

# Grand Forks International Airport

Grand Forks, North Dakota



## MINIMIZE WILDLIFE HAZARDS ENVIRONMENTAL ASSESSMENT

**Lead Agency: Federal Aviation Administration**

Bismarck Airports District Office  
701-323-7380

**Sponsor: Grand Forks Regional Airport Authority**

**Preparer: Ulteig Engineers, Inc.**



**Project Description:** The Grand Forks Regional Airport Authority is implementing a plan to reduce the attraction of the airport to high-risk wildlife species. This action includes elimination of 82.2 acres of wetlands at the Grand Forks International Airport. The impact will be mitigated more than 10,000 feet from the airport so as not to recreate the hazard. Although there will be some impacts from the proposed action, they are anticipated to be minor or temporary.

*This Environmental Assessment becomes a Federal document when the Responsible FAA Official, identified below, evaluates the EA and signs the line below.*

Responsible FAA Official:

Date:

*Patricia L. Dressler*  
*March 24, 2006*

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

**FINDING OF NO SIGNIFICANT IMPACT**

**for**

**MINIMIZE WILDLIFE HAZARDS  
AT GRAND FORKS INTERNATIONAL AIRPORT**

**by**

**GRAND FORKS REGIONAL AIRPORT AUTHORITY  
GRAND FORKS, NORTH DAKOTA**

This Federal Finding of No Significant Impact (FONSI) has been prepared for proposed minimization of wildlife hazards and associated actions at the Grand Forks International Airport (Airport). An Environmental Assessment (EA) was prepared to address the potential impacts of implementing actions at the Airport consistent with Federal Aviation Administration (FAA) design standards. Based on the evaluation in the attached EA, no significant impacts associated with the development actions were identified in accordance with FAA Order 1050.1E, "Environmental Impacts: Policies and Procedures". Therefore, no environmental impact statement will be prepared and a FONSI is being issued.

The proposed action is to reduce the attraction of the airport to high-risk wildlife species, which includes the elimination of 82.2 acres of wetlands. These wetlands consist of approximately 6.2 acres of US Army Corps of Engineers (USACE) jurisdictional wetlands and approximately 76 acres of non-jurisdictional wetlands typical of prairie potholes

The proposed action will enhance safety by reducing the potential for wildlife-aircraft strikes by implementing long-term action that reduces and mitigates the attraction of the Airport to wildlife.

The Airport shall implement the following mitigating measures as a condition of environmental approval of the proposed development/action items listed in this FONSI to support existing and proposed aeronautical activities at the Airport. Prior to the disbursement of Federal funds for this project, the Airport Sponsor will provide the FAA Bismarck Airports District Office (BIS-ADO) a copy of all permits and mitigation approvals obtained from the USACE, the North Dakota Department of Health (NDDOH), the North Dakota Game and Fish Department (NDGF), the United States Fish and Wildlife Service (USFWS), and the United States Natural Resource Conservation Service (NRCS) as required in the attached EA, and commits to comply with the following permit and mitigation requirements:

1. A USACE Section 404 Permit shall be applied for and obtained prior to any construction activities that would impact the jurisdictional wetlands associated with this project. The Airport shall perform mitigation required by the USACE permit conditions for approximately 6.2 acres of wetlands and associated drainage to mitigate for the unavoidable loss of wetlands associated with the wildlife hazard mitigation. Mitigation of impacts to wetlands will be coordinated with the USACE, the USFWS, the NRCS, and the NDGF. Mitigation shall be



conducted off-site to avoid the creation of wildlife attractants, subject to FAA Advisory Circular (AC) 150/5200-33A, "Hazardous Wildlife Attractants On or Near Airports". Mitigation and restoration of wetlands shall avoid the creation of wildlife attractants near the Grand Forks Air Force Base (GFAFB). Mitigation will consist primarily of wetland restoration. The Omaha District mitigation compensation ratio for wetland restoration projects is 1.5 acres mitigated to 1.0 acres impacted.

2. A Comprehensive Wetland Mitigation Plan and associated wetland mitigation shall be applied for and approved by the appropriated agencies prior to any construction activities that would impact the non-jurisdictional wetlands associated with this project. The Airport shall implement mitigation for approximately 76 acres of wetlands to mitigate for the unavoidable loss of wetlands associated with the wildlife hazard mitigation. The wetland mitigation shall be coordinated through the USACE, the USFWS, the NRCS, and the NDGF. Mitigation shall be conducted off-site to avoid the creation of wildlife attractants, subject to FAA AC 150/5200-33A, "Hazardous Wildlife Attractants On or Near Airports". Mitigation and restoration of wetlands shall avoid the creation of wildlife attractants near the GFAFB. Non-jurisdictional wetland mitigation will consist primarily of wetland restoration. Mitigation options include the following:
  - USFWS compensation ratio for wetland restoration projects is at least 1.0 acre of restored wetland to 1.0 acre of wetland impacted.
  - USFWS compensation ratio for wetland creation is at least 2 acres of wetland habitat created to 1 acre of wetland impacted.
3. A General Storm Water Permit for Construction Activities shall be applied for and obtained as required by the NDDOH. Mitigation measures include implementation of Best Management Practices for sedimentation and erosion control subject to the NDDOH.
4. A Surface Water Discharge Permit for Construction Activities shall be obtained if any construction dewatering occurs as a result of this project and as required by the NDDOH.
5. Consultation with the North Dakota State Historic Preservation Officer (SHPO) was conducted and a finding of "no historic properties affected" was determined. If during the course of any ground disturbance related to this project, any bones, artifacts, foundation, or other indication of past human occupation of the area are uncovered, the project must be temporarily stopped until the SHPO has been notified and has had a chance to comment. If any construction activity results in discovery of cultural resources, the Airport shall notify the SHPO and the FAA BIS-ADO, the Airport shall protect the area until cultural resource concerns have been appropriately addressed, and the Airport shall take action to comply with the National Historic Preservation Act, the Native American Graves Protection and Repatriation Act, and the Archaeological Resources Protection Act, as appropriate. The borrow sites and wetland mitigation sites must be cleared by the SHPO prior to use of material from the borrow site or development of mitigation sites.
6. Coordination with the USFWS was conducted and a finding of "no impact" to endangered and threatened species was determined. The EA indicated the project would have no

significant impact on fish and wildlife resources as it does not involve any Federally listed threatened or endangered species or their habitats. However, per USFWS's request to minimize impacts to the nesting season, the start of construction shall be postponed until after July 15<sup>th</sup> of the year the construction on this project begins. If endangered species (bald eagles) are sighted during construction, work must cease in the immediate area of the endangered species and all sightings shall be reported to the USFWS the NDGF, and the BIS-ADO.

7. All contract documents concerning construction of the proposed airfield improvements shall incorporate, as appropriate, provisions of the FAA AC 150/5370-10B, "Standards for Specifying Construction of Airports". The guidelines will be used to avoid and/or reduce potential degradation of local air and water quality and will minimize impacts to surrounding homes and businesses.

This project involves construction in designated wetland areas. As discussed in the EA, there are no prudent or practicable alternatives to this impact. The proposed action includes all practicable measures to minimize impacts to wetland areas. We find that based on the discussion above and the description found in the EA, sufficient evidence exists to support the FAA's Wetland Finding that: a) there is no practicable alternative to such construction; and b) the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.

After careful and thorough consideration of the facts contained herein, the undersigned finds that the proposed Federal action is consistent with existing national environmental policies and objectives as set forth in Section 101 of the National Environmental Policy Act (NEPA) and other applicable environmental requirements and will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to Section 102(2)(C) of NEPA.

Having met all relevant requirements for environmental considerations and consultation, the proposed action is authorized to be taken at such time as other requirements have been met. These decisions are taken pursuant to 49 U.S.C. § 40101, et seq. Those findings made by the FAA regarding minimization of wildlife hazards and wetland findings, and any necessary funding, constitute an order of the Administrator, which is subject to review by the Courts of Appeals of the United States, in accordance with the provisions of Section 1006 of the Federal Aviation Act of 1958, as amended, 49 U.S.C. § 46110.

APPROVED:

X

Steven J. Obenauer

STEVEN J. OBENAUER, MANAGER  
Federal Aviation Administration  
Bismarck Airports District Office

DISAPPROVED:

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DATE: 4/12/06



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## LIST OF ACRONYMS

AC	Advisory Circular
ADO	Airport District Office
ARC	Airport Reference Code
AWOS	Automated Weather Observation System
BMPs	Best Management Practices
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DOI	Department of the Interior
DOT	Department of Transportation
DWL	Dual Wheel Load
EA	Environmental Assessment
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FAA	Federal Aviation Administration
FBO	Fixed Base Operations
FFCA	Federal Facility Compliance Act
FR	Federal Register
FWPCA	Federal Water Pollution Control Act (Clean Water Act)
GFK	Grand Forks International Airport
GPS	Global Positioning System
IFR	Instrument Flight Rules
IMC	Instrument Meteorological Conditions
INM	Integrated Noise Model
Ldn	Day-Night Average Sound Level
MOU	Memorandum of Understanding
NAGPRA	Native American Graves Protection and Repatriation Act

## LIST OF ACRONYMS cont'd.

NEPA	National Environmental Policy Act
ND	North Dakota
NDDOH	North Dakota Department of Health
NDGF	North Dakota Game and Fish Department
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
OFA	Object Free Area
PL	Public Law
RCRA	Resource Conservation and Recovery Act
RPZ	Runway Protection Zone
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SHPO	State Historical Preservation Office
SIAP	Standard Instrument Approach Procedure
SPCC	Spill Prevention Control and Countermeasures
SWDA	Solid Waste Disposal Act
SWL	Single Wheel Load
TAF	Terminal Area Forecast
TSCA	Toxic Substances Control Act
TSS	Total Suspended Solids
UND	University of North Dakota
USACE	U.S. Army Corps of Engineers
U.S.C.	U.S. Code
USDA	U.S. Department of Agriculture



## LIST OF ACRONYMS cont'd.

USFWS	U.S. Fish and Wildlife Services
USGS	U.S. Geological Service
WHA	Wildlife Hazard Assessment and Recommendations for the Wildlife Hazard Management Plan
WS	U.S. Department of Agriculture, Wildlife Services

**Federal Statutes, Regulations, Executive Orders, and Guidance,  
Including FAA Advisory Circulars<sup>1</sup>**

Statute	Implementing Regulations and Other Guidance
<b>Air Quality</b>	
<ul style="list-style-type: none"> <li>Clean Air Act (CAA), as amended, 42 U.S.C. §§ 7401–7671 (1990).</li> </ul>	<ul style="list-style-type: none"> <li>40 C.F.R. Parts 9, 50 - 53, 60, 61, 66, 67, 81, 82, and 93 (2004).</li> </ul>
<b>Coastal Resources</b>	
<ul style="list-style-type: none"> <li>Coastal Barrier Resources Act of 1982, as amended by the Coastal Barrier Improvement Act of 1990, 16 U.S.C. §§ 3501–3510 (1990).</li> </ul>	<ul style="list-style-type: none"> <li>U.S. Department of Interior (DOI) Coastal Barrier Act Advisory Guidelines, 57 Fed. Reg. 52730 (November 5, 1992).</li> </ul>
<ul style="list-style-type: none"> <li>Coastal Zone Management Act, as amended, 16 U.S.C. §§ 1451–1464 (1999).</li> </ul>	<ul style="list-style-type: none"> <li>15 C.F.R. Parts 930, Subparts C and D (2005).</li> <li>15 C.F.R. Part 923 (2005).</li> </ul>
<ul style="list-style-type: none"> <li>Coral Reef Protection, Exec. Or. 13089 and 63 Fed. Reg. 32701 (June 11, 1998).</li> </ul>	
<b>Compatible Land Use</b>	
<ul style="list-style-type: none"> <li>Aviation Safety and Noise Abatement Act of 1979, as amended, 49 U.S.C. §§ 47501–47507 (2000).</li> </ul>	<ul style="list-style-type: none"> <li>14 C.F.R. Part 150 (2005).</li> </ul>
<b>Department of Transportation Act</b>	
<ul style="list-style-type: none"> <li>Department of Transportation Act of 1966, Section 4(f), recodified at 49 U.S.C. § 303 (c) (1983).</li> </ul>	
<b>Farmlands</b>	
<ul style="list-style-type: none"> <li>Farmland Protection Policy Act, 7 U.S.C. §§ 4201–4209, as amended by section 1255 of the Food Security Act of 1985, 100 Stat. 45.</li> </ul>	<ul style="list-style-type: none"> <li>7 C.F.R. Part 658 (2005).</li> <li>7 C.F.R. Part 657 (2005).</li> <li>The President's Council on Environmental Quality (CEQ) Memorandum on Analysis of Impacts on Prime and Unique Agricultural Lands in Implementing the National Environmental Policy Act, 45 Fed. Reg. 59189 (September 8, 1980).</li> </ul>
<b>Fish, Wildlife, and Plants</b>	
<ul style="list-style-type: none"> <li>Endangered Species Act of 1973, 16 U.S.C. §§ 1531–1544 (1973).</li> <li>Marine Mammal Protection Act of 1972, 16 U.S.C. §§ 1361–1421(h) (1972).</li> <li>Related Essential Fish Habitat Requirements of the Magnuson-Stevens Act, as amended by the Sustainable Fisheries Act, 16 U.S.C. § 1855(b)(2) (1996).</li> </ul>	<ul style="list-style-type: none"> <li>50 C.F.R. Parts 17 and 22 (2004).</li> <li>50 C.F.R. Part 402 (2004).</li> <li>50 C.F.R. Parts 450 – 453 (2004).</li> <li>50 C.F.R. § 600.920 (2004).</li> <li>Memorandum of Understanding (MOU) among 14 Federal agencies on Implementation of the Endangered Species Act, <a href="http://environment.fhwa.dot.gov/guidebook/vol1/doc4a.pdf">http://environment.fhwa.dot.gov/guidebook/vol1/doc4a.pdf</a>, November 8, 1994.</li> <li>"Memorandum of Understanding to Foster the Ecosystem Approach", <a href="http://environment.fhwa.dot.gov/guidebook/vol1/doc17b.pdf">http://environment.fhwa.dot.gov/guidebook/vol1/doc17b.pdf</a>, December 15, 1995.</li> <li>CEQ Guidance on Incorporating Biodiversity Considerations into Environmental Impact Analysis, <a href="http://www.eh.doe.gov/nepa/tools/guidance/Guidance-PDFs/iii-9.pdf">http://www.eh.doe.gov/nepa/tools/guidance/Guidance-PDFs/iii-9.pdf</a> (January 1993).</li> </ul>
<ul style="list-style-type: none"> <li>Sikes Act Amendments of 1974, 16 U.S.C. §§ 670–670(f) (1997).</li> </ul>	
<ul style="list-style-type: none"> <li>Fish and Wildlife Coordination Act of 1958, 16 U.S.C. §§ 661–666c (1958).</li> </ul>	

<sup>1</sup> All Federal Statutes, Regulations, Executive Orders, and Guidance, including Federal Aviation Administration (FAA) Advisory Circulars (AC) are referenced in FAA Order 1050.1E, Environmental Impacts: Policies and Procedures, effective June 8, 2004, and all citations are accurate as of July 19, 2005.

**Federal Statutes, Regulations, Executive Orders, and Guidance,  
Including FAA Advisory Circulars<sup>1</sup>**

Statute	Implementing Regulations and Other Guidance
<ul style="list-style-type: none"> <li>• Fish and Wildlife Conservation Act of 1980, 16 U.S.C. §§ 2901–2912 (1980).</li> <li>• Invasive Species, Exec. Or. 13112, 64 Fed. Reg. 6183 (February 8, 1999).</li> <li>• Migratory Bird Treaty Act of 1981, 16 U.S.C. §§ 703–712.</li> <li>• Responsibilities of Federal Agencies to Protect Migratory Birds, Exec. Or. 13186, 66 Fed. Reg. 3853 (January 10, 2001).</li> <li>• Presidential Memorandum on Environmentally and Economically Beneficial Landscape Practices on Federally Landscaped Grounds, April 26, 1994; Greening the Government Through Leadership in Environmental Management, Exec. Or. 13148 (April 21, 2000).</li> <li>• The Animal Damage Control Act of 1931, as amended, 7 U.S.C. §§ 426–426c (2000), 46 Stat. 1468.</li> </ul>	<ul style="list-style-type: none"> <li>• 50 C.F.R. Part 83 (2004).</li> <li>• Department of Transportation (DOT) Policy on Invasive Alien Species, <a href="http://www.fhwa.dot.gov/environment/rdsduse/rdus3_11.htm">http://www.fhwa.dot.gov/environment/rdsduse/rdus3_11.htm</a>, April 22, 1999.</li> <li>• 50 C.F.R. Part 10 (2004).</li> <li>• Environmental Protection Agency, Office of the Federal Environmental Executive, Guidance for Presidential Memorandum on Environmentally and Economically Beneficial Landscape Practices on Federal Landscaped Grounds, 60 Fed. Reg. 40837 (August 10, 1995).</li> <li>• DOT Order 5610.1C, Paragraph 3f of attachment 2.</li> </ul>
<p><b>Floodplains</b></p> <ul style="list-style-type: none"> <li>• Floodplain Management, Exec. Or. 11988, 42 Fed. Reg. 26951 (May 24, 1977).</li> <li>• Appropriate State and Local construction statutes.</li> </ul>	<ul style="list-style-type: none"> <li>• DOT Order 5650.2, Floodplain Management and Protection.</li> <li>• Federal Emergency Management Agency "Protecting Floodplain Resources: A Guidebook for Communities", <a href="http://www.fema.gov/hazards/floods/lib268.shtm">http://www.fema.gov/hazards/floods/lib268.shtm</a>, June 1996.</li> </ul>
<p><b>Hazardous Materials, POLLUTION PREVENTION, and Solid Waste</b></p>	
<ul style="list-style-type: none"> <li>• Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 and the Community Environmental Response Facilitation Act of 1992, 42 U.S.C. §§ 9601–9675</li> </ul>	<ul style="list-style-type: none"> <li>• 40 C.F.R. Parts 300, 311, 355, and 370 (2004).</li> </ul>
<ul style="list-style-type: none"> <li>• Pollution Prevention Act of 1990, 42 U.S.C. §§ 13101–13109.</li> </ul>	<ul style="list-style-type: none"> <li>• CEQ Memorandum to Heads of Federal Departments and Agencies Regarding Pollution Prevention and the National Environmental Policy Act, 58 Fed. Reg. 6478 (January 12, 1993).</li> </ul>
<ul style="list-style-type: none"> <li>• Toxic Substances Control Act of 1976, as amended, 15 U.S.C. §§ 2601–2692 (1976).</li> </ul>	<ul style="list-style-type: none"> <li>• 40 C.F.R. Parts 761 – 763 (2004).</li> </ul>
<ul style="list-style-type: none"> <li>• Resource Conservation and Recovery Act of 1976 (RCRA), 42 U.S.C. § 6972 as amended by the Solid Waste Disposal Act of 1980 (SWDA), 42 U.S.C. § 6901(1976), the Hazardous and Solid Waste Amendments of 1984, and the Federal Facility Compliance Act of 1992, (FFCA), 42 U.S.C. §§ 6901–6992(k) (1992).</li> </ul>	<ul style="list-style-type: none"> <li>• 40 C.F.R. Parts 240 – 280 (2004).</li> </ul>
<ul style="list-style-type: none"> <li>• Federal Compliance with Pollution Control Standards Exec. Or. 12088, 43 Fed. Reg. 47707 (October 13, 1978) amended by Exec. Or. 12580, 52 Fed. Reg. 2923 (January 23, 1987).</li> </ul>	
<ul style="list-style-type: none"> <li>• Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements, Exec. Or. 12856, 58 Fed. Reg. 41981 (August 3, 1993).</li> </ul>	

**Federal Statutes, Regulations, Executive Orders, and Guidance,  
Including FAA Advisory Circulars<sup>1</sup>**

Statute	Implementing Regulations and Other Guidance
<ul style="list-style-type: none"> <li>• Superfund Implementation, Exec. Or. 12580, 52 Fed. Reg. 2923 (January 23, 1987). Amended Exec. Or. 12777, 56 Fed. Reg. 54757 (1991).</li> </ul>	
<b>Historical, Architectural, Archeological, and Cultural Resources</b>	
<b>Laws Governing National Historic Preservation Programs, National Natural Landmarks, and National Historic Landmarks</b>	
<ul style="list-style-type: none"> <li>• National Historic Preservation Act of 1966, as amended Exec. Or. 11593, 36 Fed. Reg. 8921 (May 13, 1971). Protection and Enhancement of the Cultural Environment, 16 U.S.C. § 470 (1992).</li> </ul>	<ul style="list-style-type: none"> <li>• 36 C.F.R. Parts 60, 61, 63, 65, 68, 73, 78, 79, and 800, and §§ 62.1 and 65.1, as revised (2004); 65 Fed. Reg. 77695 (December 12, 2000).</li> </ul>
<b>Laws Governing the Federal Archeology Program</b>	
<ul style="list-style-type: none"> <li>• Antiquities Act of 1906, 16 U.S.C. §§ 431 – 433 (1996).</li> </ul>	<ul style="list-style-type: none"> <li>• 43 C.F.R. Part 3 (2004).</li> <li>• 25 C.F.R. Part 261 (2005).</li> </ul>
<ul style="list-style-type: none"> <li>• Archaeological and Historic Preservation Act of 1974, as amended, 16 U.S.C. §§ 469–469c (1974).</li> </ul>	<ul style="list-style-type: none"> <li>• DOI Guidelines for Archeology and Historic Preservation: Standards and Guidelines, 48 Fed. Reg. 44716 (September 29, 1983).</li> <li>• 36 C.F.R. Part 68 (2004).</li> </ul>
<ul style="list-style-type: none"> <li>• Archaeological Resources Protection Act of 1979, as amended, 16 U.S.C. §§ 470aa–470mm (1979).</li> </ul>	<ul style="list-style-type: none"> <li>• 43 C.F.R. Parts 3 and 7 (2004).</li> <li>• 36 C.F.R. Part 79 (2004).</li> <li>• 25 C.F.R. Part 262 (2005).</li> <li>• National Strategy for Federal Archeology, <a href="http://www.cr.nps.gov/aad/TOOLS/Natlstrg.htm">http://www.cr.nps.gov/aad/TOOLS/Natlstrg.htm</a></li> </ul>
<ul style="list-style-type: none"> <li>• Native American Graves Protection and Repatriation Act of 1990, 25 U.S.C. § 3001 (1990).</li> </ul>	<ul style="list-style-type: none"> <li>• 43 C.F.R. Part 10 (2004).</li> <li>• 25 C.F.R. § 262.8 (2005).</li> </ul>
<b>Other Major Federal Historic and Cultural Resource Preservation Laws and Executive Orders</b>	
<ul style="list-style-type: none"> <li>• American Indian Religious Freedom Act of 1978, 42 U.S.C. § 1996 (1978).</li> </ul>	<ul style="list-style-type: none"> <li>• 43 C.F.R. §§ 7.32 and 7.77 (2004).</li> <li>• 25 C.F.R. § 262.7 (2005).</li> </ul>
<ul style="list-style-type: none"> <li>• Department of Transportation Act, 49 U.S.C. § 303 (1983) (recodification of the Department of Transportation Act of 1966, Section 4(f)).</li> </ul>	
<ul style="list-style-type: none"> <li>• Public Building Cooperative Use Act of 1976, 40 U.S.C. §§ 601 (a), 601(a)(1), 606, 611(c), and 612(a)(4) (2002).</li> </ul>	<ul style="list-style-type: none"> <li>• 41 C.F.R. §§ 101 - 117, 101–117.002(l), (m), and (n), 101.17.002(i)(2), and 101–19 (2004).</li> </ul>
<ul style="list-style-type: none"> <li>• Locating Federal Facilities on Historic Properties in Our Nation's Central Cities, Exec. Or. 13006, 61 Fed. Reg. 26071 (May 21, 1996).</li> </ul>	
<ul style="list-style-type: none"> <li>• Indian Sacred Sites, Exec. Or. 13007, 61 Fed. Reg. 26771 (May 24, 1996).</li> </ul>	
<ul style="list-style-type: none"> <li>• Consultation and Coordination with Indian Tribal Governments, Exec. Or. 13175, 65 Fed. Reg. 67249 (November 6, 2000), and the Presidential Memorandum for Government-to-government Relations with Native American Tribal Governments, 59 Fed. Reg. 2295 (April 29, 1994).</li> </ul>	
<ul style="list-style-type: none"> <li>• Protection and Enhancement of the Cultural Environment, Exec. Or. 11593, 36 Fed. Reg. 8921, (May 13, 1971), 16 U.S.C. § 470 (1980).</li> </ul>	

**Federal Statutes, Regulations, Executive Orders, and Guidance,  
Including FAA Advisory Circulars<sup>1</sup>**

Statute	Implementing Regulations and Other Guidance
<p><b>Wild and Scenic Rivers</b></p> <ul style="list-style-type: none"> <li>• Wild and Scenic Rivers Act of 1968, 16 U.S.C. §§ 1271–1287 (1968).</li> </ul>	<ul style="list-style-type: none"> <li>• 36 C.F.R. Part 297 (2004).</li> <li>• DOI and the U.S. Department of Agriculture, Wild and Scenic River Guidelines for Eligibility, Classification and Management of River Areas, 47 Fed. Reg. 39454 (September 7, 1982).</li> <li>• CEQ Memorandum on Interagency Consultation to Avoid or Mitigate Adverse Effects on Rivers in the Nationwide Inventory, 45 Fed. Reg. 59190 (September 8, 1980).</li> </ul>
<ul style="list-style-type: none"> <li>• FAA AC 150/5020-1, Noise Control and Compatibility Planning for Airports.</li> <li>• FAA AC 150/5200-33A, Hazardous Wildlife Attractants On or Near Airports.</li> <li>• FAA AC 150/5300-13, Airport Design.</li> <li>• FAA AC 150/5325-4B, Runway Length Requirements for Airport Design.</li> <li>• FAA AC 150/5370-10B, Standards for Specifying Construction of Airports.</li> <li>• 14 C.F.R. Part 77 (2005).</li> </ul>	

# CHAPTER 1 - INTRODUCTION

## 1.1 REGULATORY PREMISE

The Grand Forks Regional Airport Authority has proposed improvements to the Grand Forks International Airport (GFK or Airport). These improvements are necessary to comply with Federal Aviation Administration (FAA) standards with regard to separation from wildlife hazard attractants. The proposed improvements will be constructed in part with Federal funds. Federal participation subjects the proposed improvements to the environmental orders of the FAA, which ensure National Environmental Policy Act (NEPA) compliance.

This Environmental Assessment (EA) was prepared in accordance with the FAA Order 5050.4A, *Airport Environmental Handbook*, dated October 8, 1985 and the FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*, dated June 8, 2004. These Orders prescribe the policies and procedures of the FAA for implementing NEPA and the regulations of the Council on Environmental Quality found at 40 CFR Parts 1500-1508. The proposed action would impact existing wetlands, subjecting this action to analysis in this EA.

## 1.2 BASIS OF ACTION

There are three documents referred to in this EA that are the basis for the alternatives and the proposed action. They are:

- The Memorandum of Agreement, (MOA), is officially named the *Memorandum of Agreement Between the FAA, the U.S. Air Force, the U.S. Army, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the U.S. Department of Agriculture to Address Aircraft-Wildlife Strikes*. The MOA is "...intended to minimize wildlife risks to aviation and human safety, while protecting the Nation's valuable environmental resources."
- The Wildlife Hazard Assessment, (WHA), is officially named the *Wildlife Hazard Assessment and Recommendations for the Wildlife Hazard Management Plan for the Grand Forks International Airport*. The WHA

was prepared by the U.S. Department of Agriculture, Wildlife Services on October 19, 2000.

- The FAA Advisory Circular (AC) 150/5200-33A, is officially named the, *FAA AC 150/5200-33A, Hazardous Wildlife Attractants On or Near Airports*. The AC was effective on July 27, 2004.

### 1.3 AIRPORT DESCRIPTION

GFK is located 5 miles west of the City of Grand Forks, Grand Forks County, North Dakota. GFK is 8 miles east of the Grand Forks Air Force Base. The Airport is immediately north of U.S. Highway 2 and east of County Road 5. The Airport property covers an estimated 1,600 acres. The Airport has three runways described as follows:

Runway 17R/35L – 7,350 feet X 150 feet D-IV grooved asphalt runway

Runway 17L/35R – 3,900 feet X 75 feet B-I concrete runway

Runway 8/26 – 4,200 feet X 100 feet B-II grooved concrete runway

The classification of runway, i.e. D-IV, is based on the aircraft approach category (based on approach speed) and the airplane design group (based on wingspan). The following tables describe the criteria that go into the classification:

#### Aircraft Approach Category

Aircraft Approach Category	Approach Speed
A	Less than 91 knots
B	91 knots or more, less than 121 knots
C	121 knots or more, less than 141 knots
D	141 knots or more, less than 166 knots
E	166 knots or more



### Airplane Design Group

Airplane Design Group	Wingspan
I	Less than 49 feet
II	49 feet or more, but less than 79 feet
III	79 feet or more, but less than 118 feet
IV	118 feet or more, but less than 171 feet
V	171 feet or more, but less than 214 feet
VI	214 feet or more, but less than 262 feet

Figures 1, 2, and 3 further describe the location and layout of the Airport. Figure 1 shows the current layout of the Airport. Figure 2 is a map that shows the Airport's location and the boundary described in FAA AC 150/5200-33A. Figure 3 is an aerial photo that shows the project area and wetlands that were delineated in relation to this EA.

#### 1.4 HISTORICAL BACKGROUND

The Airport was constructed in the 1960s. The first airline service to this Airport was Northwest Airlines on November 15, 1963. Currently Northwest Airlines and Mesaba Airlines together operate 7 flights per day out of GFK. In addition, Federal Express operates a 727 and a fleet of feeder aircraft daily for cargo operations.

University of North Dakota Aerospace (UND) has conducted flight training at GFK since 1968. Their training fleet has grown from 3 aircraft to over 80 aircraft, including 6 helicopters.

As stated above, GFK serves a variety of aircraft and is one of the busiest airports in the FAA Great Lakes Region. In fact, the high number of annual operations ranks GFK in the top 10% for operations nationally. There are approximately 6,500 annual commercial operations; 245,000 UND operations; and 5,000 GA operations for a total of 256,500 annual operations. The following table includes current operations and projected operations through 2015.

### Current and Projected Operations at GFK

Operation Category	Current (2005)	2015 Forecast
Commercial	6,500	20,540*
General Aviation	5,000	7,900*
UND (Flight Training)	245,000	386,000*
<b>Total</b>	<b>256,500</b>	<b>414,440*</b>

\* Based on 1994 Airport Master Plan

While these forecasted numbers deserve correction after 9/11, they show that the trend at GFK will be for the number of operations to continue to increase over time. As the number of operations increases, the likelihood of aircraft-wildlife strikes increase.



# Grand Forks International Airport

Grand Forks, North Dakota

Revision	Date	Number	By

FIGURE 1  
EXISTING AIRPORT LAYOUT

## LEGEND

- RUNWAY
- TAXIWAY
- APRON



Bismarck - Detroit Lakes - Fargo - Minneapolis - Sioux Falls  
3350 38th Avenue South  
Fargo, North Dakota 58104  
Phone: 701.237.3211 Fax: 701.237.3191  
Web: [www.ulteig.com](http://www.ulteig.com)  
Drawn By: KSH  
Checked By: JDS  
Approved By: JDS

FIGURE 1

Project Number: 104.396  
Date: April 27, 2005  
Sheets: 1 of 1

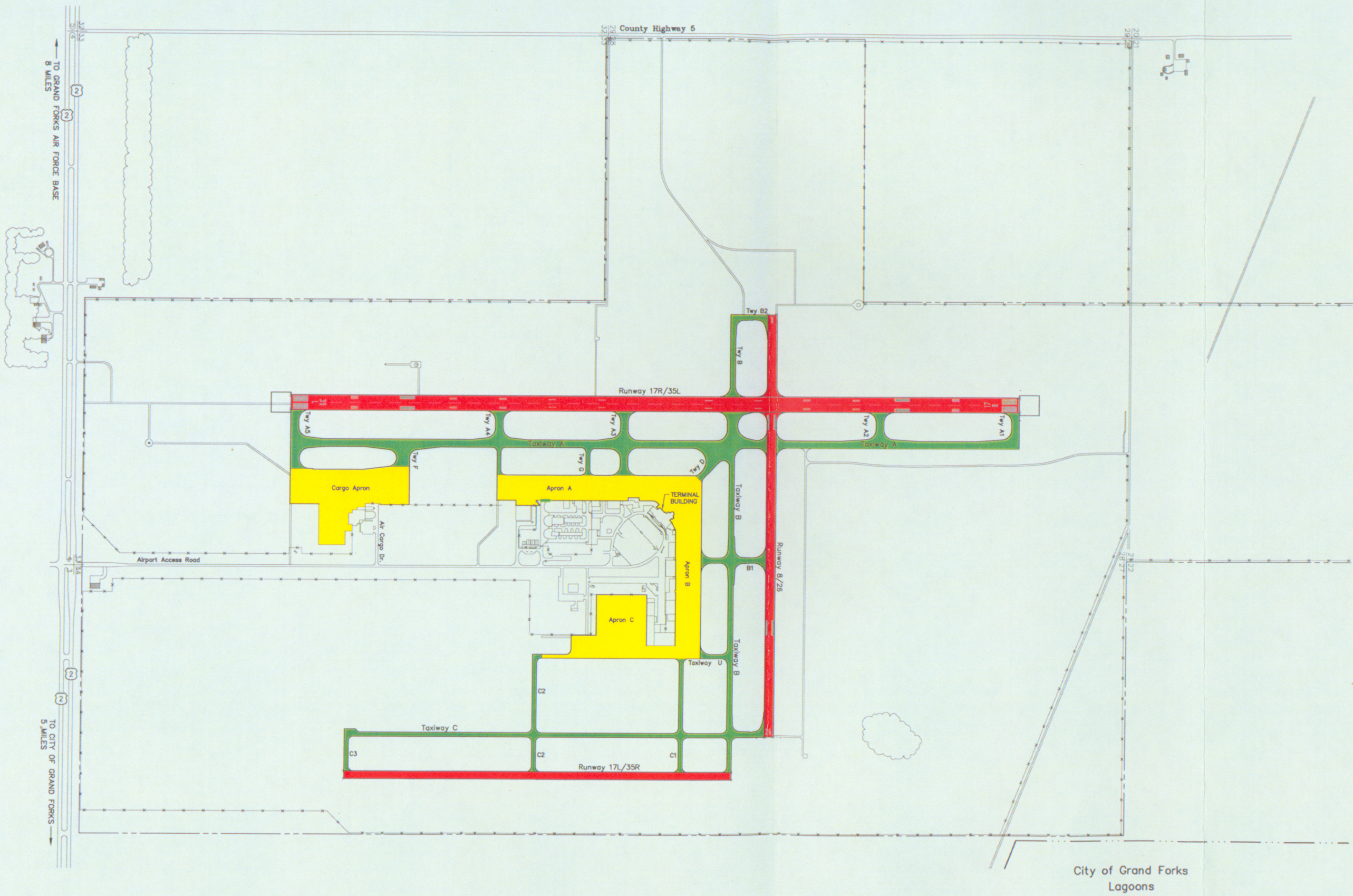
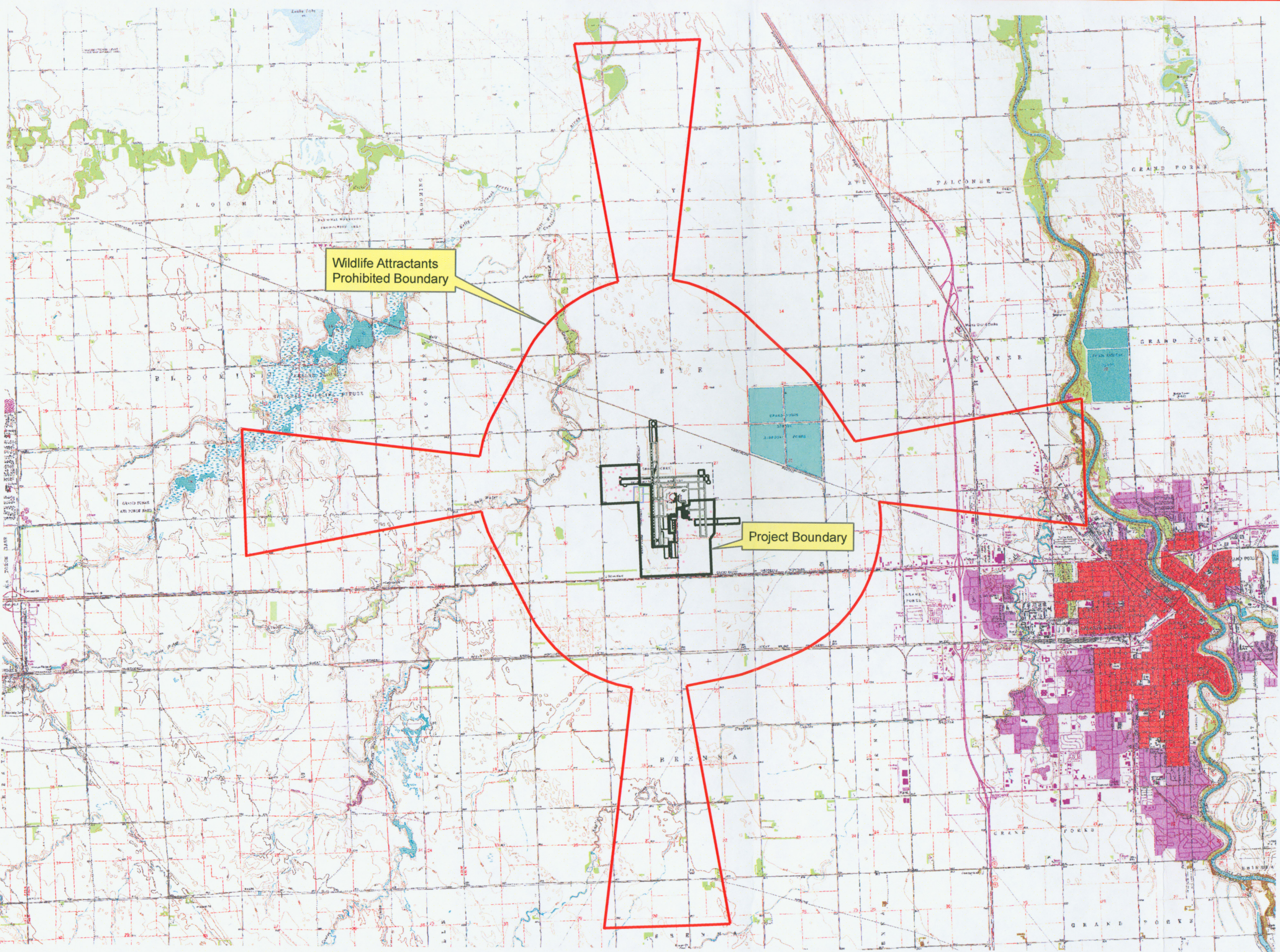




FIGURE 2  
GENERAL LOCATION  
MAP

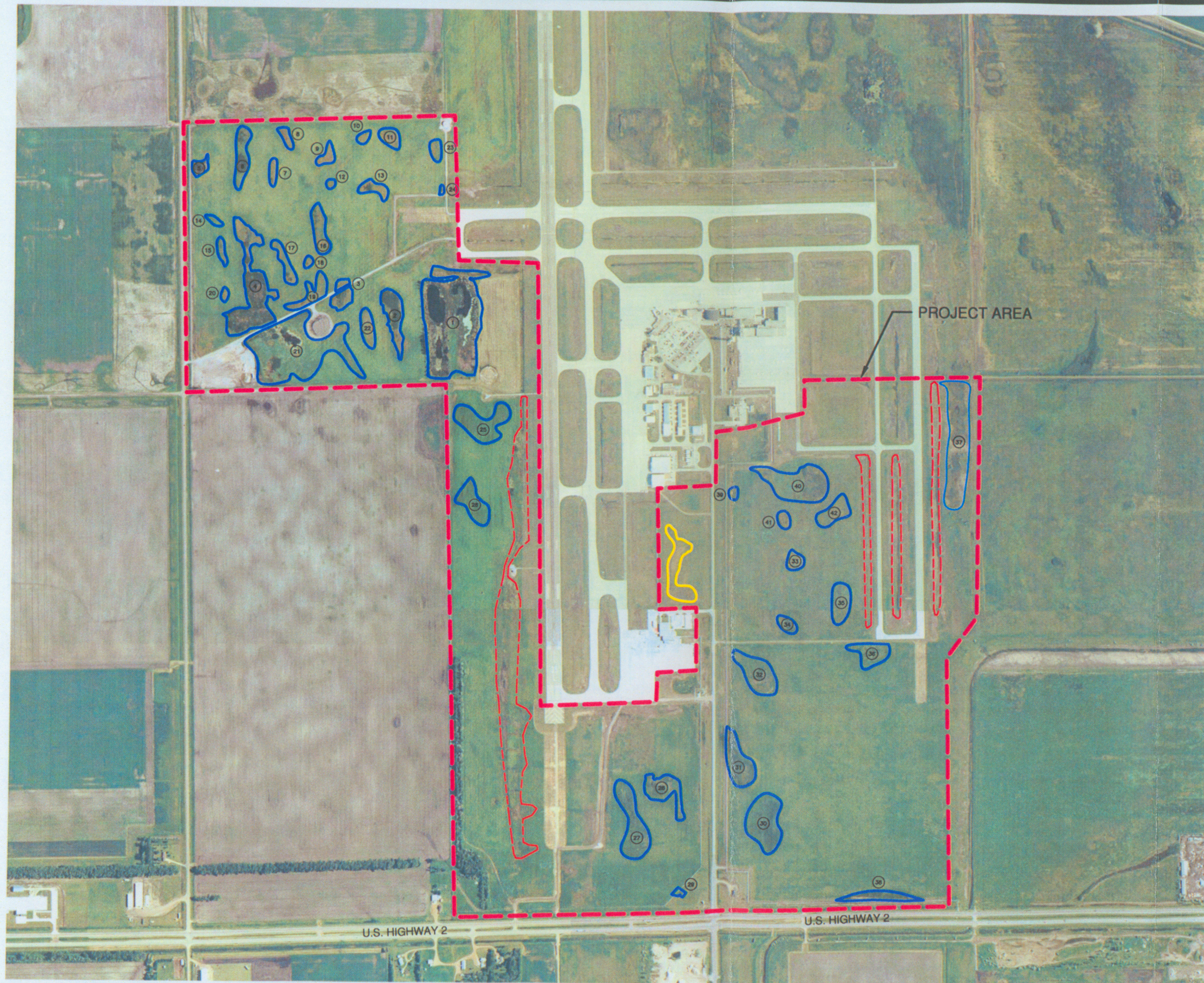


0 5,000 10,000 Feet



Get the job done right  
Bismarck - Detroit Lakes - Fargo - Minneapolis - Sioux Falls  
3350 38th Avenue South  
Fargo, North Dakota 58104  
Phone: 701.237.3211 Fax 701.237.3191  
Web: [www.ulteig.com](http://www.ulteig.com)  
Drawn by: JST  
Checked by: JDS  
Approved by: JDS





# Grand Forks International Airport

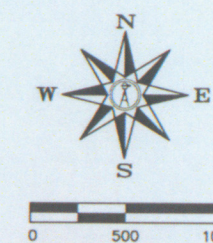
Grand Forks, North Dakota

Revision	Date	Number	By

FIGURE 3  
PROJECT AREA AND  
SUBJECT WETLANDS

## LEGEND

- PROJECT AREA BOUNDARY
- DRAINAGE FEATURE EDGE
- WETLAND EDGE
- PREVIOUSLY MITIGATED BASIN
- USACE JURISDICTIONAL WETLAND



Bismarck - Detroit Lakes - Fargo - Minneapolis - Sioux Falls  
3350 38th Avenue South  
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Web: [www.ulteig.com](http://www.ulteig.com)  
Drawn By: KSH  
Checked By: JDS  
Approved By: JDS

FIGURE 3

Project Number: 104.396  
Date: May 10, 2005  
Sheets: 1 of 1



## CHAPTER 2 – PURPOSE AND NEED FOR THE PROJECT

### 2.1 WILDLIFE HAZARD ASSESSMENT and RECOMMENDATIONS

In the document, *Wildlife Hazard Management at Airports*, by the FAA and the USDA, dated July 2005; the responsibilities of airport sponsors with regard to wildlife hazards are described as follows:

*Airport sponsors and managers have legal responsibility under federal regulations (Title 14 Code of Federal Regulations, part 139 [14 CFR, part 139]) to ensure the airport maintains a safe operating environment. As part of this responsibility, they must assess the risk and magnitude of the wildlife strike problem for their airport (14 CFR, § 139.337).*

GFK fulfilled this responsibility by engaging the USDA, Wildlife Services (WS) to conduct a wildlife hazard assessment at the Airport in 1999. In the WHA, WS identified that based on the wildlife hazard assessment a wildlife hazard exists at the Airport.

The WHA reports that 17 wildlife strikes (14 bird and 3 unknown) were reported on FAA Form 5200-7 at GFK in the period from 1991 to 1999. A search of the FAA bird strike database from 2000 to 2004 shows an additional 35 strikes that were reported. The entries on this form are entered into the national database.

The real story lies in the number of strikes that go unreported. Pilots not reporting bird strikes that do not result in damage or injury is fairly common. In the period from 1991 to 1999, GFK reported 8 strikes and WS recorded 2 strikes in 1999 that were unreported by pilots. Most recently, on April 19, 2005 Grand Forks personnel found two ducks struck on Runway 17L-35R that had not been reported on FAA Form 5200-7. The WHA references a study, authored by Dolbeer, Wright, and McCleary of the USDA dated in 1995, that estimates that approximately 80% of birdstrikes are not reported. Using that number, it is likely that the strike rate at GFK is 5 times higher than what is currently being reported.

The WHA states that, "Airports with strike rates of 1:10,000 operations, especially with high-risk species like gulls or waterfowl are considered to have significant problems...[and] The extremely low strike rates at GFK are likely due to insufficient reporting of wildlife strikes rather than the lack of wildlife strikes." The average reported strike rate at GFK was 1:78,000 operations. The WHA applies an assumed multiplier of 5 to correct for unreported strikes that makes the strike rate at GFK 1:15,600. The WHA states that this rate approaches a significant problem level.

As more accurate data is collected at the Airport it substantiates the assumption made in the WHA. At the time this document was prepared, complete 2005 birdstrike data was not yet available. However, 2004 data is available. The FAA database had 21 reported birdstrikes at GFK in 2004. In addition, UND provided additional birdstrike data via comment after the public hearing. UND reported an additional 26 strikes for 2004 that had not been entered into the national database. This is a strike rate of 1:5,500.

The strike rate for 2004 shows that with accurate reporting the assumptions of the WHA were actually too conservative or that the rate has increased since 1999. Regardless, they show that the rate is at a significant problem level.

The severity of the wildlife hazards at GFK is increased because of the location relative to the City of Grand Forks' wastewater treatment lagoons and solid waste landfill. The lagoons are located northeast of the northeast corner of the Airport property. The landfill is approximately 2,600 feet east of the Airport. The WHA states that the lagoons and landfill attract a variety of gulls and waterfowl. The WHA also documents that these birds often leave the lagoons and landfill and travel to the wetlands on the Airport. This brings high-risk species directly across the Air Operations Area (AOA) and more importantly through the approach and departure areas of the runways.

In the document, *Wildlife Hazard Management at Airports*, by the FAA and the USDA, dated July 2005, the importance of maintaining a clear AOA is stressed:

*The majority of wildlife strikes occur within the immediate airport environment: 74% of all strikes occur at or below 500 feet above ground level (AGL). Eighteen of the 19 civil and military large-transport aircraft destroyed because of bird strikes between 1960 and 2004 resulted from strikes that occurred on the airport.*



*Therefore, most wildlife involved in strikes is using the airport or its immediate vicinity, and the most logical place to begin correcting the problem is on and near the airport.*

The scope of this EA was set to include the areas in the predominant approach end of the Airport on Airport property. The winds at GFK are predominantly northerly, making the south end of the Airport the predominant approach end. The approach end was chosen because aircraft on approach are in a low power mode and gliding to land. This slow speed and lack of power hinders the aircraft's ability to react quickly to a wildlife hazard.

## **2.2 ADVISORY CIRCULAR 150/5200-33A**

In July 2004, the FAA issued an updated AC 150/5200-33A, Hazardous Wildlife Attractants On or Near Airports. This AC states that the separation distance between wildlife attractants and the AOA for airports serving turbine-powered aircraft, like GFK, is 10,000 feet and five miles in the approach paths. This boundary is shown in Figure 2.

GFK is a 14 CFR Part 139 Certificated Airport that receives Federal grant-in-aid assistance. Part 139 Certification requires the Airport to follow the standards set forth in the FAA's ACs including FAA AC 150/5200-33A. The wetlands identified in the WHA are wildlife attractants and violate the standards set forth in this AC.

## **2.3 PURPOSE AND NEED**

The purpose of this action is to enhance safety by reducing the potential for wildlife-aircraft strikes by implementing long-term action that reduces and mitigates the attraction of the Airport to wildlife and to comply with AC 150/5200-33A.

The need for implementing this action is to protect the safety of the public, users of the Airport, and to comply with FAA standards for safe operation of commercial service and general aviation operations, specifically mitigation of wildlife hazards.

## 2.4 OBJECTIVES OF THE PROPOSED ACTION

- Long-term mitigation of wildlife hazards at GFK;
- Compliance with FAA Order 1050.1E *Environmental Impacts: Policies and Procedures*, dated 06/08/04;
- Compliance with FAA AC 150/5200-33A, Hazardous Wildlife Attractants On or Near Airports; and
- Compliance with GFK Federal Grant Assurances.

## CHAPTER 3 - ALTERNATIVES

The objective of this chapter is to identify reasonable alternatives that may address the project's purpose and need as identified in Section 2.1. This chapter will also analyze the issues associated with each alternative and show the facts needed to clearly choose the best alternative. The alternatives include:

- ➔ Alternative A – No Action Alternative
- ➔ Alternative B - Avoidance Alternative
- ➔ Alternative C - Wildlife Hazing and Exclusion Devices Alternative
- ➔ Alternative D - Eliminate Wildlife Attractants Alternative

The WHA states that the wetland areas at GFK are contributing to the potential for wildlife/aircraft strikes, "The areas of most concern during the survey at GFK were the wetlands, especially the borrow pit ponds, marsh, and the standing water around which were shown to be a significant attractant to wildlife, especially waterfowl and blackbirds."

### 3.1 ALTERNATIVE A - NO ACTION ALTERNATIVE

The Airport considered a No Action Alternative, which would consist of continuing the current wildlife hazard management practices. These practices are explained in detail in the Wildlife Hazard Management Plan. In summary, the current wildlife hazard management practices are for the Airport's operations personnel to haze any hazardous wildlife that are found on routine checks or when reported by Airport users. If hazing proves ineffective, then lethal methods may be employed.

This alternative does not meet the purpose and need of this EA. It provides short-term, not long-term mitigation of the wildlife hazard and does nothing to comply with the separation distances described in FAA AC 150/5200-33A, Hazardous Wildlife Attractants On or Near Airports.

### 3.2 ALTERNATIVE B - AVOIDANCE ALTERNATIVE

The Airport considered two avoidance alternatives. The avoidance alternatives involved rotating or shifting the layout of the Airport to avoid wildlife hazards or relocating the Airport to a different location to avoid wildlife hazards. To avoid wildlife hazards, the FAA AC 150/5200-33A requires a separation distance of 10,000 feet between the AOA and a hazardous wildlife attractant. In addition, the approach paths should be kept clear of wildlife attractants for five miles from the Airport.

Alternative B meets the purpose and need of this EA.

### 3.3 ALTERNATIVE C - WILDLIFE HAZING AND EXCLUSION DEVICES

The Airport considered an alternative that would substantially increase the level of hazing at the Airport by hiring and equipping wildlife-hazing personnel to perform hazing full-time and to maintain and install exclusion devices on wildlife attractants to prevent high-risk species from using them. The WHA preparer observed, "Large numbers of various species of ducks are attracted to the wetland areas at GFK during the spring and fall migrations. Of the large high risk species, ducks are the most abundant at GFK."

Hazing would involve full-time wildlife management personnel hazing these birds to discourage them from crossing the Airport's AOA and approach/departure paths. The exclusion devices are netting and bird balls that would be installed on the wetlands to discourage waterfowl from using them.

The WHA recommends that, "Ponds used for fire extinguishing water or settling for runway runoff should be enclosed or at a minimum covered with netting or wire grids."

Wetland netting and bird balls impairs the waterfowl's ability to land and takeoff from the water. This alternative removes these wetlands from use by waterfowl. The value of the habitat for other species may be preserved, but the waterfowl would be displaced. The removal of waterfowl from the ecosystems may impact other species that depend on their presence for survival.

The northern climate of the Grand Forks area will subject the exclusion devices to extreme cold and snow/ice conditions. The weight of snow and ice build-up would damage the netting. Damage would require maintenance to repair or replace the netting at least annually. The Airport would be required to purchase amphibious vehicles to travel to and work in the remote areas where the nets are located.

For hazing to be effective, it would have to be conducted continuously around the entire perimeter of the Airport, especially during the Spring and Fall months to repel wildlife from crossing into the AOA. The Airport would hire and equip nine additional personnel to perform this duty.

The cost to employ nine employees would be \$360,000 per year. The cost to erect exclusion devices and equip hazing personnel would be \$3,000,000.

Wildlife hazing has proven to be an effective wildlife deterrent in many Airports around the country. Typically, birds associate venturing onto the Airport with an unpleasant experience from hazing personnel and will avoid it. Hazing is especially effective on resident Canada Geese. Because of the high number of migratory birds, hazing has had limited success at GFK.

The migratory nature of the high-risk, problem birds at GFK, such as gulls, geese, ducks, etc., counters the long-term benefits of hazing and exclusion devices. New flocks of birds migrating to the area would not have experienced the hazing or the exclusion devices and would proceed onto Airport property, attracted by the habitat that exists there. The WHA preparer estimated somewhere between 30,000 and 60,000 ducks, geese, and grebes using the nearby water treatment lagoons during the Spring and Fall migrations. This number fell to a few hundred in the summer months of July and August. This fluctuation in numbers shows the large number of migrating birds moving through the area.

This alternative does not meet the purpose and need of the document because it does not comply with FAA AC 150-5300/33A, Hazardous Wildlife Attractants On or Near Airports. However, this alternative was considered because of its potential to improve the safety at the Airport to some degree, though it did not eliminate attractants within 10,000 feet of the AOA or five miles in the approach paths.

### 3.4 ALTERNATIVE D - ELIMINATE WILDLIFE ATTRACTANTS ALTERNATIVE

The Eliminate Wildlife Attractants Alternative would eliminate the wetlands in the project area. This alternative proposes to fill or drain the wetlands and convert them to grassy areas that would be mowed and maintained according to the Wildlife Hazard Management Plan to reduce and eliminate their attraction to wildlife.

The WHA recommends eliminating the wetlands at the Airport by stating that, "Ponds not serving any official airport function should be eliminated" and, "The elimination of wetland areas, especially open water, will have a profound effect on waterfowl at GFK."

The 42 existing wetland basins in the project area are not serving any official Airport function. These basins were delineated and measured at 82.2 acres. The delineation report and map are attached in Appendix D. Basin #37, as shown in Figure 3, appears to be the only USACE jurisdictional wetland (per the USACE letter dated June 10, 2005).

The work on this alternative would be completed as funding became available. The first stage would be the elimination of 12.62 acres of wetland, identified as Basin #1 on Figure 3. Basin #1 is an abandoned borrow pit. This pit currently holds water, supports vegetation, and attracts large numbers of high-risk birds.

The filling of Basin #1 would require approximately 50,000 cubic yards of borrow material. 50,000 cubic yards is approximately 20 trucks hauling borrow material all day for 25 days. The area would be partially filled and partially graded to drain through a pipe to an existing ditch on Airport property. This ditch currently carries stormwater from hundreds of acres of grassy area; the additional flow from the 12.62 acres of converted wetland will be negligible. The estimated cost to complete filling Basin 1, including mitigation, is \$900,000.

The remainder of this alternative is the elimination of the other 41 basins in the project area by filling and converting them to grassy areas. The remaining basins will require an additional 100,000 CY of borrow material. That would be 20 trucks hauling borrow material all day for 50 days. These

basins would be filled and the runoff from these areas would be shed to the same ditches and drainage features that currently exist and convey runoff. The estimated cost to complete the project, including mitigation, is \$2-3 million dollars.

This alternative meets the purpose and need of this EA. It enhances the safety of the AOA, complies with FAA AC 150/5200-33A, Hazardous Wildlife Attractants On or Near Airports, and is a long-term solution.

### 3.5 SUMMARY

Of the above four alternatives, Alternative A, C, and D will be analyzed further for environmental consequences. Alternative B, the Avoidance Alternative, will not be analyzed further as it is not a practicable or prudent alternative to meet the purpose and need. Alternative B was discarded from further analysis because the Airport is not able to shift or rotate its alignments to avoid wildlife attractants and relocating the Airport would cost well in excess of the \$100 million that has been invested to build the Airport at its current location.



## CHAPTER 4 – AFFECTED ENVIRONMENT

### 4.1 EXISTING AIRPORT FACILITY

GFK is located five miles west of the City of Grand Forks, Grand Forks County, North Dakota. This location is further described as 80 miles north of Fargo, North Dakota, 270 miles northeast of Bismarck, North Dakota, and 145 miles south of Winnipeg, Manitoba, Canada. Grand Forks Air Force Base is located eight miles west of GFK.

The three alternatives that will be analyzed for environmental consequences all lay on Airport property within the city limits of the City of Grand Forks, North Dakota (see Figure 5). Grand Forks is an important regional retail, wholesale, educational, and medical center. There is a large economic presence from the nearby Grand Forks Air Force Base, as well as the University of North Dakota.

GFK was established at its present location in the 1960s. GFK is one of 3,660 airports in the FAA National Plan of Integrated Airport System. GFK is currently classified as a short-haul primary commercial service airport. This classification identifies GFK as being capable of handling most sophisticated aircraft in the commercial and general aviation fleet and as providing non-stop commercial service to destinations within 500 miles. Commercial enplanements in 2004 totaled 90,752. Airfreight in 2004 totaled 23,635 tons.

Key agencies, facilities, and airport-related businesses at GFK include:

- Grand Forks Regional Airport Authority
- FAA Air Traffic Control Tower
- FAA Airway Facilities
- FAA Automated Flight Service Station
- Transportation Safety Administration
- UND Aerospace
- Northwest Airlines
- Federal Express
- GFK Flight Support
- Three national car rental franchises
- Evergreen

- Globe
- Republic Parking
- Crosswinds Restaurant
- U.S. Customs

Full-time employment of these key organizations associated with GFK currently totals 493 individuals.

## 4.2 AIRCRAFT OPERATIONS

Of the 517 control towers in the country, GFK typically ranks 40<sup>th</sup> to 45<sup>th</sup>, for total operations, ranking it well in the top 10%. GFK's annual operations are typically around 250,000 operations per year. 2004 operations totaled 267,155 operations. 2005 operations totaled 243,778 operations.

UND conducts flight training at the Airport and bases nearly 90 aircraft at the Airport, including 6 helicopters. UND has experienced tremendous growth and contributes nearly 92% (245,640 in 2004) of the operations at GFK.

## 4.3 ADJACENT LAND USES

Nearly three-fourths of the land surrounding GFK is zoned agricultural. This land is farmed most years and is under Grand Forks County jurisdiction. Figure 4 shows the current zoning surrounding GFK. Figure 5 shows the political jurisdiction boundaries surrounding GFK.

Within one mile of the AOA there is a wastewater treatment lagoon, a solid waste landfill and the English Coulee diversion. The lagoon adjoins Airport property in the northeast corner. The landfill is east one-half mile from Airport property. Along the east side of the Airport property is the English Coulee Diversion Canal.

There is a residence at the intersection of Airport property with U.S. Highway 2 in the southwest corner of Airport property, as well as scattered residences within two miles south of U.S. Highway 2 and west and northwest of the Airport along County Road 5.

There are no churches, schools, or places of gathering within 2 miles of Airport property.

#### 4.4 AFFECTED WETLANDS

The affected wetlands are described in the delineation report as being Type 1 (seasonally-flooded basins or floodplains), Type 2 (wet meadows), Type 3 (shallow marshes), or Type 5 (open water wetlands). They do not support aquatic species such as minnows or fish. Their wildlife benefits vary with seasonal precipitation and most freeze entirely in the winter. Basin 1 is deep enough to retain fluid water under ice cover, but its lack of depth and decaying plant matter starves it of oxygen levels in the winter, rendering it unable to support fishes.

The USACE has made a preliminary determination (see the USACE letter dated June 10, 2005) that wetland Basin #37 appears to be a water of the United States and is therefore subject to Section 404 jurisdiction of the Clean Water Act. The remaining 41 basins identified in the delineation report are not waters of the United States and are not subject to Section 404.

The delineation report, Appendix D, identifies a wetland, north of the existing Federal Express facility, that was previously filled and mitigated. The preparers of this EA searched for the mitigation records, but they were likely lost in the flood of 1997. USACE records produced correspondence with the USACE that references the area and that it had been previously mitigated. The USACE provided a copy of the response letter to this correspondence that concurs with the finding. This correspondence is included in Appendix F.





## LEGEND

- A-1 (county)
- I-1 (county)
- A-2 (city)
- I-2 (city)
- IH (city)



Get the job done right

3350 38<sup>th</sup> Avenue S.  
Fargo, ND 58104-7079  
PO Box 9616/58106-9616  
Phone: 701.237.3211

**FIGURE 4 - GFK AREA  
ZONING DISTRICTS**





## LEGEND

- City of Grand Forks
- Township in Grand Forks County
- Township in Grand Forks County



Get the job done right

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Fargo, ND 58104-7079  
PO Box 9616/58106-9616  
Phone: 701.237.3211

**FIGURE 5**  
**LOCAL JURISDICTIONS**



## CHAPTER 5 – ENVIRONMENTAL CONSEQUENCES

This chapter analyzes the environmental consequences of three alternatives in specific impact categories. The three alternatives analyzed are:

- ➔ Alternative A – No Action Alternative
- ➔ Alternative C - Wildlife Hazing and Exclusion Devices Alternative
- ➔ Alternative D - Eliminate Wildlife Attractants Alternative

### 5.1 AIR QUALITY

North Dakota is in attainment with the Clean Air Act, as amended (CAA) and there are no Non-Attainment areas within its borders. The North Dakota Department of Health (NDDOH) stated that, “...we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.” (as per the NDDOH letter dated December 10, 2004). There would be no impacts from Alternatives A or C. Alternative D would create temporary impacts during construction from construction vehicle emissions and dust production.

#### 5.1.1 Potential Mitigation

FAA AC 150/5370-10B, Standards for Specifying Construction on Airports, Item P-156 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control would be made part of the project specifications. This item would require the contractor to control dust production by watering haul roads and the construction area as needed.

The construction documents for Alternative D would require the contractor to have properly operating, muffled equipment to minimize impacts from construction vehicles.

In addition, the contractor would be required to obtain and comply with a North Dakota Pollutant Discharge Elimination System (NDPDES) Construction Permit from the NDDOH. This permit requires the contractor to employ Best Management Practices (BMPs) to control dust production.

## 5.2 COASTAL RESOURCES

The Coastal Barriers Resources Act, the Coastal Zone Management Act, and EO 13089, Coral Reef Protection, govern federal activities involving or affecting coastal resources. This impact category has been considered and since there are no coastal resources in the project area, this category is not applicable and there are no impacts for Alternatives A, C, or D.

## 5.3 COMPATIBLE LAND USE

The Grand Forks Regional Airport Authority is required to comply with grant assurances as part of receiving grants from the Airport Improvement Program. One of these assurances is #21, Compatible Land Use, "It [the Airport] will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft..."

According to Appendix A, Section 4.1a of FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*, compatible land use impacts are typically analyzed with regard to noise. Section 5.13 of this EA states that there are no noise impacts from the proposed action. However, noise is not the only consideration of compatibility, FAA AC 150/5200-33A, Hazardous Wildlife Attractants On or Near Airports, discusses compatibility from the perspective of hazardous wildlife attractants on the Airport. This AC requires a minimum separation distance of 10,000 feet and five miles in the existing and planned approach paths between the AOA and any hazardous wildlife attractants. This separation boundary is illustrated in Figure 2.

The following land use compatibility impacts at GFK are anticipated from Alternatives A, C, and D.

### 5.3.1 Alternative A

Alternative A does not impact compatible land uses.



### **5.3.2 Alternative C**

Alternative C does not impact land use compatibility. The exclusion devices placed over the wetlands will alter the compatibility of the wetlands, but ultimately do not permanently affect their compatibility.

### **5.3.3 Alternative D**

Alternative D is consistent with the grant assurance by improving the compatibility of land in the AOA. According to both the WHA and the AC, the current land use as wetlands is an incompatible land use because they attract wildlife to the AOA. The elimination of wetlands would improve the compatibility of the land use with the Airport.

### **5.3.4 Potential Mitigation**

The Airport would provide mitigation to replace the loss of wetlands. So as to not recreate the hazard, the mitigation will take place a minimum of 10,000 feet from the AOA and five miles from the approach paths. This boundary is shown in Figure 2. Details for the mitigation have not been finalized, however discussion with the proper agencies has begun. The mitigation is discussed further in Section 5.17, Wetlands.

## **5.4 CONSTRUCTION IMPACTS**

Construction impacts include noise, dust, traffic, disposal of construction debris, air and water pollution, and socioeconomic impacts. Most of these impacts are covered under other appropriate sections.

The following construction impacts at GFK are anticipated from Alternatives A, C, and D.

### **5.4.1 Alternative A**

Alternative A would not require any construction and would not cause any construction impacts.

### 5.4.2 Alternative C

Alternative C would cause minimal impacts from construction traffic required for installing and maintaining exclusion devices and for hazing. There would be vehicle traffic in and around wetlands necessary for installing and maintaining exclusion devices as well as hazing wildlife. The vehicles would be construction vehicles, pickups, and all-terrain vehicles.

There would be a temporary positive socioeconomic impact from construction related employment.

### 5.4.3 Alternative D

Alternative D would require excavation and grading equipment to operate in the construction site and in the borrow area. Trucks would haul fill material from the borrow area to the project area. There would be approximately 50,000 cubic yard of material hauled to fill Basin 1. This is the equivalent of 20 trucks hauling all day for 25 days. The remainder of the 41 basins would require approximately 100,000 cubic yards. The increased truck traffic on surrounding roads may have an impact of slowing traffic at intersections due to the slower turning and acceleration of trucks. The operation of this equipment and trucks would also potentially generate dust.

Noise from properly muffled construction equipment used in excavating and grading will not generate loud enough noise to leave the Airport property. The proposed action would not require any pile driving or explosive detonation that would create noise loud enough to leave the Airport property.

The nature of the project is such that it would not generate construction debris.

There would be a temporary socioeconomic impact from construction-related employment.

#### 5.4.4 Potential Mitigation

The construction documents would require the contractor to obtain and comply with a NDPDES Construction Permit from the NDDOH. This permit requires the contractor to employ BMPs for maintaining air and water quality.

To mitigate and minimize the impact of the construction traffic on surrounding roads, the construction plans would require trucks to utilize controlled intersections with proper turn lanes, signals and signage already in place.

FAA AC 150/5370-10B, Standards for Specifying Construction on Airports, Item P-156 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control will be made part of the project specifications as well as local and state requirements.

To minimize wildlife impacts the project would be scheduled to avoid critical periods in the rearing and nesting cycle of the wildlife using the wetlands. As per the USFWS recommendations (letter dated August 17, 2004), wetland impacts would be postponed until after July 15<sup>th</sup> when the majority of birds have completed nesting.

Other than that listed above, there are no known wildlife, hazardous material, or cultural resource impacts anticipated from construction. If a previously unknown impact is encountered during construction, work will be halted. Work will continue in areas outside of the discovery area. The FAA Bismarck ADO and the agency with jurisdiction over the discovery must be notified of the situation to ensure a qualified professional evaluates the site.

#### 5.5 DEPARTMENT OF TRANSPORTATION (DOT) ACT, SECTION 4(F)

Section 4(f) of the DOT Act of 1966 was recodified and renumbered as 49 U.S.C. § 303(c). This section provides that no programs or projects brought to the Secretary of Transportation will be approved if they require the use of any publicly owned land from a public park, recreation area, refuge, or land from a historic site of National, State, or local significance unless there is no feasible and prudent alternative and the project includes all possible planning to minimize impacts. §303(c) is still referred to as §4(f). There are no properties

subject to §4(f) of the DOT Act directly or indirectly impacted by any of the alternatives.

## 5.6 FARMLANDS

The land surrounding GFK is regulated by the Farmland Protection Policy Act, as amended by section 1255 of the Food Security Act of 1985 (FPPA). To determine significance of the impact to the land, the NRCS and FAA perform a scoring of the relative value of the site for preservation. If the total score on Form AD-1006, "Farmland Conversion Impact Rating", is below 160 no further analysis is needed.

The score for the project site is 153. Since this is below 160, no further analysis with regard to FPPA regulations is required for any of the alternatives. Project sites that score below 160 are not Prime or Unique Farmlands.

The wetlands to be eliminated by Alternative D, except for Basin #1, are surrounded by land that is currently farmed or enrolled in the Conservation Reserve Program (CRP). The action in this area would be undertaken after the existing CRP contracts expire, beginning in 2007. Action in Basin #1 may occur sooner.

## 5.7 FISH, WILDLIFE, AND PLANTS

Section 7 of the Endangered Species Act, as amended, applies to Federal actions and sets forth requirements for consultation to determine if a Federal action "may affect" an endangered or threatened species.

Three sources were used to determine if any action in the project area would have an affect on endangered or threatened species, the WHA, prepared by WS, correspondence from the USFWS, and correspondence from the North Dakota Game and Fish Department (NDGF). All three agencies concur that endangered or threatened species do not frequent the Airport, and if seen would be transient. In addition, all three agencies state that the habitat at the Airport is not the type frequented by any endangered or threatened species.

The WHA noted that no observations of any endangered or threatened species were made at the Airport. The WHA states that the potential exists

for endangered species to be observed at the Airport during migration, but that it would be highly unlikely if the species were much more than transient.

In a letter dated August 17, 2004, the USFWS indicated that there were two species of concern in North Dakota, the bald eagle and gray wolf. The USFWS does not know of any occurrence of these species at the Airport.

In a letter dated 4/13/2005, NDGF commented that they have no record of threatened or endangered species at GFK. The NDGF also concurs with WS and USFWS that, "...it does not appear that the habitat available at the airport is the type frequented by threatened or endangered species, and any use of the airport by these species would likely be transient."

Due to the above comments, and the lack of habitat to support them at GFK, all alternatives support a determination of "no effect" for endangered or threatened species.

In addition to endangered or threatened species impacts, other impacts to fish, wildlife, and plants need to be assessed. When a proposed action would modify a body of water, the Fish and Wildlife Coordination Act of 1958 (FWCA) applies. The FWCA requires the responsible FAA official to consult with the USFWS and the applicable state agency to identify means to prevent loss or damage to wildlife resources from the proposal. Compliance with the FWCA is discussed in Alternative D and potential mitigation.

Following are fish, wildlife and plant impacts:

#### **5.7.1 Alternative A**

There are no anticipated fish, wildlife, or plant impacts from this alternative.

#### **5.7.2 Alternative C**

Alternative C impacts wildlife by excluding them from using the habitat covered with netting. These excluded species will be displaced to other areas.

### 5.7.3 Alternative D

Alternative D impacts wildlife and plants by eliminating 82.2 acres of wetland in the project area. These wetlands are shown in Figure 3. The impacts are discussed further in the Section 5.17, Wetlands of this EA. The species utilizing these wetlands would be displaced to other areas. The mitigation for this alternative would be coordinated with the USFWS and the USACE. The USFWS has recommended alternatives for mitigating the impact (letter dated August 17, 2004).

### 5.7.4 Potential Mitigation

To minimize wildlife impacts the project would be scheduled to avoid critical periods in the rearing and nesting cycle of the wildlife using the wetlands. As per the USFWS' recommendations (per the USFWS letter dated August 17, 2004), wetland impacts would be postponed until after July 15<sup>th</sup> when the majority of birds have completed nesting. Wetland mitigation is discussed further in the Wetlands section.

If endangered or threatened species are encountered during construction, work must cease in the immediate area and Federal regulations pertaining to emergency discovery situations must be followed. Work can continue in the project area where no endangered or threatened species are present after consultation with the USFWS. The USFWS, the NDGF, and the FAA Bismarck ADO must be notified and the Airport must ensure a qualified professional evaluates the site.

## 5.8 FLOODPLAINS

The project area was compared to a Flood Insurance Rate Map, issued by the Federal Emergency Management Administration (FEMA), effective date September 27, 1985. The map shows that the project area is in Zone C, which is the area above the 500-year floodplain of the Red River of the North. In addition, correspondence from the North Dakota State Water Commission (NDSWC) (per the NDSWC letter dated January 26, 2005), states that the project area is not located in an identified floodplain and will not affect an identified floodplain. There are no floodplain impacts for any of the alternatives.

## **5.9 HAZARDOUS MATERIALS, POLLUTION PREVENTION, AND SOLID WASTE**

There are no known hazardous waste sites in the project area. None of the alternatives impact disposal of solid waste.

### **5.9.1 Potential Mitigation**

If previously unknown contaminants are discovered during construction, or a spill occurs during construction, work will be stopped until the NDDOH and if applicable, the National Response Center (NRC) is notified.

## **5.10 HISTORIC, ARCHITECTURAL, ARCHEOLOGICAL, AND CULTURAL RESOURCES**

Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA), requires consultation with the State Historic Preservation Officer (SHPO) and if there is a potential for adverse affect, the Advisory Council on Historic Preservation (ACHP), for Federal actions that may affect historic properties.

The Native American Graves Protection and Repatriation Act (NAGPRA) provides for the disposition of cultural items, including human remains. The NAGPRA also deals with the inadvertent discovery of cultural items on Federal or Tribal lands. It includes the inventory, protection, and return of cultural items to affiliated Tribes.

The SHPO recommended (per the SHPO letter dated December 20, 2004) that no survey of the area of potential effect is warranted and concurred with a "No Historic Properties Affected" determination for the area. In addition, Michael Jackson, anthropologist with the University of North Dakota, conducted a Class 1 File Search of the area. His findings concur with the SHPO. Mr. Jackson's report is included in Appendix E.

Alternative D would require borrow material to fill the wetlands. The material would come from off of Airport property. Alternative D would also require wetland mitigation off Airport property. Both borrow and mitigation sites would be required to be cleared by the SHPO and, if applicable, the NRCS before activity for this action could begin. Mitigation sites would be more than 10,000 feet from the AOA and five miles in the approach paths so as to not recreate the hazard at the Airport.

This EA proposes a "Finding of No Historic Properties Affected" as there are no historic, architectural, archeological, or cultural resources impacted by any of the alternatives on the Airport property.

#### **5.10.1 Potential Mitigation**

The construction documents for Alternative D would require the contractor to prove that the borrow area was cleared by the SHPO and the NRCS before any borrow material could be taken from the area.

The mitigation plan would require the mitigation site landowner to prove that the mitigation site was cleared by the SHPO and the NRCS, if applicable, before any mitigation credits could be purchased. The proposed mitigation sites are shown on Figure 6.

If cultural or human remains are encountered during construction the sponsor must protect the findings, notify the SHPO and the FAA Bismarck ADO and the ACHP, when appropriate. The treatment of the discovery will be made according to the NHPA, the NEPA, the AIRFA, the NAGPRA, and the ARPA, according to the nature of the discovery.

#### **5.11 LIGHT EMISSIONS AND VISUAL IMPACTS**

There would be no changes to existing conditions with any of the alternatives and there is no impact to current light emissions levels.

#### **5.12 NATURAL RESOURCES AND ENERGY SUPPLY**

There will be no increase in electrical power or gas consumption from any of the alternatives and there are no known natural resources in the project area.



## **5.13 NOISE**

Typically noise is analyzed in regard to an increase in daily operations of aircraft. None of the alternatives of this EA increase operations of aircraft, and therefore, they do not have any impact on noise. The following impacts from ambient noise, other than aircraft noise, at GFK are anticipated from Alternatives A, C, and D.

### **5.13.1 Alternative A**

Alternative A is assumed to maintain the current level of hazing and harassment at the Airport. This involves the intermittent use of “crackers” and “whistlers” in hazing wildlife on Airport property. Since the level is expected to remain the same and will take place on Airport property, the impact is expected to be negligible.

### **5.13.2 Alternative C**

Alternative C would increase the level of hazing and harassment at the Airport significantly. With full-time employees hazing wildlife the level of intermittent use of “crackers” and “whistlers” would be expected to rise. Since the use of these pyrotechnics is largely on Airport property, there would be minimal noise impacts to the surrounding area.

### **5.13.3 Alternative D**

Alternative D would cause a temporary minor increase in noise levels in the immediate area during construction. Alternative D does not impact air traffic volumes or capacity of the Airport in any way. Alternative D does not require a noise analysis per FAA Order 5050.4A, Airport Environmental Handbook.

### **5.13.4 Potential Mitigation**

Mitigation for Alternative D would include requiring the contractor to maintain properly muffled equipment during the construction of the project.

## **5.14 SECONDARY (INDUCED) IMPACTS**

Secondary (induced) impacts are those impacts, which occur as a result of the proposed development such as changes in population growth or changes in economic activity. The following secondary (induced) socioeconomic impacts at GFK are anticipated from Alternatives A, C, and D.

### **5.14.1 Alternative A**

Alternative A does not induce any population changes, public service demands, or permanent changes in economic activity. There are no anticipated secondary impacts from this alternative.

### **5.14.2 Alternative C**

Alternative C does not induce any population changes, public service demands, or major changes in economic activity. This alternative includes the hiring of nine additional employees and the construction of exclusion devices. The construction of the exclusion devices would have a brief economic impact from the payments to the contractor. The funding for the additional nine jobs would be funded from the Airport's general fund and would reduce the amount of expenditures on other items. Alternative C does not anticipate any secondary impacts.

### **5.14.3 Alternative D**

Alternative D does not induce any population changes, public service demands, or permanent changes in economic activity. There will be a temporary economic impact from the construction payments to the contractor responsible for the project.

Alternative D does not induce any permanent secondary impacts. The action itself does not induce any and its combined effect with other impacts does not create any secondary impacts.

### **5.14.4 Potential Mitigation**

There is no proposed mitigation for secondary impacts.

## **5.15 SOCIOECONOMIC IMPACTS, ENVIRONMENTAL JUSTICE, and CHILDREN'S ENVIRONMENTAL HEALTH and SAFETY RISKS**

EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, and the accompanying Presidential Memorandum, and DOT Order 5610.2, Environmental Justice, require FAA to provide for meaningful public involvement by minority and low-income populations and analysis that identifies and addresses impacts on these populations that may be disproportionately high and adverse.

EO 13045, Protection of Children from Environmental Health Risks and Safety Risks, requires the FAA to identify and assess environmental health and safety risks that may disproportionately affect children.

If acquisition of property or displacement of persons is involved, 49 CFR Part 24, as amended must be met for projects involving Federal funding. In addition, the FAA to the extent possible, observes local and State laws, regulations, and ordinances concerning zoning, transportation, economic development, housing, etc., when planning, assessing, or implementing the proposed action.

There are no residences or businesses that would be relocated or impacted from any of the alternatives. None of the alternatives permanently alter any surface transportation patterns, divide or disrupt any established communities, disrupt orderly, planned development, or create a change in employment. The alternatives do not impact any minority or low-income populations or pose any health or safety risks to children. The alternatives do not have any socioeconomic, environmental justice, or children's environmental health and safety risk impacts.

## **5.16 WATER QUALITY**

The FWPCA, as amended (commonly referred to as the Clean Water Act) provides authority to establish water quality standards, control discharges, and regulate other issues concerning water quality. In addition, if the action would modify the waters of any body of water the FWCA applies.

The following water quality impacts at GFK are anticipated from Alternatives A, C, and D.

#### **5.16.1 Alternative A**

Alternative A does not change any current land uses or runoff patterns. Alternative A would have no impact on water quality.

#### **5.16.2 Alternative C**

Alternative C does not change any current land uses or runoff patterns. This alternative would have no impact on water quality.

#### **5.16.3 Alternative D**

Alternative D impacts 82.2 acres of wetlands. The wetlands to be impacted by this project would be filled to prevent them from holding standing water and attracting high-risk species. The areas would be seeded and maintained to establish a dense stand of grass that would hold the topsoil and control erosion.

Alternative D would not affect the general drainage patterns of the Airport property. The wetlands would no longer retain water to slow runoff, but the new grassy areas in their place will absorb substantial amounts of runoff. The runoff coefficient, which measures the amount of runoff that comes off of a surface, is as low as 20% for heavy grass areas. This is compared to a runoff coefficient of 85%-95% for paved surfaces. Runoff would be collected in the same storm sewer systems and ditches. Erosion control devices would be maintained, as part of the NDPDES Construction Permit, until a dense stand of grass has been established.

#### **5.16.4 Potential Mitigation**

To comply with the Clean Water Act and to ensure that there is no compromise of water quality before the turf is reestablished, the construction documents would have requirements for the contractor to control erosion. The contractor would be required to obtain and comply with a NDPDES Construction Permit for temporary discharge of stormwater during

construction. The permitting authority is NDDOH. This permit requires the contractor to employ BMPs to prevent erosion.

FAA AC 150/5370-10B, Standards for Specifying Construction on Airports, Item P-156 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control would be made part of the project specifications as well as local and state requirements in regards to these matters.

Measures to comply with the FWCA are discussed under Fish and Wildlife mitigation.

## 5.17 WETLANDS

EO 11990 Protection of Wetlands (EO 11990) and the Clean Water Act address activities in wetlands. EO 11990 requires the FAA to ensure that their actions minimize the destruction, loss, or degradation of wetlands. It also assures the protection, preservation, and enhancement of the Nation's wetlands to the fullest extent practicable during the planning, construction, funding, and operation of transportation facilities and projects.

Waters of the United States are under the jurisdiction of the USACE and would require a § 404 permit prior to undertaking a project to dredge or fill a wetland.

When a proposed action would modify a body of water, the FWCA applies. The FWCA requires the responsible FAA official to consult with the USFWS and the applicable state agency to identify means to prevent loss or damage to wildlife resources from the proposal. Compliance with the FWCA is discussed further under potential mitigation, Section 5.17.4 of this document.

On August 17, 2004, wetland delineation was conducted in accordance with the USACE Wetland Delineation Manual (USACE, 1987). The USFWS found that the Wetland Delineation Report adequately identified the wetlands at GFK (per USFWS letter dated March 2, 2005). The USACE has made a preliminary jurisdictional determination on the site and found that Basin #37 appears to be a jurisdictional wetland (as per the USACE letter dated June 10, 2005). The USACE would finalize the determination when a project to impact the wetlands in the project area develops. The Wetland Delineation Report,

which includes the wetland classifications and size, is attached in Appendix D.

The wetlands in the project area are Type 1, 2, 3, and 5 wetlands according to the Circular 39 system (developed by the USFWS). These types are further described below:

Type 1 – seasonally flooded basin or floodplain

Type 2 – wet meadow

Type 3 – shallow marshes

Type 5 – open water wetlands

All of the wetlands provide habitat, hydrologic, and water quality functions. Because of their shallow depth, they do not support fishes. Their dominant water source is surface runoff. 41 of the wetlands do not have outlets. Basin #37 appears to outlet to a road ditch that ultimately drains to the English Coulee Diversion. The wetlands provide habitat for whitetail deer, waterfowl, black birds, and a variety of other birds, small mammals and reptiles.

The following wetland impacts at GFK are anticipated from Alternatives A, C, and D.

#### **5.17.1 Alternative A**

Alternative A does not impact any existing wetlands.

#### **5.17.2 Alternative C**

Alternative C does not directly impact any existing wetlands. The netting and bird balls that would be installed over the top of the wetlands would impact the variety of species that would be able to use the wetlands. These species would be displaced. These impacts are also discussed under Fish, Wildlife, and Plants.

#### **5.17.3 Alternative D**

Alternative D directly impacts existing wetlands by filling them and converting them to grassy areas to be mowed and maintained.

A wetland delineation study was conducted on the project area to determine the extent of the wetlands in the project area. According to the measurements in the Wetland Delineation Report, the proposed action impacts 82.2 acres of wetlands. The delineated wetlands are shown in Figure 3.

One wetland (Basin #37 - 6.17 acres) appears to be a USACE jurisdictional wetland. In accordance with 33 D.F.F 320-330, a Department of the Army § 404 Permit would be required prior to Construction of Alternative D for this wetland. Any impacts to the rest of the wetlands (75.99 acres) would be coordinated with the USFWS.

There are no prudent or practicable alternatives to this impact.

#### **5.17.4 Potential Mitigation**

To comply with the FWCA, the proposed action has been disclosed to the USFWS. The USFWS has provided comments on mitigation alternatives for the impact (as per the USFWS letter dated August 17, 2004 and Meeting Minutes from July 20, 2005 meeting). In addition, the USACE has made a preliminary determination that Basin #37 is a jurisdictional wetland and proposed impacts to that wetland would be coordinated through the application for a § 404 Permit.

To mitigate the impact from eliminating 82.2 acres of wetlands, the Airport Authority proposes to purchase wetland credits from a landowner that has restored and created wetlands for the purpose of mitigation. Ratios of mitigation have been discussed by the USFWS as being 1:1 for restored acres and 2:1 for created acres (as per the USFWS letter dated August 17, 2004 and Meeting Minutes from July 20, 2005 meeting). The USACE uses a 1.5:1 compensation ratio for restored wetlands (as per the USACE letter dated January 23, 2006). The ratio of mitigation acres would be finalized as part of approval of the final mitigation plan. A functional assessment of both the impacted and created/restored wetlands may be conducted with the NRCS guidance. This assessment ensures that the function and values of the impacted wetlands is replaced. The finalized mitigation plan would be coordinated with the USFWS, the USACE, the NRCS and the NDGF to ensure that each agency's requirements are met.

Proposed mitigation sites in Towner, Benson, and Nelson Counties are shown in Figure 6. The proposed mitigation sites are located outside of the separation distances described in FAA AC 150/5200-33A, Hazardous Wildlife Attractants On or Near Airports, 10,000 feet from the AOA and five miles from the AOA in the approach paths, as shown in Figure 2.

Typically the USACE requires jurisdictional wetland impacts to be mitigated in the same HUC as where the impact occurs. The USACE has determined that it is acceptable in this specific case to mitigate impacts to Basin #37 outside of the HUC where the impact would occur (Sandhill-Wilson) and mitigate in the Devils Lake HUC (as per the USACE letter dated January 23, 2006). The mitigation location would be finalized in the mitigation plan and coordinated with the USACE.

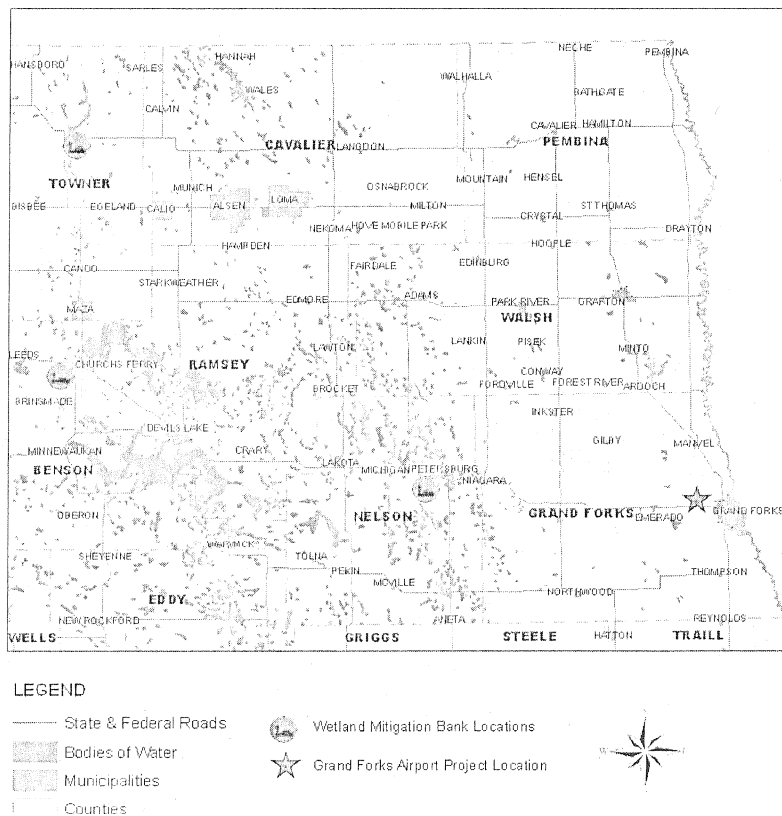


Figure 6 – Proposed Wetland Mitigation Sites



The owners of the wetland mitigation sites would be required to obtain SHPO and FPPA clearance before proceeding with any work in the mitigation site. Figure 6 shows the proposed mitigation sites for the wetland impacts.

## 5.18 WILD AND SCENIC RIVERS

The Wild and Scenic Rivers Act, as amended (WSRA) describes those river segments designated or eligible to be included in the Wild and Scenic Rivers System. The President's 1979 Environmental Message Directive on Wild and Scenic Rivers directs Federal agencies to avoid or mitigate adverse effects on rivers identified in the Nationwide Rivers Inventory as having potential for designation under the WSRA.

There are no rivers in the project area that are protected by the WSRA. Further, since there are no rivers in the project area that are listed in the Nationwide Rivers Inventory, there will be no impacts to wild and scenic rivers.

## 5.19 SUMMARY OF ANTICIPATED EFFECTS

Resource	Alternative A No Action	Alternative C Wildlife Hazing and Exclusion Devices	Alternative D Eliminate Wildlife Attractants
Air Quality	In attainment. No air quality impacts.	In attainment. No air quality impacts.	In attainment. Temporary air quality impacts from earthwork and construction vehicles.
Coastal Resources	No coastal resource impacts.	No coastal resource impacts.	No coastal resource impacts.
Compatible Land Use	Does not improve land use compatibility.	Minimal improvement of land use compatibility.	Improves land use compatibility.
Construction Impacts	No construction impacts.	Temporary impacts from	Temporary traffic and air quality

Impacts	impacts.	secondary impacts. Temporary positive economic impact during construction.	secondary impacts. Temporary positive economic impact during construction.
Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks	No socioeconomic, environmental justice, or children's environmental health and safety risks.	No socioeconomic, environmental justice, or children's environmental health and safety risks.	No socioeconomic, environmental justice, or children's environmental health and safety risks.
Water Quality	No water quality impacts.	No water quality impacts.	No significant water quality impacts.
Wetlands	No wetland impacts.	No significant wetland impacts.	Impacts 82.2 acres of wetlands. Impacts would be mitigated.
Wild and Scenic Rivers	No wild and scenic river impacts.	No wild and scenic river impacts.	No wild and scenic river impacts.
Meet Purpose and Need?	Does not meet the purpose and need.	Does not meet the purpose and need.	Meets purpose and need.
Cost	\$0	\$3 million plus \$360,000 annually	First phase - \$900,000 Second phase - \$2-3 million

## CHAPTER 6 – ENVIRONMENTAL CONSEQUENCES, OTHER CONSIDERATIONS

### 6.1 UNAVOIDABLE ADVERSE CONSTRUCTION VEHICLE IMPACTS

The proposed action would have unavoidable, temporary and adverse construction vehicle impacts. The construction of the proposed action will require an increase of truck traffic in the transportation system near the Airport. Increased truck traffic would interrupt typical traffic flow on US Highway 2 and County Road 5. Trucks turn slower and accelerate slower due to their size. This would have the impact of slowing traffic in their presence. There is also the potential for dust production from construction vehicles.

#### 6.1.1 Potential Mitigation

To mitigate and minimize the interruption of traffic flow, the construction plans would require the use of controlled intersections where possible. These controlled intersections have turn lanes, signals and appropriate signage for turning and acceleration.

To mitigate dust production, the construction specifications will include Item P156, Temporary Air and Water Pollution, Soil Erosion and Siltation Control, from FAA AC 150/5370-10B, Standards for Specifying Construction of Airports. Item P156 specifically addresses the contractors' requirements to control factors such as dust and erosion control from construction activities.

### 6.2 CUMULATIVE IMPACTS

This section will analyze the actions of the past and proposed for the future to determine the extent of the cumulative impacts from this action.

#### 6.2.1 Actions of the Past Five Years

Since 2000, GFK has undertaken projects with the assistance of the FAA to improve the safety of the Airport. These projects have included:

- Runway Safety Area and Storm Sewer Improvements
- Drainage Improvements
- Runway Reconstruction
- Perimeter Fence Construction
- Pavement Rehabilitation

### 6.2.2 Anticipated Future Actions

It is the intent of the Grand Forks Regional Airport Authority to continue undertaking projects to improve safety and minimize wildlife hazards until the recommendations of the Wildlife Hazard Assessment and FAA standards and regulations are met. This may include the elimination of additional wetlands outside of the project area of this document.

The cumulative impact of the proposed action with future actions to eliminate wetlands would be the removal of those summed acreages from Airport property. It can be anticipated that mitigation, similar to what would be required for the proposed action of this document, would be required for similar future actions. Mitigation would reduce the significance of the impacts to a negligible level.

According to the Capital Improvement Plan of the Airport, in the next five years the projects that will likely be undertaken by GFK are:

- Reconstructing tee hangar taxiways
- Constructing a parallel crosswind runway
- Constructing an airline terminal

The air traffic at the Airport will likely continue to increase from the current 256,500 operations to nearly 400,000 operations by 2015, according to the 1994 Airport Master Plan. In addition, there will be an increase in air traffic in the south half of the Airport over the project area due to the proposed future parallel crosswind runway.

## 6.3 CONSISTENCY WITH STATE AND LOCAL PLANS

A study to analyze the wildlife hazards off-airport is proposed to be part of future Federal actions. Wildlife hazard mitigation is an ongoing requirement of the Airport. The City of Grand Forks recognizes that a wildlife hazard

exists at the Airport and that the hazard is worsened by the location of the City's landfill and sewage lagoons. The City is investigating alternatives for relocating the landfill and for implementing action to deter wildlife from using the lagoons. The City of Grand Forks proposes to close the landfill from receiving waste by October 2008. Deterrents for the lagoons are currently being studied.

To avoid future problems, the City of Grand Forks and the Airport Authority are both undertaking studies to analyze future development of the City and appropriate zoning. These studies will help guide development to ensure that future wildlife attractants are not created within the recommended separation distances from the Airport.

The Proposed Action is consistent with these plans because it eliminates a hazardous wildlife attractant from the area within the 10,000 feet separation distance required by FAA AC 150/5200-33A, Hazardous Wildlife Attractants On or Near Airports, and Federal Grant Assurances.

#### **6.4 PUBLIC INVOLVEMENT**

A Notice of Availability of the Draft EA and Public Hearing date were advertised. The confirmation of advertisement is included in Appendix C.

Draft copies of the EA were sent to the following:

- Grand Forks Air Force Base-319<sup>th</sup> CES/CEVA, Grand Forks, ND
- Grand Forks Public Library, Grand Forks, ND
- North Dakota Aeronautics Commission, Bismarck, ND
- North Dakota Department of Health, Bismarck, ND
- North Dakota Game and Fish Department, Bismarck, ND
- North Dakota State Historical Society, Bismarck, ND
- North Dakota State Water Commission, Bismarck, ND
- Red River WMC – EERC, Grand Forks, ND
- University of North Dakota Aerospace, Grand Forks, ND
- U.S. Department of the Army Corps of Engineers, Bismarck, ND
- U.S. Department of Agriculture-Natural Resources Conservation Service, Bismarck, ND
- U.S. Department of the Interior-Fish and Wildlife Service, Bismarck, ND
- U.S. Environmental Protection Agency-Region 8, Denver, CO

On December 8, 2005 a Public Hearing was held for this EA. The minutes are included in Appendix B.

Comments on the Draft EA were received from the following:

- Department of the Air Force – Grand Forks AFB
- USFWS
- UND
- NDDOH
- USACE

These comments and any responses are included in Appendix B.

## 6.5 PROPOSED ACTION

The proposed action includes elimination of 82.2 acres of wetlands at GFK. The impact will be mitigated more than 10,000 feet from the Airport and 5 miles in the approach paths of existing and planned runways so as not to recreate the hazard.

## 6.6 COMMITMENTS AND COMPLIANCE - PERMITS REQUIRED

**Air Quality.** A NDPDES Construction Permit will be obtained from NDDOH and followed by the contractor. This permit requires the use of BMPs to control dust production. Also, the construction documents will require the contractors to use properly operating and muffled equipment.

**Compatible Land Uses.** The impacts to the wetlands will be mitigated as described in the Wetlands portion of this section.

**Construction Impacts.** A NDPDES Construction Permit will be obtained from NDDOH and followed by the contractor. This permit requires the use of BMPs to control erosion, both wind and water. In addition, the specifications will include Item P-156 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control. This specification is contained in FAA AC 150/5370-101, Standards for Specifying Construction of Airports. Construction traffic will be routed through controlled intersections where possible. To minimize impacting nesting season for most birds, construction will be postponed until after July 15<sup>th</sup> of the year of construction.



**Farmlands.** All of the wetlands except for Basin #1 to be eliminated by Alternative D are surrounded by land that is enrolled in the CRP. The action in this area would not begin until after the existing CRP contracts expire, beginning in 2007. In addition, the borrow site and mitigation site must be cleared by NRCS for impacts to farmlands.

**Fish, Wildlife, and Plants.** To minimize impacting nesting season for most birds, construction will be postponed until after July 15<sup>th</sup> of the year of construction. The impacts to the wetlands will be mitigated as described in the Wetlands portion of this section. If endangered or threatened species are encountered during construction, work will cease until the encountered species moves on. Sightings will be reported immediately to the USFWS, the NDGF, and the FAA Bismarck ADO.

**Hazardous Materials, Pollution Prevention, and Solid Waste.** If previously unknown contaminants are discovered during construction, or a spill occurs during construction, work will be stopped until the NDDOH and if applicable, the NRC is notified.

**Historic, Architectural, Archeological, and Cultural Resources.** The borrow and mitigation sites must be cleared by the SHPO before any borrow will be taken from that area. The mitigation sites must be cleared by the SHPO before any work begins in that site. If cultural or human remains are encountered during construction the sponsor must protect the findings, notify the SHPO and the FAA Bismarck ADO and the ACHP, when appropriate. The treatment of the discovery will be made according to the NHPA, the NEPA, the AIRFA, the NAGPRA, and the ARPA, according to the nature of the discovery.

**Noise.** The contractors will be required to maintain properly muffled equipment.

**Water Quality.** A NDPDES Construction Permit will be obtained from the NDDOH and followed by the contractors. This permit requires the use of BMPs to control erosion.

**Wetlands.** A § 404 Permit from the Department of the Army is required for impacts to Basin #37, mitigation for this basin will be coordinated with the USACE. All other mitigation for wetland impacts will be coordinated with

the USFWS and the NDGF. Mitigation will be conducted off of Airport property beyond 10,000 feet from the AOA and five miles in the approach paths of all existing and planned runways.

## CHAPTER 7 – PREPARERS

Ulteig Engineers, Inc. prepared this EA in conjunction with input from University of North Dakota's Anthropology Department using guidance and input from FAA Bismarck ADO and the Grand Forks Regional Airport Authority.

Following are the principal contributors to this document and its supporting documentation.

Name and Education	Contribution	Discipline / Experience
Steven M. Synhorst, PE B.S. Civil Engineering	Aviation Department Manager, Document Review, Quality Control	Ulteig Engineers, Inc. – 22 years of experience primarily in airport engineering.
Jonathan D. Scraper, PE B.S. Civil Engineering	Project Manager, Primary Author of EA, including Introduction, Purpose and Need, Alternatives, and Environmental Consequences	Ulteig Engineers, Inc. – 9 years of experience, primarily in airport engineering, addressing environmental concerns, construction inspection and project management.
Marisol Velilla B.S. Civil Engineering  US Army Corps of Engineers Wetland Delineation & Management Training Program	Primary Author and Wetlands Specialist for <u>Wetland Delineation Report</u>	Ulteig Engineers, Inc. – 5 years of experience as a wetland delineator and land development design engineer. Primarily design is in drainage control, stormwater management, and erosion control.
Jon Tonneson B.S. Geography	Graphics and GIS	Ulteig Engineers, Inc. – 5 years of experience as an Airport Planner and GIS Specialist
Jarrold Kassian	CAD Graphics and Production	Ulteig Engineers, Inc. – 7 years of experience as a Civil Technician and GIS Specialist
Michael A. Jackson, M.A.	Historic, Archeological, Cultural Resources Class I File Search	UND Anthropology Research

## CHAPTER 8 - REFERENCES

- ➔ FAA Order 1050.1E, Environmental Impacts: Policies and Procedures, June 8, 2004.
- ➔ FAA Order 5050.4A, Airport Environmental Handbook, October 8, 1985.
- ➔ FAA, Great Lakes Region, Bismarck ADO, "Tips for Airport Sponsors/Consultants in Documenting the Need For and Preparing EA's - Draft", November 2004.
- ➔ FAA and USDA, (Authors: Cleary, Edward C. and Dolbeer, Richard A. respectively), "Wildlife Hazard Management at Airports, A Manual for Airport Personnel", Second Edition, July 2005.
- ➔ Grand Forks International Airport, "Wildlife Hazard Management Plan", September 7, 2004.
- ➔ Memorandum of Agreement Between the FAA, the U.S. Air Force, the U.S. Army, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the U.S. Department of Agriculture to Address Aircraft-Wildlife Strikes.
- ➔ Michael A. Jackson M.A., University of North Dakota Anthropology Research, Class I File Search, January 2005.
- ➔ USDA, Animal and Plant Health Inspection Service, Wildlife Services, "Wildlife Hazard Assessment and Recommendations for the Wildlife Hazard Management Plan for the Grand Forks International Airport", Grand Forks, North Dakota, 2000.
- ➔ Federal Statutes, Regulations, Executive Orders, and Guidance, Including FAA ACs as listed in Appendix G.

## CHAPTER 9 - APPENDICES

Appendix A – Agency Contact Letters and Responses

Appendix B – Public Meeting Agenda, Minutes, and Comments

Appendix C – Advance Notification of Public Meeting

Appendix D – Wetland Delineation Report

Appendix E – Class 1 File Search Report – University of North Dakota  
Anthropology Research

Appendix F – Correspondence - Previous Mitigation of a Wetland

Appendix G – Federal Statutes, Regulations, Executive Orders, and  
Guidance, Including FAA ACs

## APPENDIX A – AGENCY CONTACT LETTERS AND RESPONSES

### Narrative

The scope of this EA began as an investigation into eliminating Basin #1 because of the large amounts of hazardous wildlife that it attracts in close proximity to the runway. This investigation included having Basin #1 reclassified as an AW (Artificial Wetland) because of its origin as a borrow pit.

After further investigation of the site and reviewing the WHA, the scope was changed to include the area that is shown now in the EA. From this point (December 2004), the scope included the present project area.

## Agency Contact Information

Agency	Contact Person	Address	City, State Zip	Response	Level of Involvement
City of Grand Forks-City Hall	Mayor Mike Brown	255 North 4 <sup>th</sup> St	Grand Forks, ND 58203	N	
EPA-Region 8 Code NEPA Review, SEPR-N	Brad Crowder	Suite 300, 999-18 <sup>th</sup> St	Denver, CO 80033	N	
Grand Forks Air Force Base-319 <sup>th</sup> CES/CEVA	Diane Strom	525 Tuskegee Airmen Blvd	GFAFB, ND 58205-6434	Y	Review agency
Grand Forks County Water Board	Pam Aaker	151 South 4 <sup>th</sup> St	Grand Forks, ND 58201	N	
Grand Forks Chamber of Commerce	Dan Schenkein	Suite 100, 202 North 3 <sup>rd</sup> St	Grand Forks, ND 58203	N	
Grand Forks Regional Economic Dev. Corp.	Klaus Thiessen	Suite 501, 600 DeMers Ave	Grand Forks, ND 58201	N	
ND Aeronautics Commission	Gary Ness	PO Box 5020	Bismarck, ND 58502	N	
ND Association of Counties	Mark Johnson	PO Box 877	Bismarck, ND 58502-0877	N	
ND Dept. of Agriculture	Roger Johnson	Dept. 602, 600 E Blvd Ave	Bismarck, ND 58505-0020	N	
ND Dept. of Health	David Glatt, PE	PO Box 5520	Bismarck, ND 58502-5520	Y	Review Agency
ND DOT-Office of Infrastructure and Support	Francis Ziegler, PE	608 E Blvd Ave	Bismarck, ND 58505	Y	No involvement unless project ventures onto NDDOT ROW
ND Division of Community Services	Paul Govig	PO Box 2057	Bismarck, ND 58503	N	
ND Game and Fish Dept.	John Schumacher	100 N Bismarck Expy	Bismarck, ND 58501	Y	Review Agency
ND Geological Society	John Hoganson	PO Box 82	Bismarck, ND 58502	N	
ND Industrial Commission-Oil and Gas Div.	Lynn Helms	Dept. 405, 600 E Blvd Ave	Bismarck, ND 58505-0840	N	
ND Parks and Recreation Dept.	Douglas Prchal	Suite 3, 1600 E Century Ave	Bismarck, ND 58503-0649	N	
ND State Historical Society	Merland Paaverud, Jr.	612 E Blvd Ave	Bismarck, ND 58505-0830	Y	Review Agency - No Survey is Warranted
ND State Soil Conservation Committee	Scott Hochhalter	Unit #104, 2718 Gateway Ave	Bismarck, ND 58503	N	
ND State Water Commission	Dale Frink	900 E Blvd Ave	Bismarck, ND 58505	Y	Review Agency - Project is not in a floodplain
ND Tourism Division	Sara Otte Coleman	PO Box 2057	Bismarck, ND 58503-2057	N	
Red River WMC - EERC	Dan Stepan	PO Box 9018	Grand Forks, ND 58202-9018	Y	Review Agency
University of North Dakota Aerospace	Frank Argenziano	2806 Airport Drive	Grand Forks, ND 58203	Y	Coordinating Agency
USACE-Environmental Economics and Cultural Resource Section-Omaha Dist.	Candace M. Gorton	106 S 15 <sup>th</sup> St	Omaha, NE 68102	N	
USACE - ND Regulatory Office	Daniel Cimarosi	1513 S 12 <sup>th</sup> St	Bismarck, ND 58504	Y	Coordinating Agency
USDA-NRCS	Doug Van Daalen	PO Box 1458	Bismarck, ND 58502-1458	Y	Coordinating Agency
USFWS - ND Ecological Services Field Office	Terry Ellsworth	3425 Miriam Ave	Bismarck, ND 58501	Y	Review Agency





Natural Resources Conservation Service  
2397 DeMers Avenue  
Grand Forks ND 58201

Grand Forks Field Office  
Phone: (701)775-4191 Ext. 3  
FAX: (701)746-7934

June 30, 2004

Jonathan D. Scraper, PE  
Ulteig Engineers, Inc.  
1401 Oak Manor Ave.  
Fargo, ND 58103-5245

RE: Wetland Certification of the Grand Forks International Airport

Dear Jonathan;

I have attached a Request for Wetland Determination/Delineation (NRCS-CPA-38) for your convenience. Please fill out the form and return the completed form to this office.

The certified wetland determination pertains only to the area highlighted in yellow on the attached Wetland Base Map. Prior to manipulation of any area other than the highlighted area on the attached aerial photo the Grand Forks International Airport needs to request a Certified Wetland Determination/Delineation from this office.

When NRCS receives the completed NRCS-CPA-38 form we will revise our Wetland Base Inventory. Notification will be sent out stating a certified wetland determination has been completed on this area and the inventory has been revised to identify the area as "AW Artificial Wetland."

If you have any question I may be reached at 701-772-2321, ext.3.

Sincerely,

A handwritten signature in cursive script, appearing to read "Paul Bjorg".

Paul Bjorg  
Soil Conservation Technician

Enclosures (2)

RECEIVED

JUL - 6 2004

ULTEIG ENGINEERS  
FARGO, ND

The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.

## REQUEST FOR CERTIFIED WETLAND DETERMINATION/DELINEATION

(use when the client requests a certified determination/delineation)

OWNER	AGENT - (OPERATOR)
Name:	Name:
Address:	Address:
Phone:	Phone:

Are you a USDA program Participant? (If yes, AD-1025 should be on file.) ☐ Yes ☐ No

Have you previously received a wetland determination or delineation on this tract from the Natural Resources Conservation Service (formerly Soil Conservation Service) or the Corps of Engineers? ☐ Yes ☐ No

Location of property (description): \_\_\_\_\_

County:	State
---------	-------

Farm No.: \_\_\_\_\_ Tract No.: \_\_\_\_\_ Acres in tract \_\_\_\_\_ ☐ Map or aerial photo with the tract/area outline

### PURPOSE OF REQUEST FOR DETERMINATION/DELINEATION (Check one and explain)

- ☐ Agricultural purpose(s): \_\_\_\_\_  
(Such as: clearing for cropland, drainage, farm buildings, etc.)
- ☐ Non-Agricultural purpose(s): \_\_\_\_\_  
(Such as: commercial development, subdivisions, etc.)
- ☐ Informational purpose(s): \_\_\_\_\_

- I certify that I am the owner or agent of the owner for the property previously described.
- I grant the Natural Resources Conservation Service (or their designated agents) the right to enter the property previously described to ascertain the extent of wetlands on said property.
- I understand that the information collected and the certified wetland determination/delineation is public information and may be release to the public or utilized in any of the agencies' data bases, or published on official wetland maps.

Signature of Owner:	Date:
Signature of Agent: (As authorized by the owner)	Date:

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willful falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

# Grand Forks County Wetland Base Map

152/51

51021

51021



①

41510

51021

51021

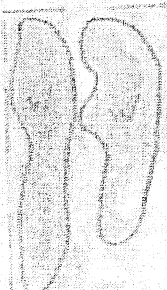
②

51021



Airport

NE



①

51021

51021

51021

945



Natural Resources Conservation Service  
2397 DeMers Avenue  
Grand Forks ND 58201

Grand Forks Field Office  
Phone: (701)775-4191 Ext. 3  
FAX: (701)746-7934

July 6, 2004

Marisol Velilla  
Ulteig Engineers, Inc.  
1401 Oak Manor Ave.  
Fargo, ND 58103-5245

Dear Marisol:

On June 7, 2004 I received an email from you requesting wetland verification on an area you identified within the Grand Forks International Airport located in the S1/2 Section 28, 152-51. As previously stated the area is identified as "W" (wetland) on NRCS's Wetland Base Inventory.

This is to notify you that on June 22, 2004 Allan Gulsvig, NRCS Soils Scientist and I were on site to make a preliminary technical determination. It was determined that the area you identified on the aerial photo provided by you is man-made. Therefore, the area will be labeled as "AW" artificial wetland. An artificial wetland is an area that was formerly non-wetland, but now meets the criteria due to human activities. In this case, the area was created as a result of excavation for fill needed for projects within the airport property. Artificial wetlands are not subject to the provisions of the 1985 Food Security Act as amended.

Our Wetland Base Inventory will need to be revised to reflect the label change of this area from "W" to "AW" before the determination will be official. To complete the label revision a Request for Certified Wetland Determination/Delineation (NRCS-CPA-38) will need to be signed by a qualified person of authority from the Grand Forks International Airport. I contacted Jonathan Scraper, PE as you recommended and he will be taking care of the request process.

There are areas adjacent to the "AW" that appear to meet the obvious wetland criteria. I recommend requesting a Certified Wetland Determination/Delineation prior to manipulation of any area outside of what will now be labeled "AW".

If you have any questions I may be reached at 701-772-2321, ext.3.

Sincerely,

Paul Bjorg  
Soil Conservation Technician



Get the job done right

3350 38th Avenue S.  
Fargo, ND 58104-7079  
PO Box 9615 / 58106-9615  
Phone: 701.237.3211  
Fax: 701.237.3191

July 14, 2004

Mr. Dan Cimarosti  
North Dakota Regulatory Office  
US Corps of Engineers  
1513 South 12th Street  
BISMARCK, ND 58504

Subject: Wetland Closure  
South 1/2 of Section 28, T152N, R51W  
Grand Forks, North Dakota  
UEI Project No. 104.396

Dear Mr. Cimarosti,

It is the intent of the Grand Forks International Airport to fill the wetland currently existing at this location. The wetland is a wildlife attractant and poses a safety hazard to air traffic. This letter is to request a jurisdictional determination from the U.S. Army Corps of Engineers.

The property is currently owned by the Grand Forks International Airport and is not connected to or part of a river, creek or navigable water.

The NRCS Grand Forks Field Office has conducted a preliminary technical determination of the wetland and will be revising the Wetland Base Inventory to label this area as an "AW" (Artificial Wetland). Review of archived construction plans show that it was created as a borrow pit many decades ago.

Mr. Dan Cimarosti

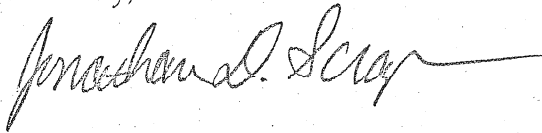
Page 2

July 14, 2004

Attached are aerial photos with the subject wetland outlined and correspondence from NRCS.

Please review this information and notify me immediately if you need any additional information. I can be reached at 701-280-8587 or email me at [Jon.Scraper@Ulteig.com](mailto:Jon.Scraper@Ulteig.com).

Sincerely,

A handwritten signature in black ink, appearing to read "Jonathan D. Scraper", with a long horizontal flourish extending to the right.

Jonathan D. Scraper, PE

JDS/ldb

Enclosure

cc: Steve Johnson, GFKRAA  
Steve Synhorst, Ulteig Engineers



Natural Resources Conservation Service  
2397 DeMers Avenue  
Grand Forks ND 58201

Grand Forks Field Office  
Phone: (701)775-4191 Ext. 3  
FAX: (701)746-7934

July 6, 2004

Marisol Velilla  
Ulteig Engineers, Inc.  
1401 Oak Manor Ave.  
Fargo, ND 58103-5245

Dear Marisol:

On June 7, 2004 I received an email from you requesting wetland verification on an area you identified within the Grand Forks International Airport located in the S1/2 Section 28, 152-51. As previously stated the area is identified as "W" (wetland) on NRCS's Wetland Base Inventory.

This is to notify you that on June 22, 2004 Allan Gulsvig, NRCS Soils Scientist and I were on site to make a preliminary technical determination. It was determined that the area you identified on the aerial photo provided by you is man-made. Therefore, the area will be labeled as "AW" artificial wetland. An artificial wetland is an area that was formerly non-wetland, but now meets the criteria due to human activities. In this case, the area was created as a result of excavation for fill needed for projects within the airport property. Artificial wetlands are not subject to the provisions of the 1985 Food Security Act as amended.

Our Wetland Base Inventory will need to be revised to reflect the label change of this area from "W" to "AW" before the determination will be official. To complete the label revision a Request for Certified Wetland Determination/Delineation (NRCS-CPA-38) will need to be signed by a qualified person of authority from the Grand Forks International Airport. I contacted Jonathan Scrapper, PE as you recommended and he will be taking care of the request process.

There are areas adjacent to the "AW" that appear to meet the obvious wetland criteria. I recommend requesting a Certified Wetland Determination/Delineation prior to manipulation of any area outside of what will now be labeled "AW".

If you have any questions I may be reached at 701-772-2321, ext.3.

Sincerely,

Paul Bjorg  
Soil Conservation Technician

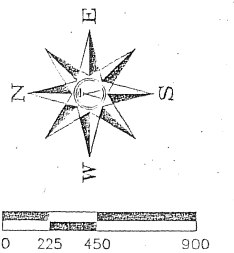


GRAND FORKS  
INTERNATIONAL  
AIRPORT

GRAND FORKS, NORTH DAKOTA

Revision	Date	Number	By
1			

WETLAND LOCATION:  
S½ SECTION 28, 152-51  
GRAND FORKS COUNTY  
GRAND FORKS, NORTH DAKOTA



Bismarck - Detroit Lakes - Fargo - Minneapolis - Sioux Falls  
3350 38th Avenue South  
Fargo, North Dakota 58104  
Phone: 701.237.3211 Fax: 701.237.3191  
Web: [www.ulteg.com](http://www.ulteg.com)  
Drawn By: JJK  
Checked By: JDS  
Approved By:

AERIAL PHOTO

Project Number: 104,396  
Date: July 13, 2004  
Sheets: 1 of 2

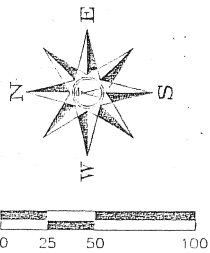


GRAND FORKS  
INTERNATIONAL  
AIRPORT

GRAND FORKS, NORTH DAKOTA

Revision	Date	Number	By
△			

WETLAND LOCATION:  
S½ SECTION 28, 152-51  
GRAND FORKS COUNTY  
GRAND FORKS, NORTH DAKOTA



Bismarck - Detroit Lakes - Fargo - Minneapolis - Sioux Falls  
3350 38th Avenue South  
Fargo, North Dakota 58104  
Phone: 701.237.3211 Fax: 701.237.3191  
Web: www.ulteig.com  
Drawn By: JJK  
Checked By: JDS  
Approved By:

AERIAL PHOTO

Project Number: 104.396  
Date: July 13, 2004  
Sheets: 2 of 2





Get the job done right

3350 38th Avenue S.  
Fargo, ND 58104-7079  
PO Box 9615 / 58106-9615  
Phone: 701.237.3211  
Fax: 701.237.3191

July 15, 2004

Jeffrey Towner, Field Supervisor  
U.S. Fish and Wildlife Service  
North Dakota Field Office  
3425 Miriam Avenue  
BISMARCK ND 58501

Subject: Wetland Closure  
Grand Forks International Airport  
Ulteig Project No. 104.396

It is the intent of the Grand Forks International Airport to fill the wetland located in the South ½ of Section 28, T152N, R51W, outlined in red on the attached aerial photos. The wetland attracts hazardous wildlife to the airfield that are a hazard to air traffic.

On June 22, 2004 the NRCS made a preliminary technical determination of the site. Based on their determination, the airport has requested a wetland determination to revise the Wetland Base Inventory to show the wetland as an "AW" or Artificial Wetland. Review of archived construction plans show that the area was created as a borrow pit many decades ago. This correspondence is attached.

We have notified the Corps of Engineers of these intentions and are awaiting a determination of jurisdiction.

At this time, we are requesting comments from the U.S. Fish and Wildlife Service on this project.

If you have any questions or would like access to the site, please call me at 701-280-8587 or email me at [Jon.Scraper@Ulteig.com](mailto:Jon.Scraper@Ulteig.com).

Sincerely,

A handwritten signature in black ink, appearing to read "Jonathan D. Scraper".

Jonathan D. Scraper, PE  
Project Engineer

JDS/ldb  
Enclosure

cc: Steve Synhorst, Ulteig Engineers



Natural Resources Conservation Service  
2397 DeMers Avenue  
Grand Forks ND 58201

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Phone: (701)775-4191 Ext. 3  
FAX: (701)746-7934

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Dear Marisol:

On June 7, 2004 I received an email from you requesting wetland verification on an area you identified within the Grand Forks International Airport located in the S1/2 Section 28, 152-51. As previously stated the area is identified as "W" (wetland) on NRCS's Wetland Base Inventory.

This is to notify you that on June 22, 2004 Allan Gulsvig, NRCS Soils Scientist and I were on site to make a preliminary technical determination. It was determined that the area you identified on the aerial photo provided by you is man-made. Therefore, the area will be labeled as "AW" artificial wetland. An artificial wetland is an area that was formerly non-wetland, but now meets the criteria due to human activities. In this case, the area was created as a result of excavation for fill needed for projects within the airport property. Artificial wetlands are not subject to the provisions of the 1985 Food Security Act as amended.

Our Wetland Base Inventory will need to be revised to reflect the label change of this area from "W" to "AW" before the determination will be official. To complete the label revision a Request for Certified Wetland Determination/Delineation (NRCS-CPA-38) will need to be signed by a qualified person of authority from the Grand Forks International Airport. I contacted Jonathan Scrapper, PE as you recommended and he will be taking care of the request process.

There are areas adjacent to the "AW" that appear to meet the obvious wetland criteria. I recommend requesting a Certified Wetland Determination/Delineation prior to manipulation of any area outside of what will now be labeled "AW".

If you have any questions I may be reached at 701-772-2321, ext.3.

Sincerely,

Paul Bjorg  
Soil Conservation Technician

# REQUEST FOR CERTIFIED WETLAND DETERMINATION/DELINEATION

(use when the client requests a certified determination/delineation)

OWNER	AGENT - (OPERATOR)
Name: Steve Johnson, Executive Director Grand Forks Regional Airport Authority	Name: Jonathan D. Scraper, PE, Project Engineer Ulteig Engineers, Inc.
Address: 2787 Airport Drive	Address: 3350 38th Avenue South
Grand Forks, ND 58203	Fargo, ND 58104-7079
Phone: 701-795-6981	Phone: 701-280-8587

Are you a USDA program Participant? (If yes, AD-1026 should be on file.) ☒ Yes ☐ No

Have you previously received a wetland determination or delineation on this tract from the Natural Resources Conservation Service (formerly Soil Conservation Service) or the Corps of Engineers? ☐ Yes ☒ No

Location of property (description): S 1/2 Section 28, 152-51

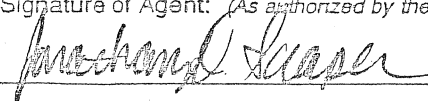
County: Grand Forks	State North Dakota
------------------------	-----------------------

Farm No.: 9287 Tract No.: 1614 Acres in tract ☒ Map or aerial photo with the tract/area outline

## PURPOSE OF REQUEST FOR DETERMINATION/DELINEATION (Check one and explain)

- ☐ Agricultural purpose(s):  
(Such as: clearing for cropland, drainage, farm buildings, etc.)
- ☒ Non-Agricultural purpose(s): Closure of wetland for wildlife hazard mitigation  
(Such as: commercial development, subdivisions, etc.)
- ☐ Informational purpose(s):

- I certify that I am the owner or agent of the owner for the property previously described.
- I grant the Natural Resources Conservation Service (or their designated agents) the right to enter the property previously described to ascertain the extent of wetlands on said property.
- I understand that the information collected and the certified wetland determination/delineation is public information and may be released to the public or utilized in any of the agencies' data bases, or published on official wetland maps.

Signature of Owner:	Date:
Signature of Agent: (As authorized by the owner) 	Date: 7/8/04

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.



Ulteig engineers

3350 38<sup>th</sup> Ave S  
Fargo, ND 58104  
Phone: 701-237-3211  
Fax: 701-280-8739

TO: Steve Johnson, Executive Director

GFK Regional Airport Authority

2787 Airport Drive

Grand Forks, ND 58203

DATE: 7/8/04

JOB No. 104.396

ATTENTION:

RE: Request for Certified Wetland

Determination/Delineation

WE ARE SENDING YOU: ☒ Attached ☐ Under separate cover via the following items:

☐ Shop Drawings

☐ Prints

☐ Plans

☐ Samples

☐ Specifications

☐ Copy of Letter

☐ Change Order

☐ Other

COPIES	DATE	No.	DESCRIPTION
1	7/8/04		NRCS-CPA-38
1	7/8/04		Aerial Photo of Subject Wetland

THESE ARE TRANSMITTED AS CHECKED BELOW:

☐ For Approval

☐ Approved As Submitted

☐ Re-Submit

copies for approval

☒ For Your Use

☐ Approved As Noted

☐ Submit

copies for distribution

☐ As Requested

☐ Returned for Corrections

☐ Return

corrected prints

☐ For Review & Comment ☐

☐ FOR BIDS DUE:

☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS: Steve,

I don't know if we need your signature on this or not, but what the heck. Please sign it and forward it along in the enclosed envelope to the NRCS. This should be answered, by the NRCS, with an official change of wetland classification to AW (Artificial Wetland). I will be sending out a request this week to the COE for determination of jurisdiction. Then, we'll be on the home stretch.

COPY TO: Synhorst

SIGNED: 



Ulteig engineers

at the job done right

3350 38<sup>th</sup> Ave S  
Fargo, ND 58104  
Phone: 701-237-3211  
Fax: 701-280-8739

TO: Paul Bjorg, Soil Conservation Technician

NRCS

2397 DeMers Ave

Grand Forks, ND 58201

DATE: 7/8/04

JOB No. 104.396

ATTENTION:

RE: Request for Certified Wetland

Determination/Delineation

WE ARE SENDING YOU: ☒ Attached ☐ Under separate cover via the following items:

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COPIES	DATE	No.	DESCRIPTION
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1	7/8/04		Aerial Photo of Subject Wetland

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corrected prints

☐ For Review & Comment ☐

☐ FOR BIDS DUE:

☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS: Paul,

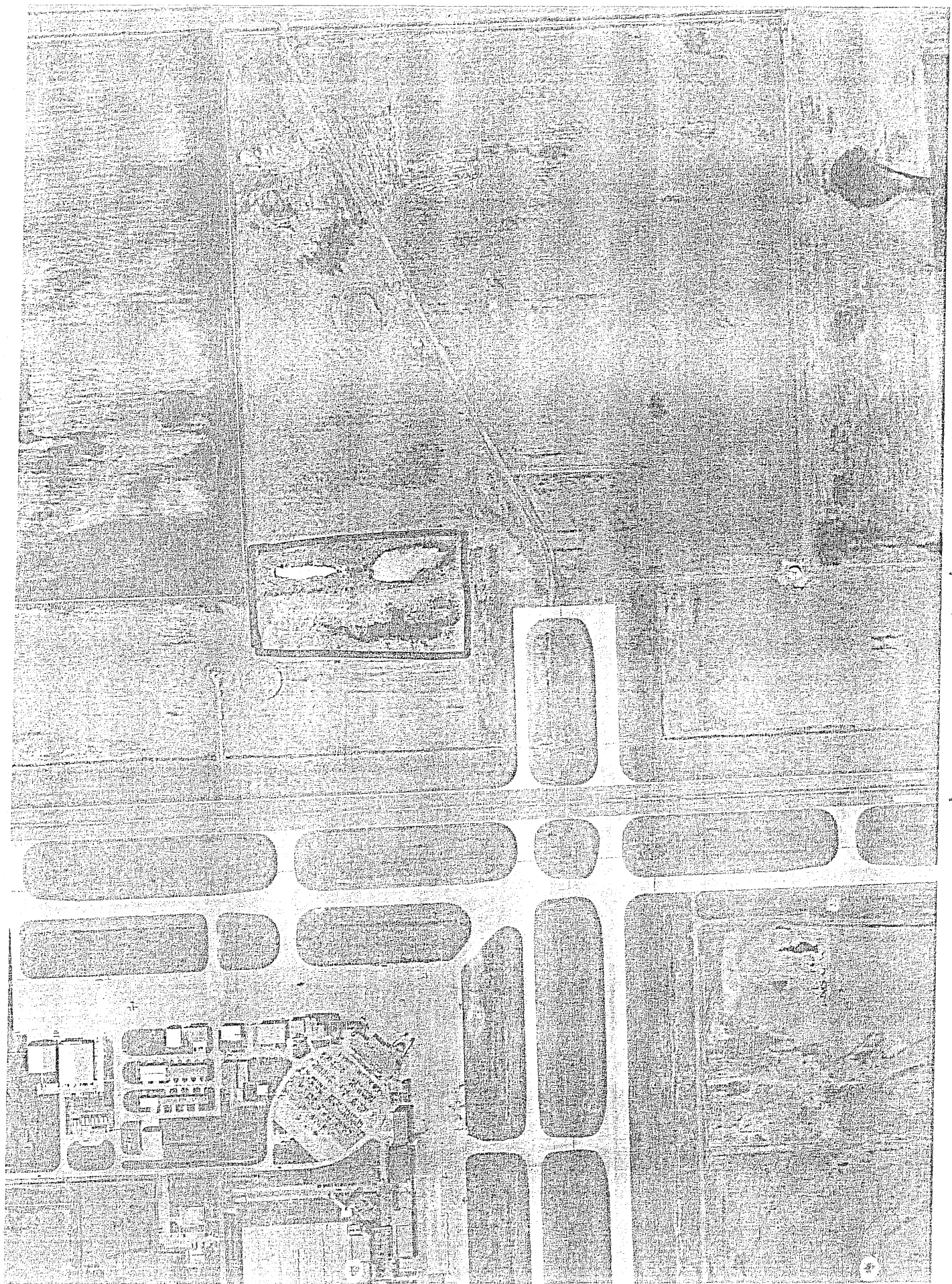
Attached is the information that you requested. Please let me know if you need any additional information.

You can call me at 701-280-8587 and my e-mail is Jon.Scraper@Ulteig.com.

COPY TO: Synhorst

SIGNED:





1" = 600'





DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, OMAHA DISTRICT  
NORTH DAKOTA REGULATORY OFFICE  
1513 S. 12<sup>TH</sup> STREET  
BISMARCK, NORTH DAKOTA 58504-6640

REPLY TO  
ATTENTION OF

July 20, 2004

North Dakota Regulatory Office

[200460482]

Mr. Jonathan Scraper, P.E.  
Ulteig Engineers  
3350 38<sup>th</sup> Avenue South  
Fargo, North Dakota 58106-9615

Dear Mr. Scraper:

This is in response to your July 14, 2004 request for a jurisdictional determination on a parcel of property located in the SW $\frac{1}{4}$  of Section 28, Township 152 North, Range 51 West, Grand Forks County, North Dakota. The Grand Forks International Airport proposes to fill a wetland that poses a safety hazard to air traffic.

Based on the information provided, we have determined that there are no jurisdictional waters of the United States located at the project site. Therefore, the activity is not subject to Department of the Army (DA) regulatory authorities and no permit pursuant to Section 404 of the Clean Water Act is required from the Corps of Engineers. If you disagree with this jurisdictional determination, you have the right to appeal the decision. If you would like more information on the jurisdictional appeal process, contact this office.

Although a DA permit is not required for this project, this does not eliminate the requirement that you obtain any other applicable Federal, State, Tribal or local permits as required. If you have any questions regarding this letter or our program, please do not hesitate to write me, or **Patsy Crooke** of my staff, at the above address, or call us at (701) 255-0015.

Sincerely,

*for* Daniel E. Cimarosti  
Acting State Program Manager  
North Dakota

Enclosures

RECEIVED

JUL 23 2004

ULTEIG ENGINEERS  
FARGO, ND

APPLICANT: Ulteig Engineering/Grand Forks International Airport

PROJECT LOCATION/WATERWAY: Isolated wetlands

FILE NUMBER: 200460482

PROJECT REVIEW COMPLETED: ☒ Office ☐ Field

Jurisdictional Determination (JD): (For sites regulated under 33 CFR 320-330)

- ☐ Preliminary JD - Based on available information, ☐ there appear to be or ☐ there appear to be no "waters of the United States" or "navigable waters of the United States" on the project site. A preliminary JD is not appealable.
- ☒ Approved JD - ☐ There are or ☒ there are no "waters of the United States" or "navigable waters of the United States" on the project site. An approved JD is an appealable action (Reference 33 CFR 331).  
(Note: JDs prepared by the Environmental Protection Agency are not appealable to the Corps of Engineers)

**Basis of Jurisdictional Determination:**

Waters defined under 33CFR 328.3(a) as "waters of the United States":

- ☐ (1) The presence of waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
- ☐ (2) The presence of interstate waters including interstate wetlands<sup>1</sup>.
- ☐ (3) The presence of other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could effect interstate commerce including any such waters:
- ☐ (i) which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☐ (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- ☐ (iii) which are or could be used for industrial purposes by industries in interstate commerce.
- ☐ (4) Impoundments of waters defined as a Water of the US.
- ☐ (5) The presence of a tributary to a water identified in (1) - (4) above.
- ☐ (6) The presence of territorial seas.
- ☐ (7) The presence of wetlands adjacent<sup>2</sup> to interstate or other waters of the US, except for those wetlands adjacent to other wetlands.

Waters defined under 33CFR 329 as "navigable waters of the United States":

- ☐ The presence of waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

**Rationale for Basis:**

The wetlands are isolated per SWANCC

**Lateral Extent of Jurisdiction:** (Reference: 33 CFR 328 and 329)

- ☐ Ordinary High Water Mark indicated by:
- ☐ clear, natural line impressed on the bank
  - ☐ the presence of litter and debris
  - ☐ changes in the character of soil
  - ☐ destruction of terrestrial vegetation
  - ☐ shelving
  - ☐ other: \_\_\_\_\_
- ☐ High Tide Line indicated by:
- ☐ oil or scum line along shore objects
  - ☐ fine shell or debris deposits (foreshore)
  - ☐ physical markings/characteristics
  - ☐ tidal gages
  - ☐ other: \_\_\_\_\_
- ☐ Mean High Water Mark indicated by:
- ☐ survey to available datum; ☐ physical markings; ☐ vegetation lines/changes in vegetation types
- ☐ In ocean or coastal area, site is within a zone three geographic (nautical) miles seaward of the baseline<sup>3</sup>
- ☐ Wetland, as shown on the attached wetland delineation map and/or in a jurisdictional report prepared by: \_\_\_\_\_

☐ Additional supporting information attached:

Preparer: Petry Clark

Date: 22 July 04

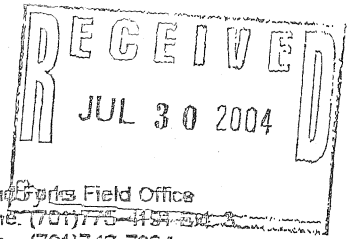
<sup>1</sup>Wetlands are identified and delineated using the methods and criteria established in the Corps Wetland Delineation Manual (87 Manual) (i.e., occurrence of hydrophytic vegetation, hydric soils and wetland hydrology).

<sup>2</sup>The term "adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes, and the like are also adjacent.

<sup>3</sup>Baseline is the line on the shore reached by the ordinary low tides from which the distance of three miles is measured.



Natural Resources Conservation Service  
2397 DeMere Avenue  
Grand Forks ND 58201



July 29, 2004

Steve Johnson  
Grand Forks Regional Airport Authority  
2787 Airport Drive  
Grand Forks, ND 58203

Dear Mr. Johnson:

This letter serves to notify you that the Natural Resources Conservation Service (NRCS) has completed a Preliminary Wetland Determination for Tract 1614 on the fields shown in Section II of the attached NRCS-CPA-026E "HIGHLY ERODIBLE LAND AND WETLAND CONSERVATION DETERMINATION." This Preliminary Wetland Determination was completed in response to a request to check wetland status on an area adjacent to the airport runway. We have determined that the area originally labeled as Wetland (W) in the south half of Section 28, Township 152 Range 51 is actually an Artificial Wetland (AW). The area labeled "AW" (this area only) is exempt from the wetland conservation provisions of the 1985 National Food Security Act (FSA), as amended.

Areas identified, as "NI" Not Inventoried have not had wetland delineations completed. This NI determination supercedes all previous NRCS wetland inventories. These areas may contain wetlands that are subject to the provisions of the 1985 National Food Security Act as amended. A certified determination should be requested prior to altering or manipulating any areas where the NI determination was made.

This wetland determination does not include "other waters of the United States," as defined by the United States Army Corps of Engineers (COE), which includes but is not limited to lakes, rivers, streams, and mud flats, which are regulated by the Clean Water Act (404). Contact the COE (701-255-0015) in Bismarck, North Dakota, regarding needs for permits.

In order to maintain your USDA program eligibility and comply with the Clean Water Act, I recommend that you contact NRCS prior to performing the following activities:

- land clearing
- drainage (tile or open ditching)
- drainage maintenance
- filling, leveling, or dredging
- land use changes
- any activity involving "other waters of the United States," as defined above



As a result of statutory and regulatory changes, the NRCS appeal process has changed. Under the current appeals process, this preliminary technical determination will become final within 30 days unless you request a field visit by NRCS staff. The NRCS representative will review with you the basis for our preliminary technical determination, answer any questions you have concerning the determination, and/or gather additional information from you concerning the preliminary determination.

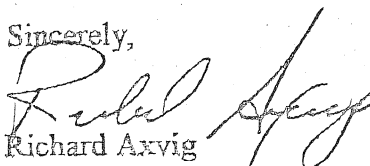
A final technical determination will be issued within 30 days after the field visit, if one is requested. If a field visit is not requested, this preliminary determination becomes final on August 30, 2004. The final technical determination, whether it is a result of the expiration of the 30-day period following receipt of this preliminary technical determination or receipt of a final determination may be appealed to the Farm Service Agency (FSA), Grand Forks County Committee at the address below. If you do not take any action during the preliminary 30-day period, your appeal rights begin August 30, 2004 and ends on September 29, 2004. We will forward a copy of our administrative record to the county committee for their use in deciding your appeal, should you decide to appeal to the county committee.

Grand Forks County FSA Committee  
2397 DeMers Avenue  
Grand Forks ND 58201

If you are the owner of this tract and have a tenant, you are urged to discuss this letter with the tenant. Likewise, if you are the tenant of these tracts, you are urged to discuss this letter and accompanying NRCS-CPA-026E with the landlord(s).

I am available to answer any questions or discuss any concerns you might have. Please stop by the office or call me at (701)772-2321, ext. 3.

Sincerely,

  
Richard Axvig  
District Conservationist

Attachments

Cc: Terry Miller, County Executive Director, FSA

## HIGHLY ERODIBLE LAND AND WETLAND CONSERVATION DETERMINATION

Name Address:	Grand Forks Regional Airport Authority 2787 Airport Drive Grand Forks, ND 58203	Request Date:	7/9/04	County:	Grand Forks
Agency or Person Requesting Determination:	Steve Johnson	Tract No:	1614	FSA Farm No.:	9287

## Section I - Highly Erodible Land

Is a soil survey now available for making a highly erodible land determination?	Yes
Are there highly erodible soil map units on this farm?	No

Fields in this section have undergone a determination of whether they are highly erodible land (HEL) or not; fields for which an HEL Determination has not been completed are not listed. In order to be eligible for USDA benefits, a person must be using an approved conservation system on all HEL.

<u>Field(s)</u>	<u>HEL(Y/N)</u>	<u>Sodbust(Y/N)</u>	<u>Acres</u>	<u>Determination Date</u>
1	N	N	123.2	8/5/88
2	N	N	39.8	8/5/88
NC	N	N	13.4	7/29/04
	-	-		
	-	-		

The Highly Erodible Land determination was completed in the Office

## Section I - Wetlands

Are there hydric soils on this farm?	Yes
--------------------------------------	-----


Fields in this section have had wetland determinations completed. See the Definition of Wetland Label Codes for additional information regarding allowable activities under the wetland conservation provisions of the Food Security Act and/or when wetland determinations are necessary to determine USDA program eligibility.

<u>Field(s)</u>	<u>Wetland Label*</u>	<u>Occurrence Year (CW)**</u>	<u>Acres</u>	<u>Determination Date</u>	<u>Certification Date</u>
1	NI		123.2	8/5/88	7/29/04
2	NI		39.8	8/5/88	7/29/04
NC	NW		5.1	7/29/04	7/29/04
NC	AW		8.3	7/29/04	7/29/04
	-				

The wetland determination was completed in the -Field It was -mailed to the person on 7/29/04.

Remarks: NRCS-CPA-33 signed 7/9/04. Area labeled "AW" is a borrow area. Revised original wetland determination of "W" to "AW".

I certify that the above determinations are correct and were conducted in accordance with policies and procedures contained in the National Food Security Act Manual.

Signature Designated Conservationist	Date
	7/29/04

# \*DEFINITIONS OF WETLAND LABEL CODES

AW	Artificial Wetland. An area that is artificial or irrigation induced wetland. These wetlands are not subject to the wetland conservation provision.
AW/FW	An area that contains both AW and FW.
AW/W	An area that contains both AW and W.
CC	Commenced Conversion exemption.
CPD	Corps Permit Decision. Corps of Engineers permit decisions regarding section 404 of the Clean Water Act will be relied upon to satisfy the wetland conservation provisions of the Food Security Act of 1985, as amended.
CMW	An area that receives a Categorical Minimal Effect determination.
CW	Converted Wetlands. An area converted between December 23, 1985 and November 28, 1990. IN any year that an agricultural commodity is planted on these converted wetlands, you will ineligible for USDA benefits.
**CW+year	An area converted after November 28, 1990. You will be ineligible for USDA program benefits until this wetland is restored.
CWNA	Converted Wetland Non-Agricultural use. A wetland area converted to other than agricultural commodity production.
CWTE	Converted Wetland Technical Error. An area converted or commenced based on an incorrect NRCS determination or misinformation from a NRCS or FSA employee.
FW	Farmed Wetland. An area that is farmed wetland; was manipulated and planted before December 23, 1985, but still meets wetland criteria. These may be farmed and maintained in the same manner as long as they are not abandoned.
FWP	Farmed Wetlands Pasture. An area that is pasture or hayland, manipulated before December 23, 1985 but still meets wetland criteria. These may be farmed and maintained in the same manner as long as they are not abandoned.
MIW	Mitigation Wetlands. Wetlands on which a person is actively mitigating a frequently cropped area or a wetland converted between December 23, 1985 and November 28, 1990. A converted wetland, farmed wetland, or farmed wetland pasture on which functions and values were lost are compensated for through wetland restoration, enhancement or creation.
MW	Minimal effect Wetland. An area determined to be minimal effect. These wetlands are to be farmed according to the minimal-effect agreement signed at the time the minimal-effect determination was made,
MWM	An area determined to be minimal effect with mitigation.
NI	Not Inventoried - No wetland determination has been completed.
NW	Non-Wetland. An area that does not contain a wetland.
NW/NAD	An area determined to be a non-wetland resulting from a decision from the National Appeals Division.
OW	Other Waters of the U.S. Area that fall under the jurisdiction of the Clean Water Act.
PC	Prior Converted cropland, which was drained filled, or manipulated before December 23, 1985; was cropped prior to December 23, 1985; was not abandoned; and does not meet FW criteria. These are not subject to the wetland conservation provision unless the area reverts to wetland as a result of abandonment.
PC/NW	An area that contains both PC and NW.
TP	Third Party Exemption.
W	Wetlands. An area meeting wetland criteria, including wetland farmed under natural conditions. If you plan to clear, drain, fill, level or manipulate these areas, contact NRCS and the Army Corp of Engineers prior to any such activity.
WX	A wetland area that has been manipulated after December 23, 1985, but was not, for the purpose of making production possible and production was not made possible. These include wetlands manipulated by drainage maintenance agreements.

# Certified Wetland Determination

Grand Forks Regional Airport Authority

Section 28, 152-51

Part of Tract 1614

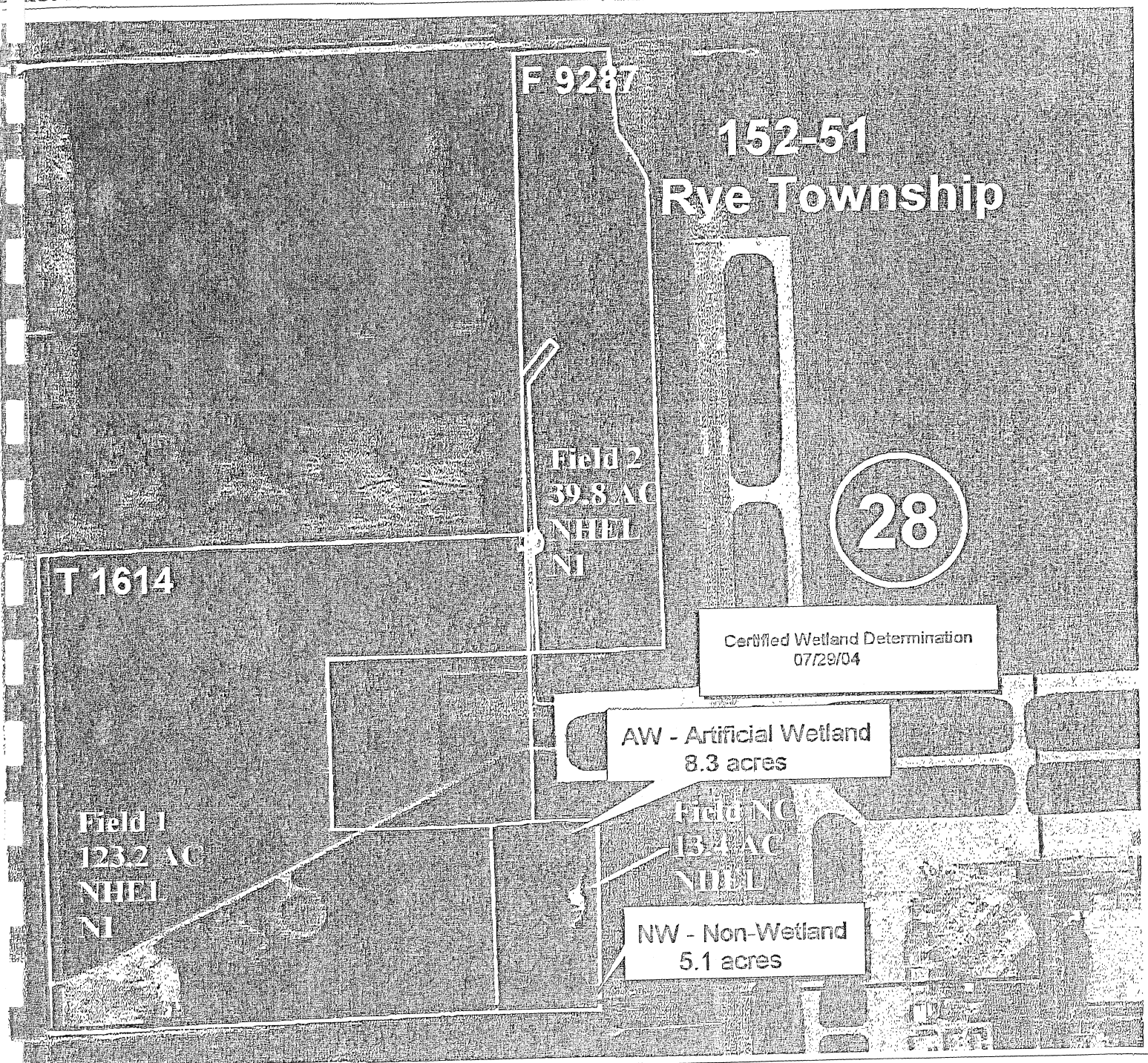
Date: 07/29/2004

Assisted by: Paul Bjorg

Grand Forks County Service Center

Cooperating with:

Eastern Grand Forks County SCD

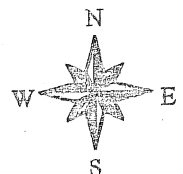


## Legend

- Certified Wetland Labeled - AW
- Section Boundary
- Tract 1614 Boundary

USDA

1000 0 1000 2000 Feet





2787 Airport Drive  
Grand Forks, ND 58203  
(701) 795-6981  
Fax (701) 795-6979

Grand Forks  
Regional Airport  
Authority

# Fax

To: Jon Scaper, Ulteig

From: Steve Johnson 

Fax:

Pages: 6

Phone:

Date: 7/30/04

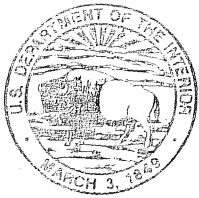
Re: Wetland determination

CC:

☐ Urgent    ☒ For Review    ☐ Please Comment    ☐ Please Reply    ☐ Please Recycle

• Commenter:

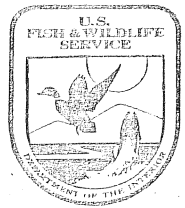
I think we won!



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Ecological Services  
3425 Miriam Avenue  
Bismarck, North Dakota 58501



AUG 17 2004

Mr. Jonathan D. Scraper, PE  
Ulteig Engineers  
3350 38th Avenue S  
Fargo, North Dakota 58104-7079

Dear Mr. Scraper:

The U.S. Fish and Wildlife Service (Service) has reviewed the information provided in your July 15, 2004, letter and the additional material you provided by fax on August 4, 2004. The Grand Forks International Airport proposes to fill 8.3 acres of wetland located near the airport runway in T. 152 N., R. 51 W., Section 28, S½, Grand Forks County, North Dakota. The project is intended to mitigate aircraft collisions with wildlife by removing wetland habitat adjacent to the airport runway.

A July 20, 2004, jurisdictional review by the Corps of Engineers determined that the area is not a water of the United States and is therefore not regulated by the Clean Water Act. The Natural Resources Conservation Service (NRCS), on July 29, 2004, made a wetland determination that the referenced site is an artificial wetland which exempts this particular wetland from the wetland conservation provisions of the 1985 National Food Security Act, as amended. Information found in archived airport construction plans indicate this site was a borrow area that has been in place for decades.

The Federal Aviation Administration, U.S. Air Force, U.S. Army, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and the U.S. Department of Agriculture have entered into a Memorandum of Agreement (MOA) to address aircraft-wildlife strikes. The July 2003 MOA states that the signatory agencies will work together to reduce the risks to aircraft from the existing and future environmental conditions contributing to aircraft-wildlife strikes. The agencies agree that wetlands provide many important ecological functions and values, including fish and wildlife habitat. The agencies further agree to cooperate with the airport operator to develop a specific wildlife hazard management plan for a given location, when a potential wildlife hazard is identified. The plan should avoid adverse impacts to wildlife populations, wetlands, or other sensitive habitats to the maximum extent practical. Unavoidable impacts resulting from implementing the plan will be fully compensated pursuant to all applicable Federal laws, regulations, and policies.

The habitats supporting fish and wildlife resources in the Red River Valley have been substantially altered through residential, commercial, industrial, and agricultural development. The remaining wetland habitat areas provide several important functions for waterfowl and other migratory birds (food, shelter, nesting and brood rearing habitat). Aerial photographs provided with your letter indicate wetland habitat characteristics (vegetation and hydrology) have developed on the site over time and undoubtedly provide functional habitat value for wetland dependant species. The Service recommends replacing the functions of the existing wetland to be filled.

Compensatory mitigation may include restoration of filled, drained, or otherwise altered wetlands; enhancement of existing wetlands; and creation of wetlands in uplands. The focus of any mitigation must be the replacement of wetland functions that have been affected, regardless of the approach chosen. The Service's general order of preference for compensatory mitigation is restoration, creation and enhancement.

The North Dakota Department of Transportation (NDDOT) owns an established wetland mitigation bank that is used to offset wetland impacts that result from transportation projects. In an August 9, 2004, phone conversation with Terry Ellsworth of my staff, you stated that this option had been discussed with NDDOT, and NDDOT would not allow the purchase of wetland mitigation bank credits for this project.

Review of the National Wetland Inventory map for the project area indicate numerous drained wetland basins within one or two miles of the project area. These drained wetlands could be restored by back-filling the drainage channel and allowing the wetlands to revert to their natural state. This method of wetland restoration has proven very successful in the prairie pothole region and would provide acre for acre mitigation for wetlands filled during project construction.

Wetland creations must be carefully planned to ensure long-term success of the mitigation site. Without adequate water inputs, wetland creation projects will fail to develop the desired functional wetland values and, therefore, will not provide acceptable mitigation for project losses. Before any site is selected for a wetland creation project, a water budget analysis should be conducted to determine if the proposed site has a sufficient contributing watershed area to support the created wetland complex. The Natural Resources Conservation Service has technical resources available to assist with the water budget analysis for proposed constructed wetlands. In order to provide maximum habitat value, the mitigation site should be excavated to create several shallow basins with irregular rims and undulating bottom contours, providing for a natural diversity of water levels within each basin. Stockpiled wetland topsoil spread over the bottom of the basins should provide a natural wetland vegetation seed bank. Wetlands created in this manner, if the hydrology is present and they attain full wetland function, would replace the wetlands that were filled during project construction at a rate of two acres of created wetland habitat for each acre of wetland filled.

Wetland monitoring is a critical component of any mitigation plan. Monitoring can determine if the target wetland functions and values are being achieved and allow for early detection of potential problems. Yearly monitoring reports can be analyzed to determine if the mitigation wetlands are developing the required wetland characteristics and will verify when mitigation goals have been met. In addition, a contingency plan should be developed for implementation in the event that any restored or created wetland areas fail to achieve full wetland functional value.

A mitigation plan should describe how the mitigation wetlands will be protected, whether through permanent wetland easements, conservation easements, restrictive deeds, or other protective measures designed to guarantee that the mitigation areas will continue to provide wetland function and value into the future.

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. § 703-712), as amended, prohibits the taking, killing, possession, sale, transportation and importation of migratory birds, their eggs, parts and nests, except when specifically authorized by the Secretary of the Interior. The Service, under the authority of and in accordance with the MBTA, provides the following recommendations to minimize project impacts to migratory birds.

- Defer the timing of construction to late summer (after July 15) or fall so as not to disrupt waterfowl or other wildlife during the nesting season.
- Reseed disturbed areas with a mixture of native grass and forb species.

A list of federally endangered and threatened species that may be present within the proposed project's area of influence is enclosed. This list fulfills requirements of the Service under Section 7 of the Endangered Species Act. At this time, I am not aware of any species that frequent the project area.

If a Federal agency authorizes, funds, or carries out a proposed action, the responsible Federal agency, or its delegated agent, is required to evaluate whether the action "may affect" listed species. If the Federal agency determines the action "may affect" listed species, then the responsible Federal agency shall request formal section 7 consultation with this office. If the evaluation shows a "no effect" determination on listed species, further consultation is not necessary. If a private entity receives Federal funding for a construction project, or if any Federal permit is required, the Federal agency may designate the fund recipient or permittee as its agent for purposes of section 7 consultation.

Thank you for the opportunity to comment on this project. If you require further information or the project plans change, please contact Terry Ellsworth of my staff at (701) 250-4481, or at the letterhead address above.



Sincerely,

*Jeffrey K. Towner*

Jeffrey K. Towner  
Field Supervisor  
North Dakota Field Office

Enclosure

cc: Director, ND Game & Fish Department, Bismarck  
(Attn: M. McKenna)

FEDERAL THREATENED SPECIES  
FOUND IN  
GRAND FORKS, NORTH DAKOTA

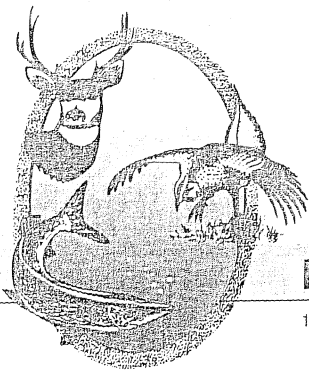
**THREATENED SPECIES**

Birds

Bald eagle (Haliaeetus leucocephalus): Migrates spring and fall statewide but primarily along the major river courses. It concentrates along the Missouri River during winter and is known to nest in the floodplain forest.

Mammals

Gray wolf (Canis lupus): Occasional visitor in North Dakota. Most frequently observed in the Turtle Mountains area.



"VARIETY IN HUNTING AND FISHING"

## NORTH DAKOTA GAME AND FISH DEPARTMENT

100 NORTH BISMARCK EXPRESSWAY BISMARCK, NORTH DAKOTA 58501-5095 PHONE 701-328-6300 FAX 701-328-6352

August 19, 2004

Jonathan D. Scraper  
Ulteig Engineers  
3350 38<sup>th</sup> Avenue South  
Fargo, North Dakota 58104-7079

Re: Grand Forks International Airport Wetland Closure

Dear Mr. Scraper:

The North Dakota Game and Fish Department has received notification of Grand Forks International Airport's proposal to fill approximately 8.3 acres of wetland located near the airport runway. The airport contends the wetland attracts wildlife to the airfield that are hazardous to air traffic. The proposed project is located in the S1/2 of Section 28, Township 152 North, Range 51 West in Grand Forks County, North Dakota.

It's our understanding the Corps of Engineers (COE) determined the area is not a water of the United States; therefore it is a non-jurisdictional wetland in regards to Section 404 of the Clean Water Act. The Natural Resources Conservation Service (NRCS) has determined the wetland to be an artificial wetland exempt from wetland conservation provisions of the 1985 National Food Security Act. Additional information has shown this area has developed both wetland hydrology and vegetation characteristics. The borrow area is currently functioning as a wetland providing valuable fish and wildlife habitat for the area.

Although the wetland may not be jurisdictional under COE or NRCS programs, we question if it is covered by Executive Order 11990? Executive Order 11990, signed by President Carter in 1977, states the destruction or modification of wetlands should be avoided if any federal assistance is provided in carrying out a project. If the Grand Forks International Airport is receiving federal funds for this project, Executive order 11990 appears to apply. Specifically, the order states that "Each agency shall provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities...". Again, if federal funds are being utilized in the construction of this project, we believe the Federal Aviation Administration (FAA) is bound by Executive Order 11990 and therefore a mitigation plan needs to be developed and implemented for the filled wetland.

Sincerely,

Michael G. McKenna  
Chief  
Conservation & Communication Division

RECEIVED

AUG 23 2004

ULTEIG ENGINEERS  
FARGO, ND

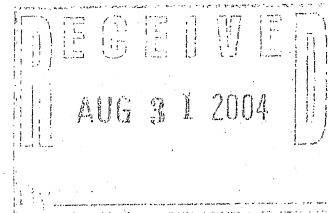


Natural Resources Conservation Service  
2397 DeMers Avenue  
Grand Forks ND 58201

Grand Forks Field Office  
Phone: (701)775-4191 Ext. 3  
FAX: (701)746-7934

August 30, 2004

Steve Johnson  
Grand Forks Regional Airport Authority  
2787 Airport Drive  
Grand Forks, ND 58203



Dear Mr. Johnson:

This letter serves to notify you that the Natural Resources Conservation Service (NRCS) has completed a **Final Technical Determination** for Tract 1614 on the fields shown in Section II of the attached NRCS-CPA-026E "HIGHLY EROBILE LAND AND WETLAND CONSERVATION DETERMINATION." This final determination is a result of the expiration of the 30-day appeal period provided with the preliminary determination.

NRCS has identified an Artificial Wetland (AW) that was labeled as Wetland (W) on your previous inventory. An Artificial Wetland is exempt from the wetland provisions of the 1985 National Food Security Act, as amended. Areas identified as Wetland (W) may be farmed under natural conditions but cannot be drained or filled to make production possible. Areas with the Farmed Wetland designation (FW) allow for the pre-1985 drainage system to be maintained but not improved. The drainage system cannot be deepened or advanced into the field. Areas with the Wetland (W) and Farmed Wetland (FW) designation cannot be filled.

Areas identified, as "NI" Not Inventoried have not had wetland delineation's completed. This NI determination supercedes all previous NRCS wetland inventories. These areas may contain wetlands that are subject to the provisions of the 1985 National Food Security Act as amended. **A certified determination should be requested prior to altering or manipulating any areas where the NI determination was made.**

This wetland determination does not include "other waters of the United States," as defined by the United States Army Corps of Engineers (COE), which includes but is not limited to lakes, rivers, streams, and mud flats, which are regulated by the Clean Water Act (404). Contact the COE (701-255-0015) in Bismarck, North Dakota, regarding needs for permits.



In order to maintain your USDA program eligibility and comply with the Clean Water Act, contact us prior to performing the following activities:

- land clearing
- drainage (tile or open ditching)
- drainage maintenance
- filling, leveling, or dredging
- land use changes
- any activity involving "other waters of the United States," as defined above.

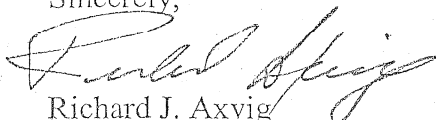
This Final Technical Determination may be appealed to the Farm Service Agency (FSA), Grand Forks County Committee, at the address below. A copy of our administrative record will be forwarded to the county committee should you decide to appeal.

Grand Forks County FSA Committee  
2397 DeMers Avenue  
Grand Forks ND 58201

If you are the owner of this tract and have a tenant, it is recommended you discuss this letter with the tenant. Likewise, if you are the tenant of these tracts of land, it is recommended you discuss this letter and accompanying NRCS-CPA-026E with your landlord(s).

I am available to answer any questions or discuss any concerns you might have. Please stop at the NRCS office or call me at (701)772-2321, ext. 3.

Sincerely,



Richard J. Axvig  
District Conservationist

Attachments

Cc: Terry Miller, County Executive Director, FSA



## HIGHLY ERODIBLE LAND AND WETLAND CONSERVATION DETERMINATION

Name Address:	Grand Forks Regional Airport Authority 2787 Airport Drive Grand Forks, ND 58203	Request Date:	7/9/04	County:	Grand Forks
Agency or Person Requesting Determination:	Steve Johnson	Tract No:	1614	FSA Farm No.:	9287

### Section I - Highly Erodible Land

Is a soil survey now available for making a highly erodible land determination?	Yes
Are there highly erodible soil map units on this farm?	No

Fields in this section have undergone a determination of whether they are highly erodible land (HEL) or not; fields for which an HEL Determination has not been completed are not listed. In order to be eligible for USDA benefits, a person must be using an approved conservation system on all HEL.

Field(s)	HEL(Y/N)	Sodbust(Y/N)	Acres	Determination Date
1	N	N	123.2	8/5/88
2	N	N	39.8	8/5/88
NC	N	N	13.4	7/29/04
-	-	-		
-	-	-		

The Highly Erodible Land determination was completed in the-Office

### Section II - Wetlands

Are there hydric soils on this farm?	Yes
--------------------------------------	-----

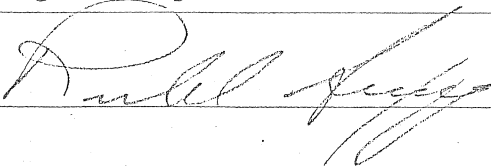
Fields in this section have had wetland determinations completed. See the Definition of Wetland Label Codes for additional information regarding allowable activities under the wetland conservation provisions of the Food Security Act and/or when wetland determinations are necessary to determine USDA program eligibility.

Field(s)	Wetland Label*	Occurrence Year (CW)**	Acres	Determination Date	Certification Date
1	NI		123.2	8/5/88	7/29/04
2	NI		39.8	8/5/88	7/29/04
NC	NW		5.1	7/29/04	7/29/04
NC	AW		8.3	7/29/04	7/29/04
-	-				

The wetland determination was completed in the -Field It was -mailed to the person on 7/29/04.

Remarks: NRCS-CPA-38 signed 7/9/04. Area labeled "AW" is a borrow area. Revised original wetland determination of "W" to "AW".

I certify that the above determinations are correct and were conducted in accordance with policies and procedures contained in the National Food Security Act Manual.

Signature Designated Conservationist	Date
	7/29/04

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

## \*DEFINITIONS OF WETLAND LABEL CODES

AW	Artificial Wetland. An area that is artificial or irrigation induced wetland. These wetlands are not subject to the wetland conservation provision.
AW/FW	An area that contains both AW and FW.
AW/W	An area that contains both AW and W.
CC	Commenced Conversion exemption.
CPD	Corps Permit Decision. Corps of Engineers permit decisions regarding section 404 of the Clean Water Act will be relied upon to satisfy the wetland conservation provisions of the Food Security Act of 1985, as amended.
CMW	An area that receives a Categorical Minimal Effect determination.
CW	Converted Wetlands. An area converted between December 23, 1985 and November 28, 1990. IN any year that an agricultural commodity is planted on these converted wetlands, you will ineligible for USDA benefits.
**CW+year	An area converted after November 28, 1990. You will be ineligible for USDA program benefits until this wetland is restored.
CWNA	Converted Wetland Non-Agricultural use. A wetland area converted to other than agricultural commodity production.
CWTE	Converted Wetland Technical Error. An area converted or commenced based on an incorrect NRCS determination or misinformation from a NRCS or FSA employee.
FW	Farmed Wetland. An area that is farmed wetland; was manipulated and planted before December 23, 1985, but still meets wetland criteria. These may be farmed and maintained in the same manner as long as they are not abandoned.
FWP	Farmed Wetlands Pasture. An area that is pasture or hayland, manipulated before December 23, 1985 but still meets wetland criteria. These may be farmed and maintained in the same manner as long as they are not abandoned.
MTW	Mitigation Wetlands. Wetlands on which a person is actively mitigating a frequently cropped area or a wetland converted between December 23, 1985 and November 28, 1990. A converted wetland, farmed wetland, or farmed wetland pasture on which functions and values were lost are compensated for through wetland restoration, enhancement or creation.
MW	Minimal effect Wetland. An area determined to be minimal effect. These wetlands are to be farmed according to the minimal-effect agreement signed at the time the minimal-effect determination was made,
MWM	An area determined to be minimal effect with mitigation.
NI	Not Inventoried – No wetland determination has been completed.
NW	Non-Wetland. An area that does not contain a wetland.
NW/NAD	An area determined to be a non-wetland resulting from a decision from the National Appeals Division.
OW	Other Waters of the U.S. Area that fall under the jurisdiction of the Clean Water Act.
PC	Prior Converted cropland, which was drained filled, or manipulated before December 23, 1985; was cropped prior to December 23, 1985; was not abandoned; and does not meet FW criteria. These are not subject to the wetland conservation provision unless the area reverts to wetland as a result of abandonment.
PC/NW	An area that contains both PC and NW.
TP	Third Party Exemption.
W	Wetlands. An area meeting wetland criteria, including wetland farmed under natural conditions. If you plan to clear, drain, fill, level or manipulate these areas, contact NRCS and the Army Corp of Engineers prior to any such activity.
WX	A wetland area that has been manipulated after December 23, 1985, but was not, for the purpose of making production possible and production was not made possible. These include wetlands manipulated by drainage maintenance agreements.

# Certified Wetland Determination

Grand Forks Regional Airport Authority

Section 28, 152-51

Part of Tract 1614

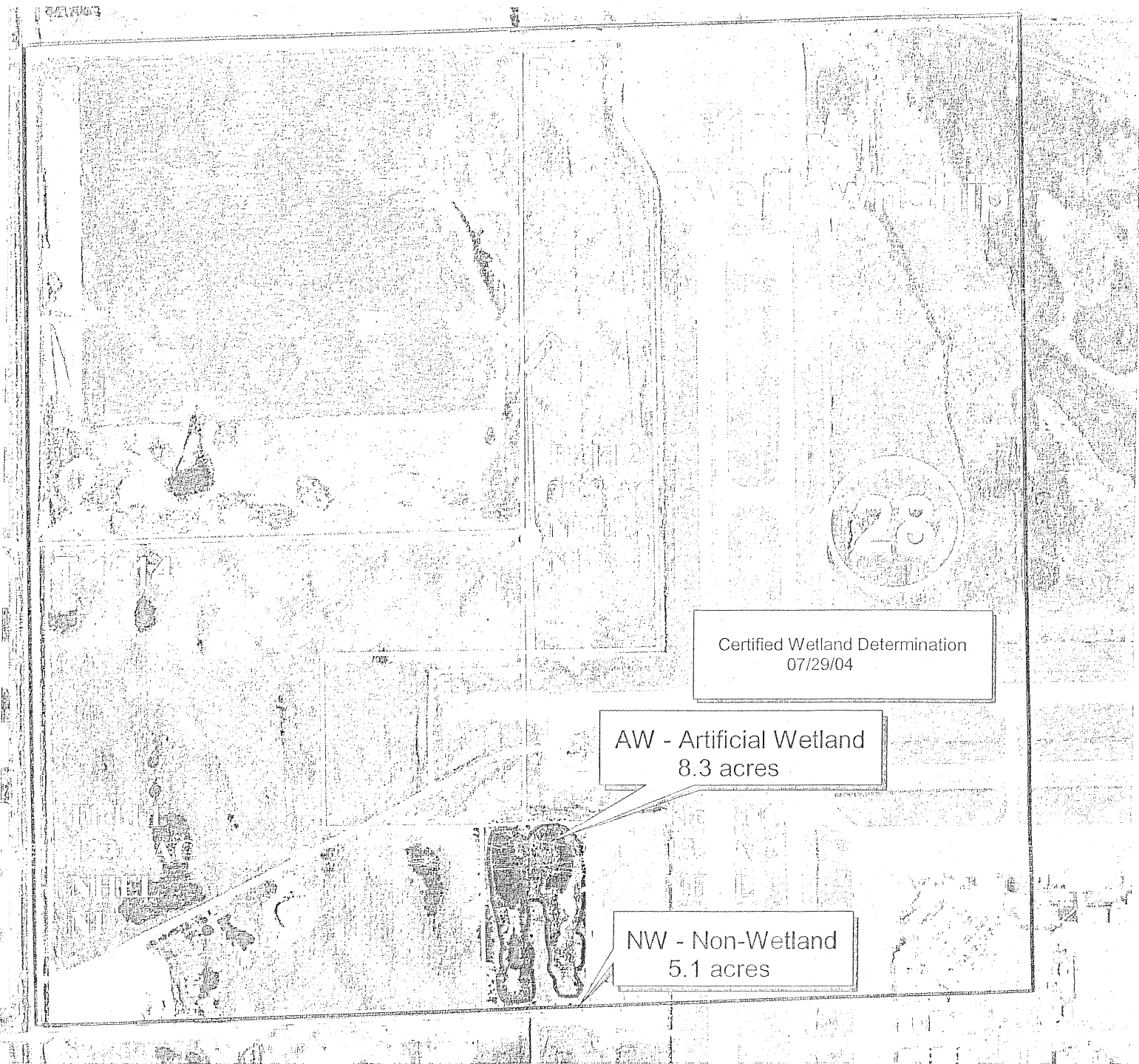
Date: 07/29/2004

Assisted by: Paul Bjorg

Grand Forks County Service Center

Cooperating with:

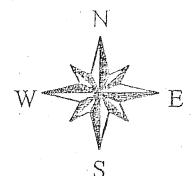
Eastern Grand Forks County SCD



## Legend

- Certified Wetland Labeled - AW
- Section Boundary
- Tract 1614 Boundary

Scale - 1:9265



USDA

1000 0 1000 2000 Feet



3350 38th Avenue S.  
Fargo, ND 58104-7079  
PO Box 9615 / 58106-9615  
Phone: 701.237.3211  
Fax: 701.237.3191

December 7, 2004

David Glatt  
North Dakota Department of Health  
PO Box 5520  
BISMARCK, ND 58502-5520

Subject: Environmental Assessment  
Grand Forks International Airport  
Grand Forks, North Dakota  
UEI Project No. 104.396

Dear David Glatt,

Ulteig Engineers, Inc., sponsored by the Grand Forks Regional Airport Authority, is preparing an Environmental Assessment under the rules of the National Environmental Policy Act.

The purpose of this letter is to request your comments with regard to the Environmental Assessment, specifically regarding environmental issues of which your agency has jurisdiction authority. Furthermore, your written notification is requested if you wish to be a Cooperating Agency under the rules of 40 C.F.R. 1501.6 as they pertain to Environmental Assessments (EAs).

The purpose and need for this action is to: eliminate wildlife attractants from airport property as recommended in the document, Wildlife Hazard Assessment and Recommendations for Wildlife Hazard Management Plan, prepared by USDA Wildlife Services, and to reduce the potential for wildlife aircraft strikes.

A wetland delineation and historical, cultural, and archeological resource evaluation are currently underway. The following general areas may be impacted (see attached map):

SW ¼ Section 28, T152N, R51W  
E ½ Section 33, T152N, R51W  
Section 34, T152N, R51W

David Glatt

Page 2

December 7, 2004

Required mitigation will be accomplished according to the US Fish and Wildlife Service and the ND Game & Fish guidelines off of airport property. The mitigation will be a minimum of 10,000 feet from the airport operations area and outside of the approach paths of existing and planned runways at the Grand Forks International Airport.

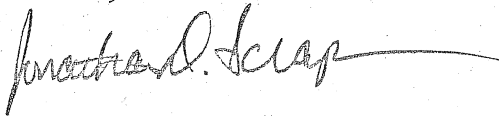
Please provide written indication of your agency's preference for continued involvement regarding this project. Your options include:

1. Official Cooperating Agency
2. Interested Coordinating Agency
3. Review Agency
4. No Further Interest

Please provide the name, address, phone number, and e-mail address for the key contact person(s) representing your agency regarding this Environmental Assessment.

We look forward to receiving your indication of continued involvement, contact information, and comments by Friday, January 14, 2005. If you have any questions or need additional information, please contact me at 701-280-8587.

Sincerely,



Jonathan D. Scraper, PE  
Project Manager

JDS/ldb  
Enclosure

December 9, 2004

Mr. Jonathan D. Scraper, PE  
Ulteig Engineers  
3350 38<sup>th</sup> Avenue S.  
Fargo, ND 58104-7079

Dear Mr. Scraper,

This letter is in response to your request for a written indication of our involvement in UEI Project 104.396, Environmental Assessment for the Grand Forks Airport.

Please consider UND Aerospace and the John D. Odegard School of Aerospace Sciences to be an *Interested Coordinating Agency*.

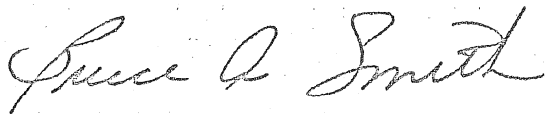
Our key contact persons are:

Mr. Al Palmer  
Director of Airport Operations  
2806 Airport Dr. #411  
Grand Forks, ND 58203  
701-777-7853

Mr. Frank Argenziano  
Special Projects Coordinator/Facilities Manager  
2806 Airport Drive  
Grand Forks, ND 58203  
701-777-7822

Please let me know if you need any further information

Sincerely,



BRUCE A. SMITH, Ph.D.  
Dean

John D. Odegard School of Aerospace Sciences  
University Avenue & Tulane Drive  
P.O. Box 9007  
Grand Forks, ND 58202-9007  
(701) 777-3196 • FAX (701) 777-3458

RECEIVED

DEC 13 2004

ULTEIG ENGINEERS  
FARGO, ND

## Jon Scraper

---

From: Marisol Velilla  
Sent: Thursday, December 09, 2004 8:31 AM  
To: Jon Scraper  
Cc: Brian Long  
Subject: FW: Wetland delineations- Grand Forks International Airport

-----Original Message-----

From: Terry\_Ellsworth@fws.gov [mailto:Terry\_Ellsworth@fws.gov]  
Sent: Thursday, December 09, 2004 8:23 AM  
To: Marisol Velilla  
Cc: Jeffrey\_Towner@fws.gov  
Subject: Re: Wetland delineations- Grand Forks International Airport

The Service agrees that following the Corps wetland delineation manual is an adequate means of identifying wetland basins. Using the wetland delineation results, aerial photography, and GIS technology the extent of the wetland acres on the project area can be accurately calculated.

Please provide us with a copy of the wetland determination and the proposed mitigation plan for our review.

Terry Ellsworth  
North Dakota Ecological Services Field Office  
425 Miriam Avenue  
Bismarck, ND 58501

Office (701) 355-8505  
Fax (701) 355-8513  
Terry\_Ellsworth@fws.gov

"Marisol Velilla"  
<Marisol.Velilla@ulteig.com>  
To: <terry\_ellsworth@fws.gov>  
cc:  
Subject: Wetland delineations- Grand Forks International Airport  
12/08/2004 02:09 PM

Mr. Terry Ellsworth:

Regarding our last phone conversation, following is a detailed explanation of the methodology that will be applied by Ulteig in the delineation of GFK property.

Please confirm that you understand and agree with the methodology.

Methodology

Prior to the field investigation, several data sources were consulted. These include:

- USGS
- Soil Survey of Grand Forks County
- Recent aerial photograph
- North Dakota Wetland inventory

These documents provide information on where wetlands have been previously identified or areas that possess a high likelihood of wetlands occurring.

These initially identified areas were visited to make on site determinations where complete delineations were necessary.

During the site inspection, four basins were delineated using the "Routine Determination with onsite inspection necessary" method; the boundaries were flagged and located with GPS Survey equipment.

The rest of the site was visually inspected and random soil tests were taken to confirm soil type. Also we visually confirmed the wetland basins shown on the aerial photo and the homogeneity of the vegetation.

The flag locations were superimposed on the aerial photo.

The visual edge from the aerial photo was extremely close to the flagged edge.

This confirmed our opinion that the delineation with the aerial photograph of the rest of the site will have a minimum error.

Since we have sufficient information to characterize the vegetation, soils and hydrology of a portion, but not all, of the project area we will delineate the entire site applying a combination of Onsite Inspections Unnecessary and Onsite Inspections Necessary, following the Manual of Technical guidelines Part IV Section D Subsection 3.



We will use AutoCAD with the aerial photo in the background.

locating the edges in the ND State Coordinate System. This will help the  
applicant evaluate the impacts.

Please confirm that you approve of this methodology.

Please call me with any questions.

Best regards,

Marisol Velilla  
Design Engineer

Wetland delineator

Ulteig Engineers, Inc.  
5201 E. River Road, Suite 308

Minneapolis, MN 55421-1027

Direct Number: 763.277.6228

Corporate Office: 763.571.2500

Fax: 763.571.1168

Marisol.Velilla@ulteig.com  
<http://www.ulteig.com>



**NORTH DAKOTA**  
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION  
1200 Missouri Avenue, Bismarck, ND 58504-5264  
P.O. Box 5520, Bismarck, ND 58506-5520  
701.328.5200 (fax)  
www.ndhealth.gov



December 10, 2004

Mr. Jonathan D. Scraper, P.E.  
Project Manager  
Ulteig Engineers  
P.O. Box 9615  
Fargo, ND 58104-7079

Re: Project No. 104.396, Grand Forks International Airport  
Wildlife Attractant Environmental Assessment, Grand Forks County

Dear Mr. Scraper:

This department has reviewed the information concerning the above-referenced project submitted under date of December 7, 2004, with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, we have the following comments:

Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance, and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.

The department owns no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area. In addition, we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

These comments are based on the information provided about the project in the above-referenced submittal. The U.S. Army Corps of Engineers may require a water quality certification from this department for the project if the project is subject to their Section 404 permitting process. Any additional information which may be required by the U.S. Army Corps of Engineers under the process will be considered by this department in our determination regarding the issuance of such a certification.

RECEIVED

Environmental Health  
Section Chief's Office  
701.328.5150

Air  
Quality  
701.328.5188

Municipal  
Facilities  
701.328.5211

Waste  
Management  
701.328.5166

DEC 16 2004  
Water  
Quality  
701.328.5210  
ULTEIG ENGINEERS  
FARGO, ND

Mr. Jonathan D. Scraper

2.

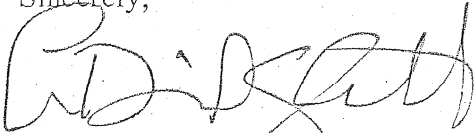
December 10, 2004

The department will continue to be a review agency regarding this project, and I will remain the contact person. Please address any further correspondence regarding this project to:

L. David Glatt, P.E., Chief  
Environmental Health Section  
ND Department of Health  
P.O. Box 5520  
Bismarck, ND 58506-5520

If you have any questions regarding our comments, please feel free to contact me at 701-328-5150 or by email at: [dglatt@state.nd.us](mailto:dglatt@state.nd.us).

Sincerely,

A handwritten signature in black ink, appearing to read "L. David Glatt", written over a horizontal line.

L. David Glatt, P.E., Chief  
Environmental Health Section

LDG:cc  
Attach.



## Construction and Environmental Disturbance Requirements

These represent the minimum requirements of the North Dakota Department of Health. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect the waters of the State of North Dakota. All projects will be designed and implemented to restrict the losses or disturbances of soil, vegetative cover, and pollutants (chemical or biological) from a site.

### **Soils**

Prevent the erosion of exposed soil surfaces and trapping sediments being transported. Examples include, but are not restricted to, sediment dams or berms, diversion dikes, hay bales as erosion checks, riprap, mesh or burlap blankets to hold soil during construction, and immediately establishing vegetative cover on disturbed areas after construction is completed. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, or land resources will be protected against compaction, vegetation loss, and unnecessary damage.

### **Surface Waters**

All construction which directly or indirectly impacts aquatic systems will be managed to minimize impacts. All attempts will be made to prevent the contamination of water at construction sites from fuel spillage, lubricants, and chemicals, by following safe storage and handling procedures. Stream bank and stream bed disturbances will be controlled to minimize and/or prevent silt movement, nutrient upsurges, plant dislocation, and any physical, chemical, or biological disruption. The use of pesticides or herbicides in or near these systems is forbidden without approval from this Department.

### **Fill Material**

Any fill material placed below the high water mark must be free of top soils, decomposable materials, and persistent synthetic organic compounds (in toxic concentrations). This includes, but is not limited to, asphalt, tires, treated lumber, and construction debris. The Department may require testing of fill materials. All temporary fills must be removed. Debris and solid wastes will be removed from the site and the impacted areas restored as nearly as possible to the original condition.

3350 38th Avenue S.  
Fargo, ND 58104-7079  
PO Box 9615 / 58106-9615  
Phone: 701.237.3211  
Fax: 701.237.3191

December 13, 2004

««AddressBlock»»

Subject: Correction to Letter dated December 7, 2004  
Environmental Assessment  
Grand Forks International Airport  
Grand Forks, North Dakota  
UEI Project No. 104.396

««GreetingLine»»

Ulteig Engineers, Inc. is currently performing an environmental assessment on behalf of the Grand Forks Regional Airport Authority. The Federal Aviation Administration (FAA) is the lead agency for the development. In a recent letter dated December 7, 2004, your agency was invited to be a Cooperating Agency. If you desire to be a Cooperating Agency, we will work with the FAA to accommodate your request. However, we would prefer to address all your environmental concerns without the formality of the agreements associated with cooperating agency status.

The aforementioned letter identified the elimination of wildlife attractants as the Purpose and Need. We would like to clarify that the purpose and need of the environmental assessment is more correctly represented as minimizing the effects of wildlife attractants on the airport. One alternative being considered is the elimination of the attractants. Other alternatives currently being considered include installing netting and bird balls in wetland areas and hazing or harassment.



Page 2

December 13, 2004

We apologize for any confusion we may have caused. We have also attached an additional drawing showing the area of potential effect and the wildlife attractants in question. The attractants include 51 wetlands (totaling approximately 126 acres), and the English Coulee Diversion (approximately 5,000 linear feet). Please note that the wildlife attractants were identified in a wildlife hazard assessment performed by the United States Department of Agriculture, Wildlife Services.

Thank you for your time and consideration.

Sincerely,

*Original signed by Jonathan D. Scaper*

Jonathan D. Scaper, PE  
Project Manager

*JS*

JDS/lbb  
Enclosure

c: Steve Obenauer, FAA ADO-BIS  
Steve Johnson, GFK



United States  
Department of  
Agriculture

Natural  
Resources  
Conservation  
Service

Bismarck State Office  
P.O. Box 1458  
Bismarck, ND 58502-1458

December 17, 2004

Jonathan D. Scraper, PE  
3350 38<sup>th</sup> Avenue S.  
PO Box 9615 / 58106-9615  
Fargo, ND 58104-7079

RE: Environmental Assessment - Grand Forks International Airport, Grand Forks, North  
Dakota - UEI Project No. 104.396

Dear Mr. Scraper:

This letter is in reply to your letter dated December 7, 2004, regarding the referenced activity and requesting our agency's preference for continued involvement in the project.

The Natural Resources Conservation Service (NRCS) requests to be involved in the project as an Interested Coordinating Agency.

Contact for our agency will be:

Doug Van Daalen, Planning Specialist  
Natural Resources Conservation Service  
PO Box 1458  
Bismarck, ND 58502-1458  
Phone: (701) 530-2094  
Email: [doug.vandaalen@nd.usda.gov](mailto:doug.vandaalen@nd.usda.gov)

Sincerely,

J.R. FLORES  
State Conservationist

ACTING

cc:  
Richard Axvig, DC, NRCS, Grand Forks, ND  
Jack Russell, ASTC (FO), NRCS, Devils Lake, ND

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DEC 21 2004

ULTEIG ENGINEERS  
FARGO, ND



STATE  
HISTORICAL  
SOCIETY  
OF NORTH DAKOTA

John Hoeven  
Governor of North Dakota

December 20, 2004

North Dakota  
State Historical Board

Diane K. Larson  
Bismarck - President

Marvin L. Kaiser  
Williston - Vice President

Albert I. Berger  
Grand Forks - Secretary

Chester E. Nelson, Jr.  
Bismarck

Gerold Gerntholz  
Valley City

A. Ruric Todd III  
Jamestown

Sara Otte Coleman  
Director  
Tourism Division

Kathi Gilmore  
State Treasurer

Alvin A. Jaeger  
Secretary of State

Douglass Prchal  
Director  
Parks and Recreation  
Department

David A. Sprynczynatyk  
Director  
Department of Transportation

John E. Von Rueden  
Bismarck

Merlan E. Paaverud, Jr.  
Director

Jonathan D. Scraper, P.E.  
Ulteig Engineers  
3350 38<sup>th</sup> Avenue South  
Fargo, ND 58104-7079

ND SHPO Ref.: 05-0232, Proposed Improvements, Grand Forks International Airport, Grand Forks County, ND.

Dear Mr. Scraper:

We have reviewed Project: 05-0232, proposed action to eliminate wildlife attractants for the Grand Forks International Airport in portions of Sections 27, 28, 33, and 34, T152N, R51W, Grand Forks County, ND.

We recommend that no survey is warranted, although a majority of the APE has not been previously inventoried for cultural resources, and we concur with "No Historic Properties Affected" determination provided the project is of the nature specified and takes place in the legal description listed in the correspondence.

Thank you for the opportunity to review this project. Please include the ND SHPO Reference number listed above in any further correspondence for this specific project. If you have any questions please contact Duane Klinner at (701) 328-3576.

Sincerely,

Merlan E. Paaverud, Jr.  
State Historic Preservation Officer  
(North Dakota)

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DEC 22 2004

ULTEIG ENGINEERS  
FARGO, ND

Accredited by the  
American Association  
of Museums

December 21, 2004

Mr. Jonathan D. Scraper, PE  
Project Manager  
Ulteig Engineers, Inc.  
3350 38th Avenue South  
PO Box 9615  
Fargo, ND 58106-9615

Dear Mr. Scraper:

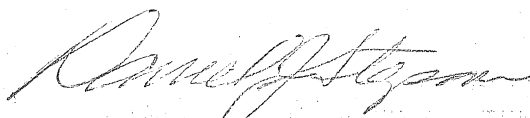
Subject: Grand Forks International Airport Environmental Assessment

Thank you for your letters dated December 7 and 13, 2004, inviting involvement in the subject environmental assessment as a cooperating agency. The Energy & Environmental Research Center's (EERC's) Red River Water Management Consortium (RRWMC<sup>®</sup>) does not have any jurisdictional authority, but would be interested in participating in the assessment project as a review agency. As Coordinator of the RRWMC Program, I will be the key representative and can be contacted at:

Dan Stepan  
Senior Research Manager  
Energy & Environmental Research Center  
PO Box 9018  
Grand Forks, ND 58202-9018  
(701) 777-5247  
[dstepan@undeerc.org](mailto:dstepan@undeerc.org)

We look forward to involvement in the project. Please feel free to contact me at your convenience if you have any questions.

Sincerely,



Daniel J. Stepan  
Senior Research Manager

RECEIVED

DEC 27 2004

ULTEIG ENGINEERS  
FARGO, ND

DJS/rss



DEPARTMENT OF THE AIR FORCE  
319TH CIVIL ENGINEER SQUADRON  
GRAND FORKS AIR FORCE BASE, NORTH DAKOTA

JAN 04 2005

MEMORANDUM FOR Ulteig Engineers

Attn: Jonathan Scraper, PE, Project Manager  
3350 38th Avenue South  
Fargo ND 58104-7079

FROM: 319 ARW/CC

SUBJECT: Environmental Assessment for Grand Forks Regional Airport

1. Your 7 & 13 Dec 04 letters concerning an Environmental Assessment (EA) to minimize the effects of wildlife attractants from the Grand Forks Regional Airport property has been reviewed with our Environmental Management office. We are interested in the EA, with its effect on diverting waterfowl, and any potential effect on our aircraft at Grand Forks AFB. Please keep us advised of your developments, as a Review Agency.

2. Our point of contact for the Environmental Impact Analysis Program is:

Diane Strom, 319 CES/CEVA  
525 Tuskegee Airmen Blvd  
Grand Forks AFB ND 58205-6434  
Telephone: (701) 747-6394  
Email: [Diane.Strom@grandforks.af.mil](mailto:Diane.Strom@grandforks.af.mil)

3. We hope this assessment provides further insight to prevent animal/aircraft collisions.

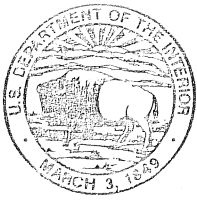
WAYNE A. KOOP, R.E.M.  
Environmental Management Flight Chief

RECEIVED

JAN 06 2005

ULTEIG ENGINEERS  
FARGO, ND

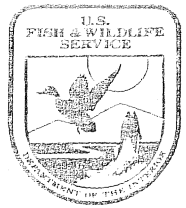




# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Ecological Services  
3425 Miriam Avenue  
Bismarck, North Dakota 58501



JAN - 5 2005

Mr. Jonathan D. Scraper, PE  
Ulteig Engineers  
3350 38th Avenue S.  
Fargo, North Dakota 58104-7079

Dear Mr. Scraper:

The U.S. Fish and Wildlife Service (Service) has reviewed the information provided in your December 7 and December 13, 2004, letters related to an Environmental Assessment (EA) of a project to minimize the effects of wildlife attractants on Grand Forks International Airport property. Alternatives to be considered in the EA include elimination of the wildlife attractants (filling wetlands), installing netting and bird diverters in wetland areas, and hazing or harassment. The potential action area is located in T. 152 N., R. 51 W., Sections 28, 33, and 34, Grand Forks County, North Dakota. The project is intended to mitigate aircraft collisions with wildlife by modifying wetland habitat adjacent to the airport.

In our August 17, 2004, letter, the Service provided comments and recommendations related to wildlife habitat, wetlands, migratory birds, and federally listed species that may occur in the potential project area.

The Service's preference for involvement in the preparation of the EA is to be a reviewing agency. We can provide environmental document review and technical assistance to help plan a project that will have minimal impacts to fish and wildlife resources in the project area. The Service requests the opportunity to review the wildlife hazard assessment and the wildlife hazard management plan for the Grand Forks International Airport.

The Service staff point of contact is:

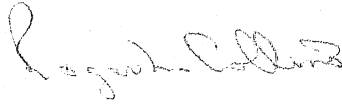
Terry Ellsworth, Fish and Wildlife Biologist  
North Dakota Ecological Services Field Office  
3425 Miriam Avenue, Bismarck, ND 58501  
Office (701) 250-4481  
Fax (701) 355-8513  
E-Mail (Terry\_Ellsworth@fws.gov)

RECEIVED

JAN 07 2005

ULTEIG ENGINEERS  
FARGO, ND

Sincerely,



Jeffrey K. Towner  
Field Supervisor  
North Dakota Field Office

cc: FAA Airport District Office, Bismarck  
(Attn: T. Schauer)  
Director, ND Game & Fish Department, Bismarck  
(Attn: M. McKenna)



DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, OMAHA DISTRICT  
NORTH DAKOTA REGULATORY OFFICE  
1513 SOUTH 12<sup>TH</sup> STREET  
BISMARCK ND 58504-6640  
January 7, 2005

[200460822]

Jonathan D. Scraper  
Ulteig Engineers, Inc.  
PO Box 9615  
Fargo, North Dakota 58104-7079

Dear Mr. Scraper:

This is in response to your request for Department of the Army, Corps of Engineers comments regarding the environmental assessment that is being prepared for the Grand Forks Regional Airport Authority. The project area is located in the SW $\frac{1}{4}$  of Section 28, E $\frac{1}{2}$  of Section 33 and Section 34, Township 152 North, Range 51 West, Grand Forks County, North Dakota.

Through Section 404 of the Clean Water Act the Corps of Engineers regulates the discharge of dredged or fill material into waters of the United States. Waters of the United States include, but are not limited to, lakes, ponds, rivers, streams, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, and vernal pools. Should the proposed project(s) or associated construction activities result in the discharge of dredged or fill material into Waters of the United States, a Corps permit may be required. If however, the proposed activity or associated work can be accomplished by avoiding impacts to Waters of United States, a Corps permit would not be required.

In order for the Corps to fully review the impacts associated with any proposed activities discussed in your December 13, 2004 solicitation letter for Section 404 authorization, a completed Corps of Engineers permit application must be submitted to this office. It is essential to identify all impacts to waters of the United States resulting from the proposed project. Should activities associated with this project result in impacts to Waters of the United States, please complete and submit the enclosed Corps of Engineers permit application to the U.S. Army Corps of Engineers, North Dakota Regulatory Office, 1513 South 12th Street, Bismarck, North Dakota 58504.

If we can be of further assistance or should you have any questions regarding our program, please do not hesitate to contact this office by letter or phone at (701)-255-0015.

Sincerely,

Jason Renschler  
Project Manager  
North Dakota Regulatory Office

RECEIVED  
Enclosure

JAN 11 2005

ULTEIG ENGINEERS  
FARGO, ND

Instructions for Preparing a  
Department of the Army Permit Application

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**Blocks 1 through 4.** To be completed by Corps of Engineers.

**Block 5. Applicant's Name.** Enter the name of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the responsible officer and title. If more than one party is associated with the application, please attach a sheet with the necessary information marked Block 5.

**Block 6. Address of Applicant.** Please provide the full address of the party or parties responsible for the application. If more space is needed, attach an extra sheet of paper marked Block 6.

**Block 7. Applicant Telephone Number(s).** Please provide the number where you can usually be reached during normal business hours.

**Blocks 8 through 11.** To be completed, if you choose to have an agent.

**Block 8. Authorized Agent's Name and Title.** Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, or any other person or organization. Note: An agent is not required.

**Blocks 9 and 10. Agent's Address and Telephone Number.** Please provide the complete mailing address of the agent, along with the telephone number where he / she can be reached during normal business hours.

**Block 11. Statement of Authorization.** To be completed by applicant, if an agent is to be employed.

**Block 12. Proposed Project Name or Title.** Please provide name identifying the proposed project, *e.g.*, Landmark Plaza, Burned Hills Subdivision, or Edsall Commercial Center.

**Block 13. Name of Waterbody.** Please provide the name of any stream, lake, marsh, or other waterway to be directly impacted by the activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

**Block 14. Proposed Project Street Address.** If the proposed project is located at a site having a street address (not a box number), please enter it here.

**Block 15. Location of Proposed Project.** Enter the county and state where the proposed project is located. If more space is required, please attach a sheet with the necessary information marked Block 15.

**Block 16. Other Location Descriptions.** If available, provide the Section, Township, and Range of the site and / or the latitude and longitude. You may also provide description of the proposed project location, such as lot numbers, tract numbers, or you may choose to locate the proposed project site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed project site if known.

**Block 17. Directions to the Site.** Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site.

**Block 18. Nature of Activity.** Describe the overall activity or project. Give appropriate dimensions of structures such as wingwalls, dikes (identify the materials to be used in construction, as well as the methods by which the work is to be done), or excavations (length, width, and height). Indicate whether discharge of dredged or fill material is involved. Also, identify any structure to be constructed on a fill, piles, or float-supported platforms.

The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 18.

**Block 19. Proposed Project Purpose.** Describe the purpose and need for the proposed project. What will it be used for and why? Also include a brief description of any related activities to be developed as the result of the proposed project. Give the approximate dates you plan to both begin and complete all work.

**Block 20. Reasons for Discharge.** If the activity involves the discharge of dredged and/or fill material into a wetland or other waterbody, including the temporary placement of material, explain the specific purpose of the placement of the material (such as erosion control).

**Block 21. Types of Material Being Discharged and the Amount of Each Type in Cubic Yards.** Describe the material to be discharged and amount of each material to be discharged within Corps jurisdiction. Please be sure this description will agree with your illustrations. Discharge material includes: rock, sand, clay, concrete, etc.

**Block 22. Surface Areas of Wetlands or Other Waters Filled.** Describe the area to be filled at each location. Specifically identify the surface areas, or part thereof, to be filled. Also include the means by which the discharge is to be done (backhoe, dragline, etc.). If dredged material is to be discharged on an upland site, identify the site and the steps to be taken (if necessary) to prevent runoff from the dredged material back into a waterbody. If more space is needed, attach an extra sheet of paper marked Block 22.

**Block 23. Is Any Portion of the Work Already Complete?** Provide any background on any part of the proposed project already completed. Describe the area already developed, structures completed, any dredged or fill material already discharged, the type of material, volume in cubic yards, acres filled, if a wetland or other waterbody (in acres or square feet). If the work was done under an existing Corps permit, identify the authorization, if possible.

**Block 24. Names and Addresses of Adjoining Property Owners, Lessees, etc., Whose Property Adjoins the Project Site.** List complete names and full mailing addresses of the adjacent property owners (public and private) lessees, etc., whose property adjoins the waterbody or aquatic site where the work is being proposed so that they may be notified of the proposed activity (usually by public notice). If more space is needed, attach an extra sheet of paper marked Block 24.

Information regarding adjacent landowners is usually available through the office of the tax assessor in the county or counties where the project is to be developed.

**Block 25. Information about Approvals or Denials by Other Agencies.** You may need the approval of other federal, state, or local agencies for your project. Identify any applications you have submitted and the status, if any (approved or denied) of each application. You need not have obtained all other permits before applying for a Corps permit.

**Block 26. Signature of Applicant or Agent.** The application must be signed by the owner or other authorized party (agent). This signature shall be an affirmation that the party applying for the permit possesses the requisite property rights to undertake the activity applied for (including compliance with special conditions, mitigation, etc.).

## DRAWINGS AND ILLUSTRATIONS

### General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross-Section Map. Identify each illustration with a figure or attachment number.

Please submit one original, or good quality copy, of all drawings on 8½ x11 inch plain white paper (tracing paper or film may be substituted). Use the fewest number of sheets necessary for your drawings or illustrations.

Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross-section). While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.



APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT  
(33 CFR 325)

OMB APPROVAL NO. 0710-0003  
Expires December 31, 2004

The public reporting burden for this collection of information is estimated to average 10 hours per response, although the majority of applications should require 5 hours or less. This includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003), Washington, DC 20503. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies. Submission of requested information is voluntary, however, if information is not provided, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
--------------------	----------------------	------------------	-------------------------------

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE <i>(an agent is not required)</i>
6. APPLICANT'S ADDRESS	9. AGENT'S ADDRESS
7. APPLICANT'S PHONE NUMBERS WITH AREA CODE a. Residence b. Business	10. AGENT'S PHONE NUMBERS WITH AREA CODE a. Residence b. Business

11. STATEMENT OF AUTHORIZATION

I hereby authorize \_\_\_\_\_ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

APPLICANT'S SIGNATURE

DATE

NAME, LOCATION AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE <i>(see instructions)</i>	
13. NAME OF WATERBODY, IF KNOWN <i>(if applicable)</i>	14. PROJECT STREET ADDRESS <i>(if applicable)</i>
15. LOCATION OF PROJECT  _____ COUNTY STATE	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN <i>(see instructions)</i>	
17. DIRECTIONS TO THE SITE	

18. Nature of Activity (Description of project, include all features)

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

23. Is Any Portion of the Work Already Complete? Yes \_\_\_\_\_ No \_\_\_\_\_ IF YES, DESCRIBE THE COMPLETED WORK

24. Addresses of Adjoining Property Owners, Lessees, etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

25. List of Other Certifications or Approvals/Denials Received from other Federal, State, or Local Agencies for Work Described in This Application

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

\*Would include but is not restricted to zoning, building and flood plain permits

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT

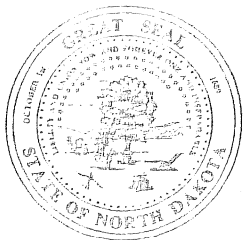
DATE

SIGNATURE OF AGENT

DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States, knowingly and willfully falsifies, conceals, or covers up any trick scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.



# North Dakota Department of Transportation

David A. Sprynczynatyk, P.E.  
*Director*

John Hoeven  
*Governor*

January 7, 2005

Jonathon D. Scraper, P.E.  
Ulteig Engineers Inc.  
P.O. Box 9615  
Fargo, ND 58106-9615

EA GRAND FORKS INTERNATIONAL AIRPORT, GRAND FORKS COUNTY, GRAND  
FORKS, NORTH DAKOTA

We have reviewed your December 13, 2004, letter.

It appears that the project boundaries are off the DOT right-of-way; therefore, this should have no apparent adverse effect on the North Dakota Department of Transportation highways.

However, if because of this project any work needs to be done on highway right-of-way, appropriate permits and risk management documents will need to be obtained from the Department of Transportation District Engineer, Les Noehre, 701-787-6515.

FRANCIS G. ZIEGLER, P.E. - DIRECTOR, OFFICE OF PROJECT DEVELOPMENT

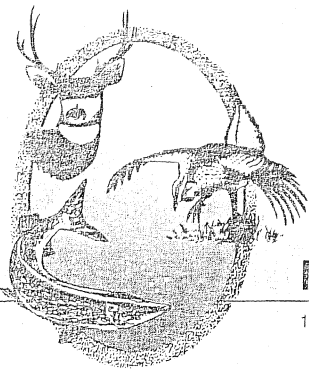
57:fgz:js

c: Les Noehre, Grand Forks District Engineer

RECEIVED

JAN 17 2005

ULTEIG ENGINEERS  
FARGO, ND



"VARIETY IN HUNTING AND FISHING"

## NORTH DAKOTA GAME AND FISH DEPARTMENT

100 NORTH BISMARCK EXPRESSWAY BISMARCK, NORTH DAKOTA 58501-5095 PHONE 701-328-6300 FAX 701-328-6352

January 13, 2005

Jonathan D. Scraper, PE  
Project Manager  
Ulteig Engineers  
PO Box 9615  
Fargo, ND 58106-9615

Dear Mr. Scraper:

RE: Grand Forks International Airport Environmental Assessment  
UEI Project No. 104.396

This project would minimize the effects of wildlife attractants on the Grand Forks International Airport by eliminating the attractants or through other alternatives. The North Dakota Game and Fish Department's preference for involvement in this project is as a Review Agency. As such, please keep us informed as the project develops. The key contact person for this project is:

John Schumacher  
ND Game and Fish Dept.  
100 N. Bismarck Expy  
(701)328-6321  
jschumac@state.nd.us

Sincerely,

Michael G. McKenna  
Chief  
Conservation & Communication Division

js

RECEIVED

JAN 17 2005

ULTEIG ENGINEERS  
FARGO, ND



# North Dakota State Water Commission

900 EAST BOULEVARD AVENUE, DEPT 770 • BISMARCK, NORTH DAKOTA 58505-0800 • 701-328-2750  
TDD 701-328-2750 • FAX 701-328-3696 • INTERNET: <http://www.swc.state.nd.us/>

January 26, 2005

Jonathan Scraper  
Ulteig Engineering  
PO Box 9615  
Fargo, ND 58106-7079

Dear Mr. Scraper:

This is in response to your letter to the Commission regarding your work on the EA for Grand Forks International Airport.

If this has any bearing on the EA, the project area is not located in an identified floodplain and it is believed the project will not affect an identified floodplain.

There are no other concerns associated with this project that affect State Water Commission or State Engineer regulatory responsibilities.

Thank you for the opportunity to provide review comments. If you wish to keep the State Engineer, or me advised please do. If you have any questions, please call me at 328-4969.

Sincerely,

Larry Knudtson  
Research Analyst

LJK:1570

RECEIVED

JAN 28 2005

ULTEIG ENGINEERS  
FARGO, ND



350 38th Avenue S.  
 Fargo, ND 58104-7079  
 P.O. Box 9615 / 58106-9615  
 Phone: 701.237.3211  
 Fax: 701.237.3191

January 28, 2005

Mr. Jason Renschler, Project Manager  
 US Army Corps of Engineers  
 1513 South 12<sup>th</sup> Street  
 BISMARCK, ND 58504

Subject: Jurisdictional Determination for Delineated Wetlands  
 Grand Forks International Airport  
 UEI Project No. 104.396

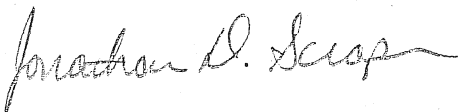
Dear Mr. Renschler,

I received your letter dated January 7, 2005 commenting on the Environmental Assessment that we are preparing to minimize hazardous wildlife attractants at the Grand Forks International Airport. In that letter you state that a Section 404 Permit Application is required for impacts to waters of the United States. This letter is to request a jurisdictional determination of the wetlands that may be impacted in this project. It is our understanding that if the wetlands are determined to not be waters of the United States that a Section 404 Permit will not be required for the work.

I have enclosed a copy of the Wetland Delineation Report for your use in this determination. The project area is located in SW ¼ of Section 28, E ½ of Section 33, W ½ of Section 34, Township 152 North, Range 51 West, Grand Forks County, North Dakota.

If you have any questions, or need additional information, please call me at 701-280-8587.

Sincerely,



Jonathan D. Scraper, PE

JDS/ldb  
 Enclosure

 ulteig engineers

Let the job done right

350 38th Avenue S.  
 Fargo, ND 58104-7079  
 P O Box 9615 / 58106-9615  
 Phone: 701.237.3211  
 Fax: 701.237.3191

January 28, 2005

Terry Ellsworth, Fish and Wildlife Biologist  
 ND Ecological Services Field Office  
 3425 Miriam Avenue  
 BISMARCK, ND 58501

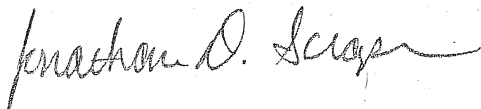
Subject: Approval of Wetland Delineation Report  
 Grand Forks International Airport  
 UEI Project No. 104.396

Dear Mr. Ellsworth,

I am submitting the Wetland Delineation Report that has been prepared for the Environmental Assessment to minimize hazardous wildlife attractants at the Grand Forks International Airport. Please review the report and provide correspondence indicating your acceptance of its findings.

If you have any questions, or need additional information, please call me at 701-280-8587.

Sincerely,



Jonathan D. Scraper, PE

JDS/ldb  
 Enclosure

engineers

Get the job done right

350 38th Avenue S.  
Fargo, ND 58104-7079  
PO Box 9615 / 58106-9615  
Phone: 701.237.3211  
Fax: 701.237.3191

January 28, 2005

Mr. Doug Van Daalen, Planning Specialist  
NRCS  
PO Box 1458  
BISMARCK, ND 58502-1458

Subject: Approval of Wetland Delineation Report  
Grand Forks International Airport  
UEI Project No. 104.396


Dear Mr. Van Daalen,

I am submitting the Wetland Delineation Report that has been prepared for the Environmental Assessment to minimize hazardous wildlife attractants at the Grand Forks International Airport. Please review the report and provide correspondence indicating your acceptance of its findings.

In addition please review the project area indicated in the report and provide comments on Prime or Unique Farmland and any easements that may exist.

If you have any questions, or need additional information, please call me at 701-280-8587.

Sincerely,



Jonathan D. Scaper, PE

JDS/ldb  
Enclosure

3350 38th Avenue S.  
Fargo, ND 58104-7079  
PO Box 9615 / 58106-9615  
Phone: 701.237.3211  
Fax: 701.237.3191

February 22, 2005

Terry Ellsworth, Fish and Wildlife Biologist  
ND Ecological Services Field Office  
3425 Miriam Avenue  
BISMARCK, ND 58501

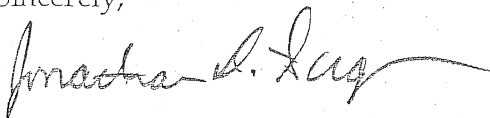
Subject: Minimize Hazardous Wildlife Attractants Environmental Assessment  
Grand Forks International Airport  
Grand Forks, North Dakota  
Ulteig Project No. 104.396

In your letter dated January 5, 2005, you requested to be a reviewing agency and to provide environmental document review and technical assistance to minimize fish and wildlife resource impacts. You have been included on the list of agencies that will receive the draft Environmental Assessment for review and comments.

In addition, you requested the opportunity to review the Wildlife Hazard Assessment prepared by USDA Wildlife Services, and the Wildlife Hazard Management Plan prepared by Grand Forks Regional Airport Authority. I sent these documents to you via e-mail on January 18, 2005. These are for your reference with regard to this project. We are not requesting comments on them.

If you need any addition information, please contact me at 701-280-8587.

Sincerely,



Jonathan D. Scraper, PE  
Project Manager

JDS/ldb  
Enclosure



2787 Airport Drive  
Grand Forks, ND 58203  
701-795-6981  
701-795-6979 fax  
www.gfkairport.com

February 23, 2005

Jon Scraper  
Ulteig Engineers  
3350 38<sup>th</sup> Avenue South  
Fargo, ND 58104

Mr. Scraper:

The Authority wishes to comment on one aspect of the EA for wildlife hazard mitigation, specifically bird hazing. Hazing can work on an individual, one-time basis, but seems impractical as a long term effective solution to the overall bird hazard problem.

Authority personnel currently rely primarily on hazing as the chief method of bird control. The very nature of hazing assumes birds come onto the premises and are subsequently chased away. When birds arrive on the airport in the first place we have failed. Hazing puts birds back into the air which creates a potential hazard. Birds, over time, habituate to every known hazing technique. The ultimate goal should be to eliminate attractants so that birds aren't drawn to the airport in the first place.

Hazing is dependent on detecting the presence of offending species. The Authority owns approximately 1,600 acres, of which 82 acres are included in this environmental assessment. Some of the areas being studied in this EA are remote and not within line of sight of the workplace. Some have tall grasses and cattails. In some areas the ground is too soft to support vehicle traffic. During certain times of the year, our employees have difficulty getting physically close enough to the birds' location to effectively haze.

The airport is open to aircraft operations 24 hours a day. For eight hours in the evening and at night only a single Operations employee staffs the airport. That person cannot abandon other duties to harass birds. To insure that hazing is an effective alternative, the Authority would need to staff two additional positions, 24 hours a day, 365 days a year. That would require hiring approximately nine more employees.

Simply put, hazing is not the best and most practical solution to the bird hazard situation at Grand Forks International Airport.

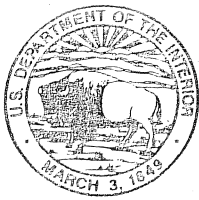
Steve Johnson, A.A.E  
Executive Director  
Grand Forks Regional Airport Authority

RECEIVED

FEB 24 2005

ULTEIG ENGINEERS  
FARGO, ND

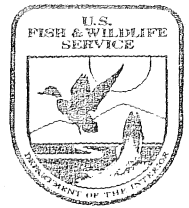




# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Ecological Services  
3425 Miriam Avenue  
Bismarck, North Dakota 58501



MAR - 2 2005

Mr. Jonathan D. Scraper, PE  
Ulteig Engineers  
3350 38th Avenue S  
Fargo, North Dakota 58104-7079

Dear Mr. Scraper:

The U.S. Fish and Wildlife Service (Service) has reviewed the Wetland Delineation Report enclosed with your January 28, 2005, letter related to an Environmental Assessment (EA) of a project to minimize the effects of wildlife attractants on Grand Forks International Airport property. The wetlands that were delineated are located in T. 152 N., R. 51 W., Sections 28, 33, and 34, Grand Forks County, North Dakota.

Your report adequately identified the wetlands occurring on the Grand Forks International Airport property. This report should be used to develop mitigation plans for impacts to identified wetlands.

In a February 2, 2005, e-mail message, you requested information on Service easements in the project area. A review of our plat books indicates no Service property interests in the project area.

In August 2004, we provided you with a list of federally threatened and endangered species that may be present in the proposed project area. In that list, the grey wolf was classified as a threatened species. That classification has now changed. In April 2003, the Service downlisted the grey wolf from endangered to threatened. On February 1, 2005, a U.S. District Court in Oregon overturned the April 2003 decision and ordered the Service to rescind the rule downlisting the grey wolf. At this time, the grey wolf is listed as endangered in North Dakota.

Thank you for the opportunity to review the Wetland Delineation Report for the Grand Forks International Airport. If you require further information, please contact Terry Ellsworth of my staff at (701) 250-4481, or at the letterhead address above.

ULTEIG ENGINEERS  
FARGO, ND

MAR 7 2005

RECEIVED

Sincerely,

A handwritten signature in cursive script that reads "Jeffrey K. Towner".

Jeffrey K. Towner  
Field Supervisor  
North Dakota Field Office

cc: FAA Airport District Office, Bismarck  
(Attn: T. Schauer)  
Director, ND Game & Fish Department, Bismarck  
(Attn: M. McKenna)



United States  
Department of  
Agriculture

Natural  
Resources  
Conservation  
Service

Bismarck State Office  
P.O. Box 1458  
Bismarck, ND 58502-1458

March 14, 2005

Jonathan D. Scraper, PE  
Ulteig Engineers  
3350 38<sup>th</sup> Avenue S.  
Fargo, ND 58104-7079

RE: Wetland Delineation Report - Grand Forks International Airport - UEI Project No. 104.396

Dear Mr. Scraper:

We have reviewed your report and have the following suggestions and comments:

- On pages 3 & 9, the legal description is incorrect. It should be R.51 not R.53.
- Suggest adding drainage modifiers to wetland basins, if drainage exists.

The Natural Resources Conservation Service (NRCS) concurs with the methodology used to determine wetland boundaries and types; however, NRCS is not able to field verify completeness. At this time, we are unable to accept the report findings of existing number, type, and acres of wetlands.

A review of the soil mapping within the project boundaries indicates the Farmland Protection Policy Act (FPPA) applies in the project area. Without specific location(s) or size of future project(s), it is not possible for our agency to address FPPA.

A review of the project area determined there are no lands under NRCS easement at this time.

Thank you for the opportunity to review and comment on this report. Should you require additional information, discussion, or clarification, please contact Doug Van Daalen, Planning Specialist, at (701) 530-2094.

Sincerely,

RECEIVED

MAR 17 2005

ULTEIG ENGINEERS  
FARGO, ND

  
J.R. FLORES  
State Conservationist

cc:

Gwen Kappes, Acting DC, NRCS, Grand Forks, ND  
Todd A. Schwagler, ASTC (FO), NRCS, Jamestown, ND  
Steve Sieler, State Soil Liaison, NRCS, Bismarck, ND

3350 38th Avenue S.  
Fargo, ND 58104-7079  
P.O. Box 9615 / 58106-9615  
Phone: 701.237.3211  
Fax: 701.237.3191

March 24, 2005

Mr. John Schumacher  
ND Game & Fish Department  
100 North Bismarck Expressway  
BISMARCK, ND 58501-5095

Subject: Endangered or Threatened Species at Grand Forks International Airport  
Wildlife Hazard Environmental Assessment  
Grand Forks, North Dakota  
UEI Project No. 104.396

Ulteig Engineers, Inc. is preparing an Environmental Assessment (EA) to minimize the wildlife hazards at the Grand Forks International Airport. This EA is looking at several alternatives, one of which is eliminating the wetlands in the project area.

Please provide comments on the current presence of endangered or threatened species at the Grand Forks International Airport. Also, please provide comments as to whether the habitat at the airport is the type of habitat that the endangered or threatened species frequent.

The Wildlife Hazard Assessment, prepared by USDA Wildlife Services, in 2000 states:

*Table B-2 (Appendix B) lists threatened and endangered species in North Dakota. None of these species were seen at GFK, however the potential does exist for five (5) currently listed threatened or endangered avian species to be seen at GFK during migration; the whooping crane, Eskimo curlew, bald eagle, piping plover, and least tern. It is highly unlikely that these species would be much more than transient, if seen. The gray wolf is the only mammal on the list and is an occasional transient to North Dakota from Minnesota.*

In an August 17, 2004 letter, USFWS provided a list of the endangered and threatened species that may be present in the proposed project area. The letter went on to state that:

*At this time, I am not aware of any species that frequent the project area.*

If you need any additional information to complete your comments, please call me at 701-280-8587.

Sincerely,



Jonathan D. Scraper, PE

JDS/ldb

350 38th Avenue S.  
Fargo, ND 58104-7079  
Box 9615 / 58106-9615  
Phone: 701.237.3211  
Fax: 701.237.3191

April 6, 2005

Shawnn Balstad, District Conservationist  
USDA-NRCS  
2397 DeMers Avenue  
GRAND FORKS, ND 58201

Subject: Submittal of AD-1006 Form  
Wildlife Hazard Environmental Assessment  
Grand Forks International Airport  
Grand Forks, North Dakota  
Ulteig Project No. 104.396

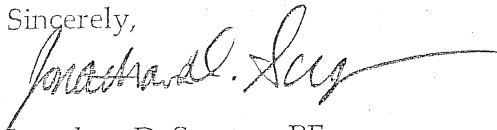
Ulteig Engineers, Inc. is currently performing an Environmental Assessment on behalf of the Grand Forks Regional Airport Authority. The Federal Aviation Administration (FAA) is the lead agency for the development.

One of the alternatives that we are considering is to fill 82.2 acres of wetlands and convert them to grassy areas that will be mowed. The wetlands have been delineated and the wetland delineation report has been sent to Doug Van Daalen, in your Bismarck office.

Enclosed are three copies of the AD-1006 Form. I have also included a map from the report that shows the delineated wetlands that would be converted as part of this proposed action.

If you have any questions or need additional information, please feel free to contact me at 701-280-8587.

Sincerely,



Jonathan D. Scraper, PE

JDS/ldb  
Enclosures



## FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request	April 5, 2005
Name Of Project	GFK Wildlife Hazard EA	Federal Agency Involved	Federal Aviation Administration
Proposed Land Use	Convert Wetlands to Mowed Grass Area	County And State	

PART II (To be completed by NRCS)		Date Request Received By NRCS	
Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply -- do not complete additional parts of this form).		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Acres Irrigated	Average Farm Size
Name Of Land Evaluation System Used	Name Of Local Site Assessment System	Amount Of Farmland As Defined in FPPA Acres: %	
		Date Land Evaluation Returned By NRCS	

PART III (To be completed by Federal Agency)	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	82.2			
B. Total Acres To Be Converted Indirectly	0			
C. Total Acres In Site	0.0 82.2	0.0	0.0	0.0

PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value				

PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)	0	0	0	0
---	---	---	---	---

PART VI (To be completed by Federal Agency)	Maximum Points				
Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))					
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
TOTAL SITE ASSESSMENT POINTS	160	0	0	0	0

PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)	100	0	0	0	0
Total Site Assessment (From Part VI above or a local site assessment)	160	0	0	0	0
TOTAL POINTS (Total of above 2 lines)	260	0	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/>
Reason For Selection:		

# Grand Forks International Airport

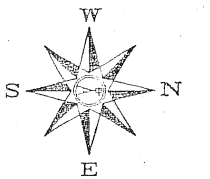
Grand Forks, North Dakota

Revision	Date	Number	By

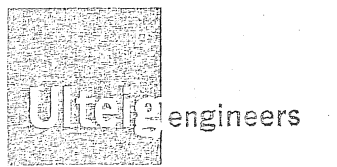
FIGURE 1  
EXISTING AIRPORT LAYOUT

## LEGEND

	RUNWAY
	TAXIWAY
	APRON



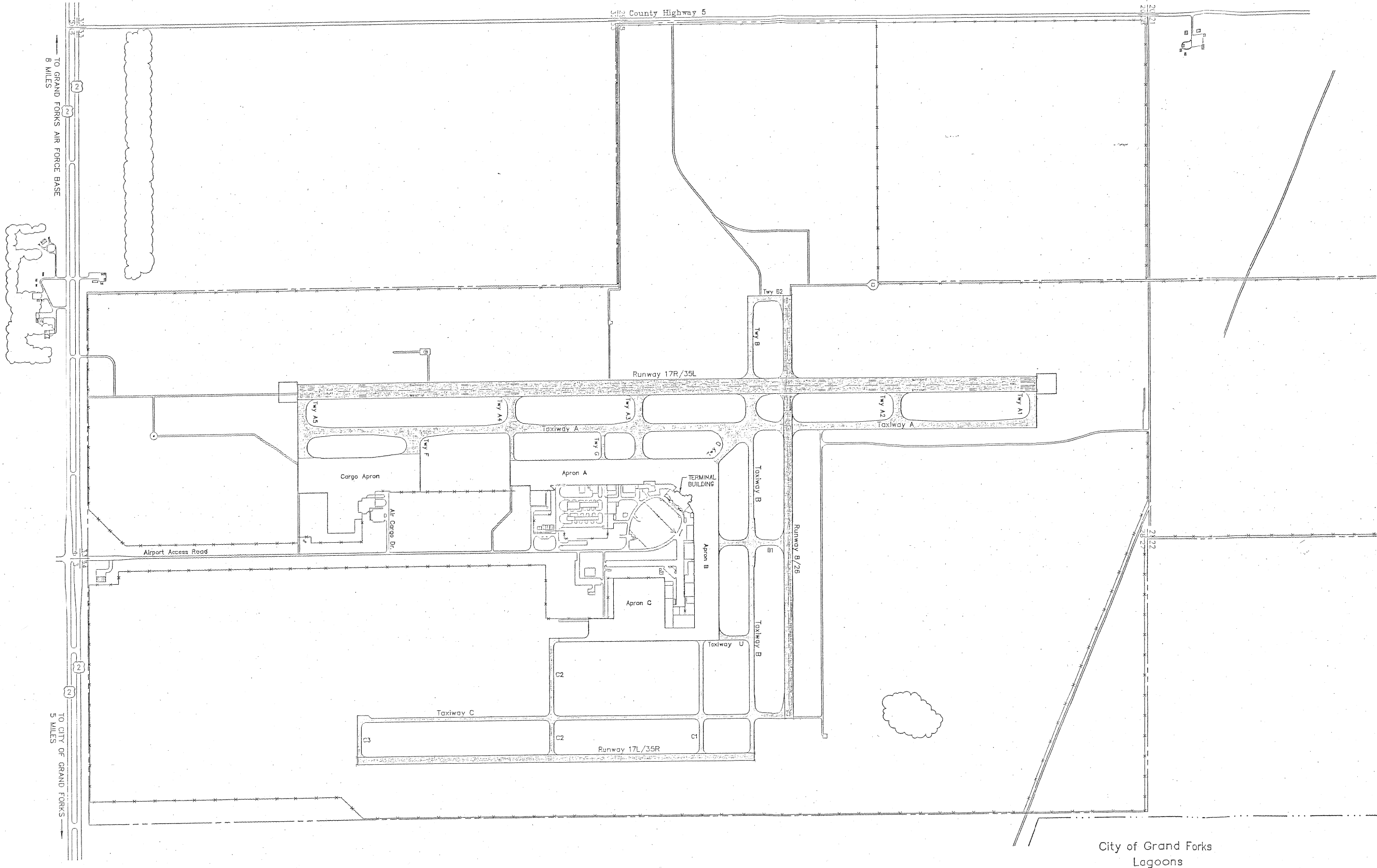
0 500 1000 2000



Bismarck • Detroit Lakes • Fargo • Minneapolis • Sioux Falls  
3350 38th Avenue South  
Fargo, North Dakota 58104  
Phone: 701.237.3211 Fax: 701.237.3191  
Web: [www.ulteig.com](http://www.ulteig.com)  
Drawn By: KSH  
Checked By: JDS  
Approved By: JDS

FIGURE 1

Project Number: 104.396  
Date: February 4, 2005  
Sheets: 1 of 1

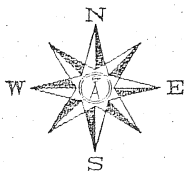
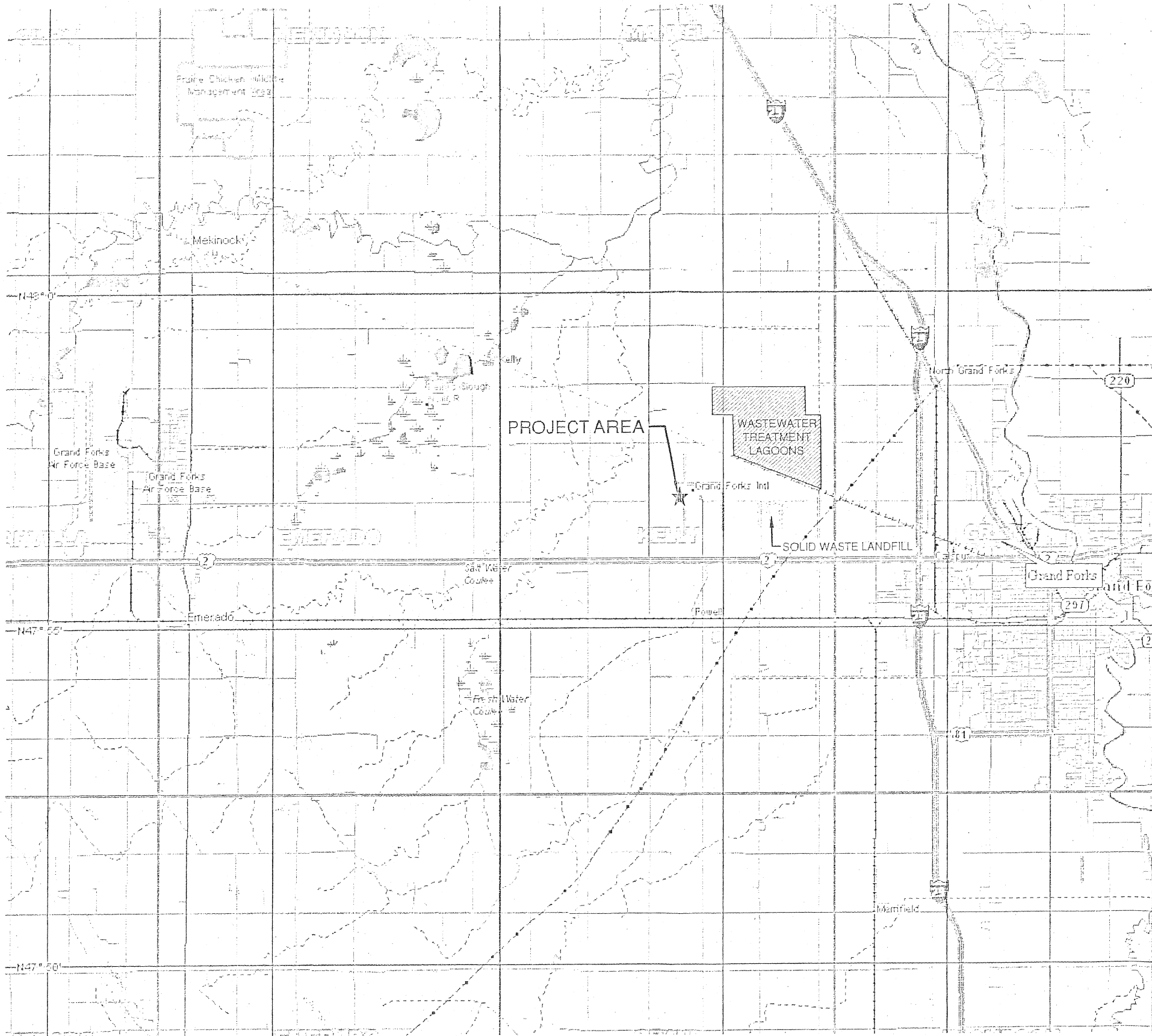


# Grand Forks International Airport

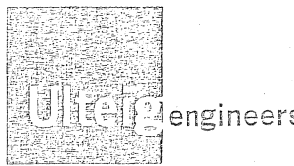
Grand Forks, North Dakota

Revision	Date	Number	By

FIGURE 2  
GENERAL LOCATION MAP



0 1 MILE 2 MILES



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3350 38th Avenue South  
Fargo, North Dakota 58104  
Phone: 701.237.3211 Fax: 701.237.3191  
Web: www.uteig.com  
Drawn By: KSH  
Checked By: JDS  
Approved By: JDS

FIGURE 2



Grand Forks  
International Airport

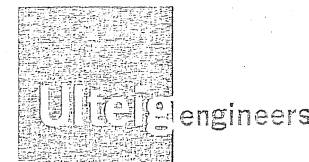
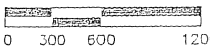
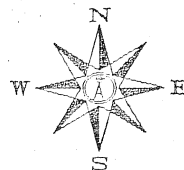
Grand Forks, North Dakota

Revision	Date	Number	By

FIGURE 3  
PROJECT AREA AND  
SUBJECT WETLANDS

LEGEND

- PROJECT AREA BOUNDARY
- DRAINAGE FEATURE EDGE
- WETLAND EDGE
- PREVIOUSLY MITIGATED BASIN



Bismarck - Detroit Lakes - Fargo - Minneapolis - Sioux Falls  
3350 38th Avenue South  
Fargo, North Dakota 58104  
Phone: 701.237.3211 Fax: 701.237.3191  
Web: www.ulteig.com  
Drawn By: KSH  
Checked By: JDS  
Approved By: JCS

FIGURE 3

Project Number: 104 396  
Date: February 4, 2005  
Sheets: 1 of 1

## U.S. Department of Agriculture

## FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request	April 5, 2005
Name Of Project	GFK Wildlife Hazard EA	Federal Agency Involved	Federal Aviation Administration
Proposed Land Use	Convert Wetlands to Mowed Grassy Area	County And State	GRAND FORKS N. DAKOTA

PART II (To be completed by NRCS)		Date Request Received By NRCS	4-11-2005
Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply -- do not complete additional parts of this form).		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Acres Irrigated 5,000 Average Farm Size 876
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: 783,747 % 85%	Amount Of Farmland As Defined in FPPA Acres: 749,610 % 81	
Name Of Land Evaluation System Used	Name Of Local Site Assessment System	Date Land Evaluation Returned By NRCS	
LESA	NONE	4/27/2005	

PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly		82.2			
B. Total Acres To Be Converted Indirectly		0			
C. Total Acres In Site		82.2	0.0	0.0	0.0

PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland		0			
B. Total Acres Statewide And Local Important Farmland		65.0			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted		51%			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value		51.1%			

PART V (To be completed by NRCS) Land Evaluation Criterion					
Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)		64	0	0	0

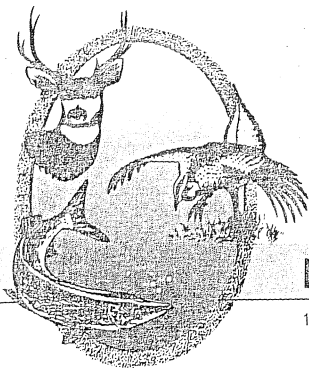
PART VI (To be completed by Federal Agency)		Maximum Points			
Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))					
1. Area In Nonurban Use	15	12			
2. Perimeter In Nonurban Use	10	7			
3. Percent Of Site Being Farmed	20	20			
4. Protection Provided By State And Local Government	20	20			
5. Distance From Urban Builtup Area	15	15			
6. Distance To Urban Support Services	15	0			
7. Size Of Present Farm Unit Compared To Average	10	10			
8. Creation Of Nonfarmable Farmland	10	0			
9. Availability Of Farm Support Services	5	5			
10. On-Farm Investments	20	0			
11. Effects Of Conversion On Farm Support Services	10	0			
12. Compatibility With Existing Agricultural Use	10	0			
TOTAL SITE ASSESSMENT POINTS		160	89	0	0

PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)	100	64	0	0	0
Total Site Assessment (From Part VI above or a local site assessment)	160	89	0	0	0
TOTAL POINTS (Total of above 2 lines)	260	153	0	0	0

Site Selected: A	Date Of Selection	4-29-2005	Was A Local Site Assessment Used?
			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Reason For Selection:

This site is selected as an alternative because the total score is below 160, indicating that the impact would be insignificant pursuant to NEPA.



"VARIETY IN HUNTING AND FISHING"

## NORTH DAKOTA GAME AND FISH DEPARTMENT

100 NORTH BISMARCK EXPRESSWAY BISMARCK, NORTH DAKOTA 58501-5095 PHONE 701-328-6300 FAX 701-328-6352

April 13, 2005

Jonathan D. Scraper, PE  
Ulteig Engineers  
PO Box 9615  
Fargo, ND 58106-9615

Dear Mr. Scraper:

RE: Endangered or Threatened Species at Grand Forks International Airport  
Wildlife Hazard Environmental Assessment  
Grand Forks, North Dakota  
UEI Project No. 104.396

The North Dakota Game and Fish Department has no record of threatened or endangered species at the Grand Forks International Airport. We are in agreement with USDA Wildlife Services and the US Fish and Wildlife Service, it does not appear the habitat available at the airport is the type frequented by threatened or endangered species, and any use of the airport by these species would likely be transient.

Sincerely,

Michael G. McKenna  
Chief  
Conservation & Communication Division

js

RECEIVED

APR 15 2005

ULTEIG ENGINEERS  
FARGO, ND





Get the job done right

3350 38th Avenue S.  
Fargo, ND 58104-7079  
PO Box 9615 / 58106-9615  
Phone: 701.237.3211  
Fax: 701.237.3191

April 20, 2005

Doug Van Daalen, Planning Specialist  
Natural Resources Conservation Service  
PO Box 1458  
Bismarck, ND 58502-1458

Subject: Wetland Delineation Report  
Grand Forks International Airport  
Grand Forks, North Dakota  
Ulteig Project No. 104.396

I received a comment letter from the State Conservationist with comments concerning the Wetland Delineation Report that we submitted to you for approval.

The first comment is that the legal description on pages 3 and 9 is incorrect. This will be verified and corrected.

The second comment is the suggestion to add drainage modifiers to wetland basins, if drainage exists. Please expand on this suggestion. We are unsure of the intention of this suggestion.

The third comment is that, although NRCS concurs with the methodology of the delineation, you are unable to accept the report findings without field verification. At this time, both USFWS and USACE are accepting the findings and intend to use the delineated acreages for impact and mitigation quantities. We request that NRCS concur with these agencies and the findings of this report for the purpose of developing a mitigation plan for impacts to the identified wetlands.

The fourth comment is in regard to the FPPA. AD-1006 Forms have been sent to Shawnn Balstad, District Conservationist to begin that process.

Thank you for your prompt comments and responses. We appreciate it. If you have any questions, please contact me at 701-280-8587.

Sincerely,

A handwritten signature in dark ink, appearing to read "Jonathan D. Scraper", with a long, sweeping horizontal line extending to the right.

Jonathan D. Scraper, PE  
Project Manager

JDS/ldb



Get the job done right

350 38th Avenue S.  
Fargo, ND 58104-7079  
PO Box 9615 / 58106-9615  
Phone: 701.237.3211  
Fax: 701.237.3191

April 26, 2005

Shawnn Balstad, District Conservationist  
USDA-NRCS  
2397 DeMers Avenue  
Grand Forks, ND 58201

Subject: Wetland Delineation Report  
Grand Forks International Airport  
Grand Forks, North Dakota  
UEI Project No. 104.396

I have enclosed a copy of the *Wetland Delineation Report* prepared by Ulteig Engineers, Inc. This report was prepared as part of an Environmental Assessment being prepared on behalf of the Grand Forks Regional Airport Authority. FAA is the lead agency. This report was sent to your Bismarck office previously and they provided comments. This copy has been revised based on the comments to correct a typo on the legal description of the project area.

USFWS has accepted these findings. I have enclosed the correspondence stating this.

If you require field verification of these delineations prior to accepting the report, please let me know so that I can arrange access and an escort at the airport.

Sincerely,

A handwritten signature in dark ink, appearing to read "Jonathan D. Scraper".

Jonathan D. Scraper, PE  
Project Manager

JDS/ldb  
Enclosures

**Jon Scraper**

---

**From:** Balstad, Shawnn - Grand Forks, ND [Shawnn.Balstad@nd.usda.gov]  
**Sent:** Thursday, April 28, 2005 9:13 AM  
**To:** Jon Scraper  
**Subject:** Wetlands at the airport

Jon,

Received a call this morning from Alan Gulsvig, Area Soil Scientist. He has verified everything with our state office regarding your FPPA and wetland filling requests. We will not really be involved here at this level, unless the State Office specialists request our assistance. The FPPA materials are in the mail to you already and as far as the wetlands go, David Dewald, the State Biologist out of Bismarck, is working cooperatively with the ACOE on your proposed project. He would be the one to contact and invite to the joint meetings you spoke of.

Just in case you don't have his information -- his phone number is 701-530-2083, email is [dave.dewald@nd.usda.gov](mailto:dave.dewald@nd.usda.gov) and mailing address is NRCS, P.O. Box 1458, Bismarck, ND 58502-1458.

*Shawnn K. Balstad*  
*District Conservationist*

Natural Resources Conservation Service  
4775 Technology Circle #1B  
Grand Forks, ND 58203-5635  
(701) 772-2321

**Jon Scraper**

---

**From:** Gulsvig, Alan - Devils Lake, ND [Alan.Gulsvig@nd.usda.gov]  
**Sent:** Thursday, April 28, 2005 3:47 PM  
**To:** Jon Scraper  
**Subject:** RE: Grand Forks Project

John,

I have reviewed the site assessment points on Form 1006 and the points assigned are acceptable according to the guidelines and thus meet the requirements of FPPA.

Alan Gulsvig  
Area Soil Scientist  
NRCS

-----Original Message-----

**From:** Jon Scraper [mailto:Jon.Scraper@ulteig.com]  
**Sent:** Thursday, April 28, 2005 3:21 PM  
**To:** Gulsvig, Alan - Devils Lake, ND  
**Subject:** Grand Forks Project

Alan,

Attached is a scan of the letter that I received from you with the form. I downloaded the site assessment criteria and followed them. With that I have put together a draft, I scanned that in also. Please review it and let me know if it appears that I have filled it out correctly.

According to our criteria, if the site scores under 160, then no further analysis is needed. Please call me when you get back in and we can discuss this as well as the mitigation steps that we have begun to take.

Thanks,

Jon Scraper



Get the job done right

3350 38th Avenue S.  
Fargo, ND 58104-7079  
PO Box 9615 / 58106-9615  
Phone: 701.237.3211  
Fax: 701.237.3191

April 29, 2005

Shawnn Balstad, District Conservationist  
USDA-NRCS  
4775 Technology Circle  
GRAND FORKS, ND 58203

Subject: AD-1006 Form  
Grand Forks International Airport  
Grand Forks, North Dakota  
UEI Project No. 104.396

Enclosed is the completed AD-1006 form. The total score is below 160, which indicates that the impact is not significant and does not require further analysis.

I have also enclosed a copy of recent correspondence to Doug Van Daalen.

If you have any questions, please call me at 701-280-8587.

Sincerely,

A handwritten signature in black ink, appearing to read "Jonathan D. Scraper", followed by a horizontal line.

Jonathan D. Scraper, PE  
Project Manager

JDS/ldb  
Enclosures



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PO Box 9615 / 58106-9615  
Phone: 701.237.3211  
Fax: 701.237.3191

April 29, 2005

Doug Van Daalen, Planning Specialist  
NRCS  
PO Box 1458  
BISMARCK, ND 58502-1458

Subject: AD-1006 Comments  
Minimizing Wildlife Hazards EA  
Grand Forks International Airport  
Grand Forks, North Dakota  
UEI Project No. 104.396

I received a letter from Alan Gulsvig in your Devils Lake Office with comments regarding the AD-1006 Form that we submitted as part of this Environmental Assessment. I have attached a copy of this letter for your use. We have completed Part VI and VII of this form and submitted it to the Grand Forks Field Office with our determination. We determined that the proposed site would have insignificant impact. We determined insignificant impact and that no further analysis is needed because the total score on the "Farmland Conversion Impact Rating" was less than 160. A copy of this form is also included for your use.

Mr. Gulsvig commented on the CRP contract that currently exists on some of the land, mitigation of the wetland impacts, and FPPA evaluations on borrow sites.

The EA includes language that acknowledges that many of these wetlands are currently included in areas enrolled in CRP and that they will be filled as the contracts expire on these lands, beginning in 2007.

The mitigation of these impacts is being coordinated with USFWS and USACE. We have also made contact with Dave Dewald, NRCS, about mitigation requirements and will continue to correspond with him on this subject. As part of this EA, proposed mitigation sites have been named. These will be subject to approval in a final mitigation plan that will be separate from this EA.



Doug Van Daalen

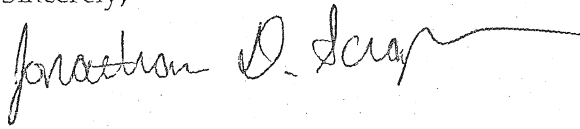
Page 2

April 29, 2005

The EA does not identify borrow locations, however it does include provisions that the borrow sites will have to follow for approval. These provisions include SHPO and FPPA evaluations.

Thank you for your prompt responses, we appreciate the cooperation.

Sincerely,

A handwritten signature in black ink, reading "Jonathan D. Scraper". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Jonathan D. Scraper, PE  
Project Manager

JDS/ldb

Enclosures

c: Alan Gulsvig, NRCS – Devils Lake  
Shawn Balstad – NRCS – Grand Forks

## U.S. Department of Agriculture

## FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request April 5, 2005			
Name Of Project GFK Wildlife Hazard EA		Federal Agency Involved Federal Aviation Administration			
Proposed Land Use Convert Wetlands to Mowed Grass Area		County And State GRAND FORKS, N. DAKOTA			
PART II (To be completed by NRCS)		Date Request Received By NRCS 4-11-2005			
Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply -- do not complete additional parts of this form).		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Acres Irrigated 5,000	Average Farm Size 876
Major Crop(s) CRP	Farmable Land In Govt. Jurisdiction Acres: 783,747	% 85%		Amount Of Farmland As Defined in FPPA Acres: 749,610	% 81
Name Of Land Evaluation System Used LESA	Name Of Local Site Assessment System NONE	Date Land Evaluation Returned By NRCS 4/27/2005			
PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly		82.2			
B. Total Acres To Be Converted Indirectly		0			
C. Total Acres In Site		82.2	0.0	0.0	0.0
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland		0			
B. Total Acres Statewide And Local Important Farmland		65.0			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted		51%			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value		51.1%			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)		64	0	0	0
PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))		Maximum Points			
1. Area In Nonurban Use	15	12			
2. Perimeter In Nonurban Use	10	7			
3. Percent Of Site Being Farmed	20	20			
4. Protection Provided By State And Local Government	20	20			
5. Distance From Urban Builtup Area	15	15			
6. Distance To Urban Support Services	15	0			
7. Size Of Present Farm Unit Compared To Average	10	10			
8. Creation Of Nonfarmable Farmland	10	0			
9. Availability Of Farm Support Services	5	5			
10. On-Farm Investments	20	0			
11. Effects Of Conversion On Farm Support Services	10	0			
12. Compatibility With Existing Agricultural Use	10	0			
TOTAL SITE ASSESSMENT POINTS	160	89	0	0	0
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100	64	0	0
Total Site Assessment (From Part VI above or a local site assessment)		160	89	0	0
TOTAL POINTS (Total of above 2 lines)		260	153	0	0
Site Selected: A		Date Of Selection 4-29-2005		Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Reason For Selection:

This site is selected as an alternative because the total score is below 100, indicating that the impact would be insignificant pursuant to NEPA.



Natural Resources Conservation Service  
502 Hwy 2 W, Suite 1  
Devils Lake, ND 58301

To: Jonathan D. Scraper, PE  
Ulteig Engineers  
PO Box 9615  
Fargo, ND 58106-9615

Subject: Grand Forks Airport Wetlands

Date: April 27, 2005

Attached is Form NRCS -CPA-1006 with Parts II, IV & V completed. The purpose of FPPA (Farmland Protection Policy Act) is to reduce the conversion of productive farmland to non-agricultural uses. The land to be converted is mostly farmland of local importance with less than 10 acres being prime farmland. This is due to the moderate to strong salinity of most of the non-wetland soils.

I am assuming that you have a copy of the site assessment guidelines for completion of Part VI of CPA-1006. If you do not, I can email a copy to you. Please return a copy of the completed form to my office for our agency records.

The primary concern of our Agency with this project is mitigation of the wetlands to be filled. As some of this area is under Conservation Reserve Program contract, all contractual issues will need to be satisfied prior to any fill being placed in the wetlands. In addition, wetland mitigation sites need to be located, evaluated, and approved to satisfy provisions of the Food Security Act and NEPA regulations. I understand that the Corps of Engineers has been contacted regarding wetlands under their jurisdiction and we will coordinate our work with theirs.

Another issue is the source of soil material to be used as fill. If the fill is taken from land currently in agriculture use, the borrow site(s) will also need to be evaluated according to the FPPA guidelines. Have the borrow sites been determined at this time?

Please contact me if any further information or assistance is needed.

Sincerely,

Alan R. Gulsvig  
Area Resource Soil Scientist  
Ph. (701) 662-7967 ext. 128

RECEIVED

APR 28 2005

ULTEIG ENGINEERS  
FARGO, ND



United States  
Department of  
Agriculture

Natural  
Resources  
Conservation  
Service

Bismarck State Office  
P.O. Box 1458  
Bismarck, ND 58502-1458

May 9, 2005

Jonathan D. Scraper, PE  
Ulteig Engineers  
3350 38<sup>th</sup> Avenue S.  
Fargo, ND 58104-7079

RE: Wetland Delineation Report – Grand Forks International Airport – UEI Project No. 104.396

Dear Mr. Scraper:

This letter is in reply to your letter dated April 29, 2005, regarding the above referenced activity.

The comment concerning adding drainage modifiers to the wetland basins refers to identifying basins as prior converted (PC) or partially drained (FW).

NRCS will not complete a field verification of the report findings. Again, we do agree with the methodology used to determine wetland boundaries and types. NRCS is willing to provide training if a functional assessment is used to determine current wetland functions.

At this time, it is our understanding no modification of existing wetlands will be commenced until after all existing Conservation Reserve Program contracts expire. If at that time, the landowner elects not to receive future USDA program benefits, NRCS will not need to be involved in the wetland determination process.

It is our understanding the US Fish & Wildlife Service (USF&WS) will be the jurisdictional agency the Grand Forks Airport will coordinate wetland conversion activities with. NRCS will not complete a certified wetland determination unless the Grand Forks International Airport or lessee receives USDA benefits.

Should you require additional information, discussion, or clarification, please contact Doug Van Daalen, Planning Specialist, at 701-530-2094.

Sincerely,

  
J.R. FLORES  
State Conservationist

cc:

Andy Wingenbach, ASTC (FO), NRCS, Devils Lake, ND  
Shawn K. Balstad, DC, NRCS, Grand Forks, ND

RECEIVED

MAY 12 2005

ULTEIG ENGINEERS  
FARGO, ND



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3350 38th Avenue S.  
Fargo, ND 58104-7079  
PO Box 9615 / 58106-9615  
Phone: 701.237.3211  
Fax: 701.237.3191

May 10, 2005

Terry Ellsworth, Fish and Wildlife Biologist  
ND Ecological Services Field Office  
3425 Miriam Avenue  
BISMARCK, ND 58501

Subject: Wetland Mitigation Banking Proposal  
Minimize Wildlife Hazards EA  
Grand Fork International Airport  
UEI Project No. 104.396

As you know Ulteig Engineers, Inc. is preparing an Environmental Assessment to minimize wildlife hazards at the Grand Forks International Airport on behalf of the Grand Forks Regional Airport Authority. FAA is the lead agency. As part of this Environmental Assessment, we are analyzing an alternative to eliminate 82.2 acres of wetlands. To mitigate this impact we are considering using wetland mitigation credits from an established private wetland banker.

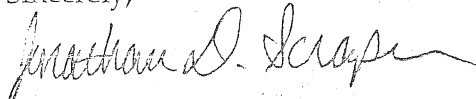
The banker currently has approximately 45 acres of credit available and is in the process of developing another 90 (2 – 45 acre banks). These banks are located in Towner, Benson, and Nelson Counties, respectively. The banks are existing, drained wetlands that have been or will be restored. The banker has been working with Mark Fisher in your Devils Lake office on the development of these banks.

The wetlands in these banks closely replicate the type and function of the wetlands that we are proposing to eliminate with this alternative.

Would mitigation in these banks be acceptable to USFWS for mitigating wetland impacts at the project site on the Grand Forks International Airport?

If you have any questions, please contact me at 701-280-8587.

Sincerely,

  
Jonathan D. Scraper, PE

JDS/lhb



DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, OMAHA DISTRICT  
NORTH DAKOTA REGULATORY OFFICE  
1513 SOUTH 12<sup>TH</sup> STREET  
BISMARCK ND 58504-6640

June 10, 2005

[200460822]

Mr. Jonathan D. Scraper  
Ulteig Engineers, Inc.  
PO Box 9615  
Fargo, North Dakota 58104-7079

Dear Mr. Scraper:

We have reviewed your request for Department of the Army, Corps of Engineers (Corps) jurisdictional wetland determination on a parcel of land located adjacent to the Grand Forks International Airport, in the SW $\frac{1}{4}$  of Section 28, the E $\frac{1}{2}$  of Section 33, and the West $\frac{1}{2}$  of Section 34, Township 152 North, Range 51 West, Grand Forks County, North Dakota.

Based on the information you provided, the wetlands located in the SW $\frac{1}{4}$  of Section 28 and the E $\frac{1}{2}$  of Section 33, T152N, R51W may not be jurisdictional waters of the United States. As we discussed by telephone on March 17, 2005, to finalize the jurisdictional determination a determination must be made if there are wetlands which are contiguous to a tributary; this can often be found in drainage ditches. If a drainage ditch bisects a wetland, and that ditch contains wetlands which are contiguous with a tributary, the bisected wetland may be jurisdictional. If you can provide information indicating whether or not project wetlands are contiguous with tributaries (perhaps via ditches), we would be able to finalize our determination. A representative from this office could assist with this determination, however, someone may not be available until July 2005.

In addition, based on your information, and the wetland delineation report prepared for the Grand Forks International Airport (August 17, 2004), we have made a preliminary determination that the wetland identified in the report as wetland #37, located in the West  $\frac{1}{2}$  of Section 34, T152N, R51W, appears to be a jurisdictional water of the United States. Furthermore, based on the map you submitted to this office depicting the area of potential effect (APE) for this project, dated December 13, 2004, it appears that there is an additional wetland basin located immediately to the east of wetland #37 that may also be jurisdictional. Therefore, should a proposed project result in the placement of dredge or fill material into either of these wetland, a Corps permit would likely be required prior to construction activities.

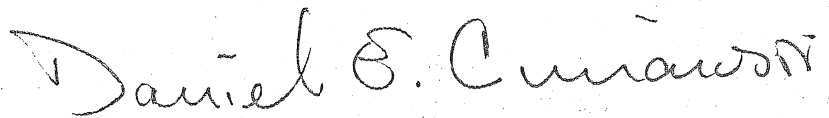
When finalized, the jurisdictional determination would identify the limits of Clean Water Act jurisdiction for the particular sites identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenants are USDA program participants, or anticipate participation in the USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.



Also, I would like to clarify a comment found in a letter from Ulteig Engineers to Doug Van Daalen, Natural Resources Conservation Service, dated April 20, 2005. Within that letter was the following comment, "...USACE are accepting the findings and intend to use the delineated acreages for impact and mitigation quantities". The findings are not yet accepted by the Corps; once accepted we would use the information in our Section 404 evaluation.

Should you have any questions regarding this determination, please do not hesitate to contact Jason Renschler of this office in writing at the letterhead address, by telephone (701-255-0015), or by e-mail ([Jason.J.Renschler@usace.army.mil](mailto:Jason.J.Renschler@usace.army.mil)) and reference project number 200460822.

Sincerely,

A handwritten signature in dark ink, reading "Daniel E. Cimarosti". The signature is fluid and cursive, with the first name "Daniel" being the most prominent.

Daniel E. Cimarosti  
Regulatory Program Manager  
North Dakota

CF: Doug Van Daalen

3350 38th Avenue S.  
Fargo, ND 58104-7079  
PO Box 9615 / 58106-9615  
Phone: 701.237.3211  
Fax: 701.237.3191

**Meeting Minutes**  
**Minimize Wildlife Hazards EA**  
**Grand Forks International Airport**  
**UEI Project No. 104.396**

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*(This constitutes our understanding of items discussed and the decisions reached. In the event that there are any additions or corrections, please contact the undersigned.)*

On July 20, 2005 at 10:30 a.m., a meeting was held at the Bismarck Airports District Office to discuss wetland impacts as they relate to an environmental assessment to minimize the wildlife hazards at Grand Forks International Airport. The meeting agenda and attendance sign-up sheet is attached.

Introductions were made with each individual describing their interest in this process.

Jon Scraper, Ulteig Engineers, described the scope of this project if the alternative to eliminate wetlands is chosen. This alternative would involve eliminating 82.16 acres of existing wetlands at the Grand Forks International Airport. Of the 82.16 acres, the USACE has expressed that 6.17 acres may be jurisdictional and subject to Section 404 permitting before any work begins in that area. The remaining 75.99 acres appear to not be jurisdictional and would not require Section 404 permitting.

Tom Schauer explained that this EA for minimizing wildlife hazards is one part of a larger plan to eliminate wildlife hazards at the airport. Other wildlife hazard mitigation has included installation of a perimeter deer fence was in 2004, the future closure of the City of Grand Forks landfill adjacent to the airport, and addressing mitigation with the City of Grand Forks sewage lagoons. Tom explained the 10,000-foot wildlife hazard setback and also protection of the 5-mile approach surface.





## MEETING ATTENDANCE SIGN UP SHEET

SUBJECT OF MEETING: Grand Forks International Airport EA

[illegible]

**Wetland Impact Mitigation Meeting Agenda**  
**Minimize Wildlife Hazard EA**  
**Grand Forks International Airport**  
July 20, 2005

Invitees: Patricia Dressler – FAA BIS-ADO  
Thomas Schauer – FAA BIS-ADO  
Terry Ellsworth – USFWS ND Ecological Services  
Bill Bicknell – USFWS  
Jon Scraper – Ulteig Engineers, Inc.

- I. Introductions of attendees
- II. Description of possible impact at GFK
- III. Assess present state of EA
- IV. Review of correspondence with USFWS
- V. Discussion on proposed mitigation including FAA guidance on wetland banking
- VI. Timeline for USFWS acceptance of mitigation for proposed wetland impacts
- VII. Discussion of USFWS requirements for tentative final mitigation plan, including ratios, protection, and coordination.

**PUBLIC HEARING  
MINIMIZE WILDLIFE HAZARDS  
DRAFT ENVIRONMENTAL ASSESSMENT**

**December 8, 2005**

A public hearing was held in the Board Room of the Airport Authority on Thursday, December 8, 2005. It was presented by Jon Scraper of Ulteig Engineers, Inc. on behalf of the Grand Forks Regional Airport Authority. The topic was "Minimize Wildlife Hazards – Draft Environmental Assessment".

The Open House was held from 6:00 p.m. until 7:00 p.m. At 7:00 p.m. Commissioner Clark Cronquist opened the hearing and all those present introduced themselves. Attending were, Jon Scraper and Steve Synhorst from Ulteig Engineers, Inc.; Eric Fortwengler from the USAF Flight Safety; Steve Johnson, Executive Director of the Grand Forks Regional Airport Authority; Frank Argenziano from UND; Dana Siewert, UND Safety; and Clark Cronquist, Board Commissioner of the Grand Forks Regional Airport Authority.

Scraper then presented information per the attached Agenda. When the presentation concluded, the floor was opened for public comment. There were no comments.

The public hearing was adjourned at 7:28 p.m.

Respectfully submitted,

*Coleen Peterson*

Coleen Peterson, Executive Assistant  
Grand Forks Regional Airport Authority



**Agenda**  
**Minimize Wildlife Hazards**  
**Draft Environmental Assessment**  
**Public Hearing**

**December 8, 2005 6:00 to 8:00 pm**

Presented by **Ulteig Engineers, Inc.** on behalf of the  
**Grand Forks Regional Airport Authority**

**6:00 pm    Open House** (please review the display boards and this agenda)  
Ulteig Engineers personnel are present to visit with you about the project.

**7:00 pm    Formal Presentation**

- I.     Welcome
- II.    Introductions (Clark Cronquist, Commissioner)
- III.   Description of Grand Forks International Airport
  - (a) History
  - (b) Current activity
  - (c) Anticipated Future Actions
- IV.   Project Analysis and Needs
  - (a) History of Wildlife Hazards Abroad
  - (b) History of Wildlife Hazards at GFK
  - (c) Objectives of this action
- V.    Alternatives that were considered
  - (a) No Action
  - (b) Avoidance Alternative
  - (c) Wildlife Hazing and Exclusion Devices
  - (d) Eliminate Wildlife Attractants – Proposed Action
- VI.   Proposed Action
  - (1) Eliminate Basin #1
  - (2) Eliminate the remainder of the wetlands as the CRP contracts expire and as funds are available
- VII.   Borrow Location
- VIII. Mitigation for Wetland Impacts
- IX.   Project Costs and Funding Sources
- X.    Opportunities for Public Comment

**7:30 pm**     **Open House** (please review the display boards and visit project staff with any questions or comments)

**8:00 pm**     **Adjourn Hearing**

DATE: December 8, 2005

TIME: 6:00 pm – 8:00 pm

LOCATION: Grand Forks Regional Airport Authority Board Room, 2787 Airport Drive, Grand Forks, ND

SUBJECT: Minimize Wildlife Hazards – Draft Environmental Assessment – Public Hearing

## ATTENDANCE ROSTER

	NAME	ROLE OR FUNCTIONAL GROUP	PHONE
1.	Jon Scraper	Ulteig Engineers, Inc.	701-280-8587
2.	Steve Synhorst	Ulteig Engineers, Inc.	701-280-8596
3.	Eric Fortwengler	U.S. Air Force <sup>Flight</sup> Safety	701-747-3842
4.	Steve Johnson	GFRAA	(701) 795-6981
5.	FRANK BRGENZIAND	UND	701-777-7872
6.	DANA SIEWERT	UND SAFETY	701 777-7895
7.	Clark Cronquist	GFRAA	
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# COMMENT CARD

December 8, 2005

(Please return by January 9, 2006)

## PUBLIC INPUT MEETING:

# Grand Forks International Airport – Minimize Wildlife Hazards Draft EA

NAME (please print): \_\_\_\_\_ ADDRESS (please print): \_\_\_\_\_

*Comments may also be submitted by email to: [Jon.Scraper@Ulteig.com](mailto:Jon.Scraper@Ulteig.com), or fax number 701-280-8739*

I wish to offer the following comments: \_\_\_\_\_

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

**Please leave your comment sheet with us**  
**or mail your comments by January 9, 2006 to :**

**Jon Scraper, PE**  
**Ulteig Engineers, Inc.**  
**3350 38<sup>th</sup> Avenue South**  
**Fargo, ND 58104-7079**

Public Notices

NOTICE OF PUBLIC HEARING  
AND AVAILABILITY OF ENVIRONMENTAL  
ASSESSMENT CONCERNING  
IMPROVEMENTS TO MINIMIZE WILDLIFE  
HAZARDS AT GRAND FORKS  
INTERNATIONAL AIRPORT  
GRAND FORKS, ND

The Grand Forks Regional Airport Authority, in cooperation with the Federal Aviation Administration and the North Dakota Aeronautics Commission, announces that a Public Hearing will be held on December 8, 2005 at 6:00 p.m. at the Grand Forks Regional Airport Authority Board Room, 2787 Airport Drive, Grand Forks, ND. There will be an open house from 6:00 p.m. to 7:00 p.m. and a formal presentation with an opportunity for comments at 7:00 p.m. Representatives from Ulteig Engineers, Inc. will be available to answer your questions and receive your comments. This Hearing is being held to present and discuss the proposed action and the environmental effects of the proposed action. (Exhibits will be on display). Requests for special facilities to assist disabled persons' involvement in this meeting should be received prior to December 5, 2005. Please contact Jon Scraper at 701-280-8587 for special arrangements.

Notice is hereby given of the availability of the Environmental Assessment for the proposed action at the Grand Forks International Airport.

An Environmental Assessment was prepared pursuant to the National Environmental Policy Act of 1969 to assess the environmental impacts associated with the proposed action. The proposed action consists of the following:

The proposed action includes elimination of 82.2 acres of wetlands at the Grand Forks International Airport. Approximately 6.17 acres of the impacted wetlands are under jurisdiction of the U.S. Army Corps of Engineers; the remaining wetlands are isolated wetlands. The areas will be maintained in a manner that does not attract high-risk species of wildlife. The wetland impacts will be mitigated so as not to recreate the hazard.

Copies of the Environmental Assessment, which explains the proposed action and its environmental impacts, are available for public inspection during normal business hours at the following locations:

Federal Aviation Administration, Airports District Office, 2301 University Drive Building 23B, Bismarck, ND  
North Dakota Aeronautics Commission, 2301 University Drive, Building 22, Bismarck, ND

Grand Forks Public Library,  
2110 Library Circle  
Grand Forks, ND 58201  
Grand Forks Regional Airport Authority,  
2787 Airport Drive  
Grand Forks, ND 58203

Individuals or organizations wishing to submit comments on the Environmental Assessment should do so by January 9, 2006. Comments should be made to:

Jon Scraper, PE  
Project Manager  
Ulteig Engineers, Inc.  
3350 38th Ave S  
Fargo, ND 58104  
Email: Jon.Scraper@Ulteig.com  
(November 5 & 8, December 3, 2005)

AFFIDAVIT OF PUBLICATION

STATE OF NORTH DAKOTA }  
COUNTY OF GRAND FORKS }

SS. Ct. # 12-14-05  
1001.0300.240100

first duly sworn, on oath says:

That { she } is { a representative of the GRAND FORKS HERALD, INC.,

publisher of the Grand Forks Herald, Morning Edition, a daily newspaper of general circulation, printed and published in the City of Grand Forks, in said County and State, and has been during the time hereinafter mentioned, and that the advertisement of

Reduce Wildlife Hazards  
a printed copy of which is hereto annexed, was printed and published in every copy of the following issues of said newspaper, for a period of 3 time (s) to wit:

<u>11-5</u>	Yr. <u>05</u>	Yr. _____
<u>11-8</u>	Yr. <u>05</u>	Yr. _____
<u>12-3</u>	Yr. <u>05</u>	Yr. _____

and that the full amount of the fee for the publication of the annexed notice inures solely to the benefit of the publishers of said newspaper; that no agreement or understanding for a division thereof has been made with any other person and that no part thereof has been agreed to be paid to any person whomsoever and the amount of said fee is \$ 361.35;

That said newspaper was, at the time of the aforesaid publication, the duly elected and qualified Official Newspaper within said County, and qualified in accordance with the law of the State of North Dakota to do legal printing in said County and State.

Subscribed and sworn to before me this 12 day of

Dec A.D. 05

Elaine Newcote  
Notary Public, Grand Forks, ND



**NORTH DAKOTA**  
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION  
1200 Missouri Avenue, Bismarck, ND 58504-5264  
P.O. Box 5520, Bismarck, ND 58506-5520  
701.328.5200 (fax)  
www.ndhealth.gov



November 8, 2005

Mr. Jon Scraper, P.E.  
Project Manager  
Ulteig Engineers, Inc.  
3350 - 38<sup>th</sup> Avenue South  
Fargo, ND 58104

Re: November 2005 Draft Environmental Assessment  
Minimize Wildlife Hazards, Grand Forks International Airport  
Grand Forks County

Dear Mr. Scraper:

This department has reviewed the above-referenced draft environmental assessment submitted under date of November 3, 2005.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, our comments remain the same as those in our December 10, 2004 letter to you (copy enclosed).

If you have any questions regarding our comments, please contact me at 701-328-5150.

Sincerely,

L. David Glatt, R.E., Chief  
Environmental Health Section

LDG:cc  
Attach.





**NORTH DAKOTA**  
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION  
1200 Missouri Avenue, Bismarck, ND 58504-5264  
P.O. Box 5520, Bismarck, ND 58506-5520  
701.328.5200 (fax)  
www.ndhealth.gov



December 10, 2004

Mr. Jonathan D. Scraper, P.E.  
Project Manager  
Ulteig Engineers  
P.O. Box 9615  
Fargo, ND 58104-7079

Re: Project No. 104.396, Grand Forks International Airport  
Wildlife Attractant Environmental Assessment, Grand Forks County

Dear Mr. Scraper:

This department has reviewed the information concerning the above-referenced project submitted under date of December 7, 2004, with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, we have the following comments:

Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance, and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.

The department owns no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area. In addition, we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

These comments are based on the information provided about the project in the above-referenced submittal. The U.S. Army Corps of Engineers may require a water quality certification from this department for the project if the project is subject to their Section 404 permitting process. Any additional information which may be required by the U.S. Army Corps of Engineers under the process will be considered by this department in our determination regarding the issuance of such a certification.

Mr. Jonathan D. Scraper

2.

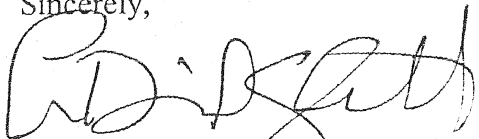
December 10, 2004

The department will continue to be a review agency regarding this project, and I will remain the contact person. Please address any further correspondence regarding this project to:

L. David Glatt, P.E., Chief  
Environmental Health Section  
ND Department of Health  
P.O. Box 5520  
Bismarck, ND 58506-5520

If you have any questions regarding our comments, please feel free to contact me at 701-328-5150 or by email at: [dglatt@state.nd.us](mailto:dglatt@state.nd.us).

Sincerely,

A handwritten signature in black ink, appearing to read 'L. David Glatt', written over a horizontal line.

L. David Glatt, P.E., Chief  
Environmental Health Section

LDG:cc  
Attach.

## RESPONSE TO ND DEPT. OF HEALTH COMMENT

The comments from NDDOH have been addressed in the EA. The comments about minimizing disturbance and siltation of water bodies and preventing spills of oil and grease and the handling of fuels on the site have been addressed by requiring that specification Item P-156 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control be included in the specifications for any construction projects to take this action. This requirement is listed in **Section 5.4.4 [Construction Impacts] Potential Mitigation.**



DEPARTMENT OF THE AIR FORCE  
319TH CIVIL ENGINEER SQUADRON  
GRAND FORKS AIR FORCE BASE, NORTH DAKOTA

DEC 07 2005

Mary C. Giltner  
525 Tuskegee Airmen Blvd  
Grand Forks AFB ND 58205-6434

Ulteig Engineers  
Attn: Jonathan Scraper, PE, Project Manager  
3350 38<sup>th</sup> Avenue South  
Fargo ND 58104-7079

Dear Mr. Scraper:

Your draft Environmental Assessment (EA) dated 9 Nov 05 concerning the Grand Forks Regional Airport Authority implementation of a plan to reduce the attraction of the airport to high risk wildlife species has been received. This action, which includes elimination of 82.2 acres of wetlands at the Grand Forks International Airport, has been reviewed with our Environmental Impact Analysis Process (EIAP) team members.

We are interested in the EA and the proposed action, with its effect on diverting waterfowl, and the potential effect on our aircraft operations at Grand Forks AFB. We have enclosed our comments. The locations of the borrow pits should be selected so they do not create ponds for migrating waterfowl near any airfields.

Our point of contact is Diane Strom, at telephone (701) 747-6394, email [Diane.Strom@grandforks.af.mil](mailto:Diane.Strom@grandforks.af.mil). Thank you for the opportunity to review the EA.

Sincerely,

  
MARY C. GILTNER  
Deputy Base Civil Engineer

Attachments  
Comments

RECEIVED

DEC 16 2005

ULTEIG ENGINEERS  
FARGO, ND

Comments by Kristen Rundquist,  
Natural Resource Program Manager,  
Grand Forks AFB ND

- 1) Page 2-2. Improved record keeping regarding actual bird-aircraft strikes would better support ecological decisions made.
- 2) Page 2-2. The average strike rate is 1:78000, which is way below the hazard of 1:10000. Including a standardized reference factor would improve the justification that even though the documented rate is 1:78000, it must be lower, given that there are a number of unreported strikes. It lacks supporting rationale.
- 3) Page 2-2. It is possible that birds identified traveling from the city lagoons to the airport lagoons were likely traveling to Kelly's Slough NWR, as well. If the wetlands are removed from the airport, birds may travel in high numbers from the city lagoons to Kellys Slough. Therefore, the airport will still have to employ hazing mechanisms to keep birds away. This EA should address Kellys Slough NWR and the attractant 'hazard' it represents. Wildlife attractant areas are included in Figure 2 (Kelly's Slough, English Coulee, etc).
- 4) Wetlands vary in type and bird attractants. Wetland typing appears lacking, and the associated wildlife that inhabit them. Wetlands with open standing water (typically lacustrine) would be a bigger concern to GFK. Small palustrine, emergent wetlands typically are not large waterfowl attractants like open water wetlands, and it may be unnecessary to fill them.
- 5) Page 3-2. The netting could be removed before ice-over, as well as the bird-balls. Travel with a truck to the general wetland areas should be possible given the several roads visible on the satellite image. The wetlands appear to be within walking distance from the road to the wetlands.
- 6) Regardless of filling/not filling wetlands on GFK, it appears the airport shall still have to employ hazing mechanisms during spring/fall migration period, due to the airport's location in the flyway, and the relative closeness to Kellys Slough, English Coulee, city sewage lagoons, and the Red River.
- 7) Page 3-3. It is true that alterative C does not eliminate attractants within 10,000 feet of the AOA or five miles in the approach paths, but the preferred alternative does not appear to significantly reduce the attractants.
- 8) Page 3-3. Review of general waterfowl migration in ND has been on the rise over several years given the recent wet-weather cycle. This has inflated the numbers of geese and ducks and should be taken into account in the EA.
- 9) The assessment of increased drainage from the wetland removal appears lacking. The affect on neighboring agricultural area farm fields is also not addressed. During the current wet-cycle, fields have typically been wet as well and this will only proliferate their problem. Alternative D seems to reduce the storage capacity of water, and increases drainage. A storm drainage capacity test or modeling should be run to demonstrate existing infrastructure can handle the removal of wetlands.
- 10) Section 5.7. The statement that the airport has no T&E species should be justified with a specific survey, vice general observations. It is likely that state species of concern (taken from the ND Natural Heritage Inventory or the State's top 100

species for conservation (NDFGD)), such as the Nelson's Sharp-tailed sparrow, upland sandpipers, chestnut-collared longspurs, grasshopper sparrows, etc., would frequent the airport, and breed there, given the grassland habitat. These species are known to occur near the airport. Grassland birds have experienced the sharpest population decline, as compared with any other bird assemblage in North America. Some grassland birds, like the Nelson's sharp-tail, need heavy vegetation cover, like that provided by a small palustrine emergent wetland. It is suggested that this EA evaluate the affects of wetland removal on the associated non-game species. It is also noted that these species are not a Bird Airstrike Hazard (BASH) target.

- 11) Section 5.7. This section needs to address T&E plants as identified by the title. An approved plant survey, or textual description of the plants present at the airport is lacking. This section seems to focus on the T&E animal concerns. Wetlands and their transition zones are often a haven for plant diversity, and should be evaluated.
- 12) All wetlands mitigated should be in the same watershed as they were removed. The USACE is requiring it of the jurisdictional wetland. Perhaps the airport should do the same for the rest of the wetland acreage.
- 13) It is suggested that Basin#1 be filled, as the evidence supports the remediation of this waterfowl hazard. Filling the rest of the wetlands may not provide the desired results, given the location of the airport, the type of small-emergent wetlands, the central flyway, the city lagoons, and Kelly's NWR. With the removal of all wetlands, the airport may not achieve their bird hazard reduction goal and must still employ the use of hazing techniques, etc. A modified version of alternative C is suggested as the best alternative to address the airport's concern. The EA lacks evidence of professional surveys for the wildlife or plants using the area, and relies on general observations. The EA identifies the airport as a High Risk WHA with an adjusted strike rate of 1:15600, which does not fully support a 1:10000 high risk WHA zone. Evidence to support bird strike reduction could be improved. Adjacent land facilities supporting wildlife may require continued hazing techniques to achieve acceptably low bird airstrike hazards.



Comments by Eric J. Fortwengler, MSgt, USAF  
Flight Safety NCO  
Grand Forks AFB, ND  
Telephone 747-3842

1) Section 5.7 The EA should reflect a study or theory on where the displaced migrating waterfowl/wildlife will relocate.

2) Section 3.4. The EA should indicate the location of borrow pits from which the 150,000 cubic yards of fill dirt will originate. There is a concern to avoid creating another pond for migrating waterfowl near any airfield.

3350 38th Avenue S.  
Fargo, ND 58104-7079  
Phone: 701.237.3211  
Fax: 701.237.3191

February 1, 2006

Mary C. Giltner, Deputy Base Civil Engineer  
Grand Forks Air Force Base  
525 Tuskegee Airmen Blvd  
Grand Forks AFB, ND 58205-6434

Subject: Response to GFAFB Comments Dated December 7, 2005  
Minimize Wildlife Hazards Environmental Assessment  
Grand Forks International Airport  
Grand Forks, North Dakota  
UEI Project No. 104.396

Ms. Giltner,

I received your letter dated December 7, 2005 with comments pertaining to the Draft Environmental Assessment (EA) for the Grand Forks International Airport (GFK) dated November 9, 2005. This Draft EA addresses implementing a plan to reduce the attraction of the airport to high-risk wildlife species.

The following responses to your comments are numbered as received in your letter. A copy of your comments is attached for reference.

Comment #1 –A mandatory reporting system would increase the accuracy of the database that Federal Aviation Administration (FAA) currently maintains. Currently, FAA does not require reporting all strikes. Since the Wildlife Hazard Assessment (WHA) was conducted in 1999, the Airport has encouraged the users of the airport to report all wildlife-aircraft strikes. This encouragement has increased the reporting rate significantly.

Comment #2 – The strike data for 2004 from the FAA database shows 21 strikes. In addition, University of North Dakota (UND) commented that they had 26 unreported strikes in 2004. The strike rate for 2004 is 1:5,500. This data has been added to the EA.

Comment #3 – Kelly's Slough is not identified in the WHA as a primary concern for Grand Forks International Airport.

Comment #4 – The Wetland Delineation Report is included in Appendix D of the EA. This report describes wetland types.

Comment #5 – The option of removing and reinstalling exclusion devices would require personnel not currently available at the Airport. As explained in the EA, the effectiveness of these types of devices is low due to the migratory nature of the high-risk species that they are meant to exclude. As new flocks of birds arrive that have not experienced the nets and balls, they will be attracted to the wetlands.

Comment #6 – This EA does not presume to eliminate the need for hazing forever or to eliminate the presence of all high-risk species all of the time. The purpose of this action is to enhance safety by reducing the potential for wildlife-aircraft strikes by implementing long-term action that reduces or mitigates the attraction of the Airport to wildlife and to comply with FAA Advisory Circular (AC) 150/5200-33A, Hazardous Wildlife Attractants On or Near Airports.

Comment #7 – The preferred alternative significantly reduces the attractants in the project area. Attractants outside of the project area would be the subject of a different EA.

Comment #8 – The current waterfowl population is similar to that of the 1970's and will likely continue to cycle with wet or dry cycles.

Comment #9 – The drainage of the project area is routed within airport property until it can be conveyed through a public ditch or drainage system. The reduction in storage capacity is minor as the proposed grass cover slows storm runoff and promotes infiltration into the ground.

Comment #10 – The United States Department of the Interior Fish and Wildlife Service (USFWS) provided a list of Threatened and Endangered Species as well as an update when the status of those species changed as part of their comments for this EA. The species provided by the USFWS were considered as part of this EA. The WHA also provides a report on species observed during regular surveys at the site over the course of 13 months. The preparer of the WHA never observed an Endangered or Threatened Species.

Comment #11 – The USFWS provided a list of Threatened and Endangered Species as well as an update when the status of those species changed as part of their comments for this EA. The species provided by the USFWS were considered as part of this EA. The WHA also provides a report on species observed during regular surveys at the site over the course of 13 months. The preparer of the WHA never observed an Endangered or Threatened Species. A description of the plants present at the wetlands is included in the Wetland Delineation Report.

Comment #12 – Mitigation of non-jurisdictional wetlands will be coordinated with the USFWS and the North Dakota Game and Fish Department (NDGF). In addition, the Department of the Army Corps of Engineers (USACE) will allow, in this specific case, mitigation of jurisdictional wetlands outside of the watershed as per their Draft EA comments.

Comment #13 – This EA does not presume to eliminate the need for hazing forever or to eliminate the presence of all high-risk species all of the time. The purpose of this action is to enhance safety by reducing the potential for wildlife-aircraft strikes by implementing long-term action that reduces or mitigates the attraction of the Airport to wildlife and to comply with FAA Advisory Circular (AC) 150/5200-33A, Hazardous Wildlife Attractants On or Near Airports.

The WHA, conducted by United States Department of Agriculture-Wildlife Services (USDA-Wildlife Services), is a professional survey that provides thorough surveys of the wildlife and habitat at the Airport. The FAA, which has the lead responsibility for aircraft safety, has an Interagency Agreement with the USDA Wildlife Services' National Wildlife Research Center to conduct wildlife hazard research. USDA's National Research Center is the U.S. government's primary expert in wildlife hazard issues.

At the time of the survey the adjusted strike rate was projected to be 1:15,600. Using the most recent complete strike data from 2004, the strike rate is 1:5,500. This strike rate is well within the threshold of being high-risk. This information has been added to the EA.

Comment #1 (E. Fortwengler) – It would be difficult to study or theorize future waterfowl movements other than to predict that they will likely be present at habitats attractive to them.

Comment #2 (E. Fortwengler) – Borrow pits will be either located outside of the separation distance described in AC 150/5200-33A or graded to not retain water and create attractants.

Thank you for taking time to participate in this process and provide your comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Jonathan D. Scraper", with a long horizontal flourish extending to the right.

Jonathan D. Scraper, PE  
Project Manager

JDS/ldb

Attachment – Dept. of the Air Force – GFAFB Comments dated December 7, 2005

cc: Steven Obenauer, Manager – FAA Bismarck Airports District Office



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Ecological Services  
3425 Miriam Avenue  
Bismarck, North Dakota 58501



JAN - 9 2006

RECEIVED

JAN 12 2006

ULTEIG ENGINEERS  
FARGO, ND

Mr. Jonathan D. Scraper, PE  
Ulteig Engineers  
3350 38th Avenue S.  
Fargo, North Dakota 58104-7079

Dear Mr. Scraper:

The U.S. Fish and Wildlife Service (Service) has reviewed the November 2005, Draft Environmental Assessment (DEA) for the Grand Forks International Airport Wildlife Hazard Mitigation Plan. The Grand Forks Regional Airport Authority (GFRAA) proposes to fill 82.2 acres of wetland habitat located on the airport property. The project is intended to mitigate aircraft collisions with wildlife by removing wetland habitat that attracts wildlife to the airport property. Service comments are provided under the authority of and in accordance with the requirements of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), Migratory Bird Treaty Act (16 U.S.C. 703 et seq.), and the Endangered Species Act (ESA) (16 U.S.C. 1531 et seq.).

As a reviewing agency, the Service has provided comments and recommendations to avoid, minimize, and compensate for unavoidable impacts to fish and wildlife resources resulting from project construction. The Service has reviewed the proposed wetland mitigation and concurs that if wetland credits are purchased from an approved wetland mitigation bank, the project's wetland impacts can be adequately offset. The use of functional assessment techniques to determine the level of mitigation needed to replace the impacted wetlands will ensure the project results in no net loss of wetlands in accordance with Executive Order 11990 (Protection of Wetlands). The Service will continue to provide technical assistance to the GFRAA as they finalize the details of their comprehensive wetland mitigation plan.

### Specific Comments on the DEA

Pg. 2-3, Section 2.2. The first paragraph states that Figure 2 shows the required separation distance between wildlife attractants and the AOA for airports serving turbine-powered aircraft. It does not appear that the separation boundary is shown in Figure 2. Add a visual representation of the boundary to Figure 2.

Pg. 5-7, Section 5.7. In the fourth paragraph, a threatened and endangered species determination of "not likely to affect" is made. With the lack of habitat and absence of documented



occurrences of threatened or endangered species in the project area, an appropriate threatened and endangered species determination would be "no effect." If the evaluation shows a "no effect" determination on listed species, further consultation is not necessary.

Pg. 5-17, Section 5.17.3. This section is discussing Alternative D. In the first sentence on page 5-17, change Alternative B to Alternative D.

Appendix A - Agency Contact Letters and Responses. In the table listing Agency Contact Information, the Service is listed as a Coordinating Agency. In our letter of January 5, 2005, the Service indicated our preference is to be a reviewing agency in the preparation of the EA, not a cooperating agency. Please change the table to reflect that our office is a Review Agency.

We appreciate the opportunity to review and provide comments on this DEA and look forward to working with you in the future. If you require further information, please contact Terry Ellsworth of my staff at (701) 250-4481, or at the letterhead address above.

Sincerely,

A handwritten signature in cursive script that reads "Jeffrey K. Towner".

Jeffrey K. Towner  
Field Supervisor  
North Dakota Field Office

cc: NEPA Coordinator, Denver (MAIL STOP 60120)  
Director, ND Game & Fish Department, Bismarck  
(Attn: M. McKenna)

## RESPONSE TO USFWS COMMENT

The comments from USFWS dated January 9, 2006 have been addressed in the EA.

The first comment relating to the content of Figure 2 was accurate. **Figure 2** was changed to reflect the information as stated in the EA.

The second comment relating to the effect of the action to threatened and endangered species was changed in **Section 5.7** to "no effect."

The third comment relating to a typo in **Section 5.17.3** where Alternative D is shown as Alternative B was corrected.

The fourth comment relating to a mistake in the **Appendix A - Agency Contact Information** where USFWS was listed as a Coordinating Agency has been corrected and USFWS is listed as a Review Agency as they had requested.

## Jon Scraper

---

**From:** Frank Argenziano [argenzia@aero.und.edu]  
**Sent:** Wednesday, January 04, 2006 4:09 PM  
**To:** Jon Scraper  
**Cc:** Dana Siewert  
**Subject:** Nov. 2005 Draft Environmental Assessment

Dear Mr. Scraper,

Having attended the December 8, 2005 meeting, and reviewing the draft environmental assessment, I would like to comment on the number of reported bird strikes at Grand Forks. While our internal Occurrence/Hazard Report system (OHR) captures virtually all bird strike information for the UND Aerospace fleet, I am reasonably sure this information does not make it into the FAA data base. A review of our reports for 2005, 2004, and 2003 provided the following bird strike numbers: 2005 - 13, 2004 - 26, 2003 - 19.

We are presently working on a method to transfer future bird strike data directly from our system to the FAA reporting system without having to manually reenter it. Hopefully this will provide a more accurate picture of the bird strike hazard around the Grand Forks airport.

If you need additional information, please feel free to contact me.

Sincerely,

Frank Argenziano  
Assistant Director Aviation Safety & Security  
701-777-7822  
argenzia@aero.und.edu

## RESPONSE TO UND COMMENT

The comments from UND have been addressed in the EA. The additional bird strike information provided in the comment dated January 4, 2006 is incorporated into the discussion of bird strike rates in **Section 2.1 Wildlife Hazard Assessment and Recommendations**, page 2-2.



DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, OMAHA DISTRICT  
NORTH DAKOTA REGULATORY OFFICE  
1513 SOUTH 12<sup>TH</sup> STREET  
BISMARCK ND 58504-6640  
January 23, 2006

[200460822]

Mr. Jonathan D. Scraper  
Ulteig Engineers, Inc.  
PO Box 9615  
Fargo, North Dakota 58104-7079

Dear Mr. Scraper:

This letter is in response to your recent request to mitigate for wetlands impacts outside of the designated hydrologic unit classification (HUC) boundary in which anticipated wetland impacts would occur. This request is in regards to the Grand Forks Regional Airport Authorities (GFRAA) plan, in cooperation with the Federal Aviation Administration (FAA), to reduce the attraction of the airport to high-risk wildlife species. The GFRAA is developing a proposal to reduce the attraction of wildlife to the airport, which includes eliminating a total of 82.2 acres of wetlands located at the airport. Ulteig Engineers has completed the draft Environmental Assessment for impacts associated with this proposed airport improvement project. This project is located in the SW¼ of Section 28, the E½ of Section 33, and the West½ of Section 34, Township 152 North, Range 51 West, Grand Forks County, North Dakota.

As part of the airport improvement project planned by the GFRAA, the 6.17-acre wetland, identified as basin #37 in the wetland delineation report prepared for this project, which may be regulated under Section 404 of the Clean Water Act, would be eliminated in addition to 41 identified isolated wetlands. As stated in the U.S. Army Corps of Engineers Guidance for Compensatory Mitigation in the Omaha District, one of the requirements is to mitigate for the unavoidable wetland impacts utilizing the 8-digit HUC, also referred to as a watershed approach. This guidance can be found on our office web site at <http://www.nwo.usace.army.mil/html/op-r/mitbnk.htm>. It is the Corps understanding that the anticipated wetland impacts would occur in the Sandhill-Wilson HUC and the proposed mitigation sites that you have identified are located in the Devils Lake HUC. It is also the Corps understanding that the mitigation proposal will consist primarily of wetland restoration. Please be advised that the Omaha District mitigation compensation ratio for restoration projects is 1.5:1.

Based on the information you provided this office, we have determined that mitigating for wetland impacts outside of the designated HUC would be acceptable in this specific case, should mitigation be required under Section 404 of the Clean Water Act. This determination is based in part on the fact that mitigation will be accomplished in a HUC that has been identified as having more serious water quality problems than the HUC at which the impacts would occur and by restoring the hydrology to previously drained wetland basins may contribute to lessening the ongoing flooding concerns in the Devils Lake basin. Although not required, it is strongly recommended that a complete compensatory mitigation plan be included and submitted concurrently with your completed Corps application.

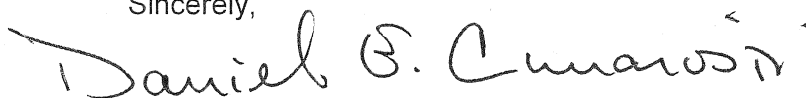
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JAN 27 2006

ULTEIG ENGINEERS  
FARGO, ND

Also, as discussed in our June 10, 2005 letter to you, in order to finalize our jurisdictional determination, a determination must be made if there are wetlands which are contiguous to a tributary. If you can provide information indicating whether or not project wetlands are contiguous with tributaries (perhaps via ditches), we would be able to finalize our determination. Should you have any additional questions, please do not hesitate to contact Jason Renschler of this office at the letterhead address or by telephone at (701-255-0015).

Sincerely,

A handwritten signature in black ink that reads "Daniel E. Cimarosti". The signature is written in a cursive style with a large, sweeping initial 'D'.

Daniel E. Cimarosti  
Regulatory Program Manager  
North Dakota



## RESPONSE TO USACE COMMENT

The comments from USACE dated January 23, 2006 have been addressed in the EA.

The first comment relating to the Omaha District mitigation compensation ratio being 1.5:1 for restoration mitigations has been incorporated into **Section 5.17.4 [Wetland Impacts] Potential Mitigation**.

The second comment relating to the granting of the request to mitigate outside of the HUC where the impact occurs and instead mitigate in the Devils Lake Basin is addressed in **Section 5.17.4 [Wetland Impacts] Potential Mitigation**.

The third comment relating to finalizing the jurisdictional determination has been noted and will be coordinated as part of the mitigation plan.

**NOTICE OF PUBLIC HEARING  
AND AVAILABILITY OF ENVIRONMENTAL ASSESSMENT  
CONCERNING IMPROVEMENTS TO MINIMIZE WILDLIFE HAZARDS AT  
GRAND FORKS INTERNATIONAL AIRPORT  
GRAND FORKS, ND**

The Grand Forks Regional Airport Authority, in cooperation with the Federal Aviation Administration and the North Dakota Aeronautics Commission, announces that a Public Hearing will be held on December 8, 2005 at 6:00 p.m. at the Grand Forks Regional Airport Authority Board Room, 2787 Airport Drive, Grand Forks, ND. There will be an open house from 6:00 p.m. to 7:00 p.m. and a formal presentation with an opportunity for comments at 7:00 p.m. Representatives from Ulteig Engineers, Inc. will be available to answer your questions and receive your comments. This Hearing is being held to present and discuss the proposed action and the environmental effects of the proposed action. (Exhibits will be on display).

Requests for special facilities to assist disabled persons' involvement in this meeting should be received prior to December 5, 2005. Please contact Jon Scraper at 701-280-8587 for special arrangements.

Notice is hereby given of the availability of the Environmental Assessment for the proposed action at the Grand Forks International Airport. An Environmental Assessment was prepared pursuant to the National Environmental Policy Act of 1969 to assess the environmental impacts associated with the proposed action. The proposed action consists of the following:

The proposed action includes elimination of 82.2 acres of wetlands at the Grand Forks International Airport. Approximately 6.17 acres of the impacted wetlands are under jurisdiction of the U.S. Army Corps of Engineers, the remaining wetlands are isolated wetlands. The areas will be maintained in a manner that does not attract high-risk species of wildlife. The wetland impacts will be mitigated so as not to recreate the hazard

Copies of the Environmental Assessment, which explains the proposed action and its environmental impacts, are available for public inspection during normal business hours at the following locations:

Federal Aviation Administration, Airports District Office, 2301 University Drive  
Building 23B, Bismarck, ND

North Dakota Aeronautics Commission, 2301 University Drive, Building 22,  
Bismarck, ND

Grand Forks Public Library, 2110 Library Circle  
Grand Forks ND 58201

Grand Forks Regional Airport Authority, 2787 Airport Drive  
Grand Forks, ND 58203

Individuals or organizations wishing to submit comments on the Environmental Assessment should do so by January 9, 2006. Comments should be made to:

Jon Scraper, PE  
Project Manager  
Ulteig Engineers, Inc.  
3350 38<sup>th</sup> Ave S  
Fargo, ND 58104

Email: [Jon.Scraper@Ulteig.com](mailto:Jon.Scraper@Ulteig.com)

3350 38th Avenue S.  
Fargo, ND 58104-7079  
Phone: 701.237.3211  
Fax: 701.237.3191

November 3, 2005

Mr. Steve Obenauer  
Federal Aviation Administration  
Bldg 23B  
2301 University Drive  
Bismarck, ND 58504-7595

Subject: November 2005 Draft Environmental Assessment  
Minimize Wildlife Hazards  
Grand Forks International Airport  
Grand Forks, North Dakota

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- The document may not be disassembled, written on, or otherwise defaced.
- The document needs to be available during your regular business hours.

The document may be removed from availability on January 9, 2006 at the close of your regular business hours.

Your effort to make the EA available to the public is greatly appreciated. If you have any questions, please call me at 701-280-8587.

Sincerely,



Jon Scaper, PE

JS/lhb  
Enclosure

3350 38th Avenue S.  
Fargo, ND 58104-7079  
Phone: 701.237.3211  
Fax: 701.237.3191

November 3, 2005

Mr. Steve Johnson  
Grand Forks Regional Airport Authority  
2787 Airport Drive  
Grand Forks, ND 58203-8901

Subject: November 2005 Draft Environmental Assessment  
Minimize Wildlife Hazards  
Grand Forks International Airport  
Grand Forks, North Dakota

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November 3, 2005

Grand Forks Public Library  
2110 Library Circle  
Grand Forks, ND 58201

Subject: November 2005 Draft Environmental Assessment  
Minimize Wildlife Hazards  
Grand Forks International Airport  
Grand Forks, North Dakota

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November 3, 2005

Mr. Gary Ness  
ND Aeronautics Commission  
PO Box 5020  
Bismarck, ND 58502

Subject: November 2005 Draft Environmental Assessment  
Minimize Wildlife Hazards  
Grand Forks International Airport  
Grand Forks, North Dakota

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November 3, 2005

Mr. Terry Ellsworth  
USFWS - ND Ecological Services Field Office  
3425 Miriam Avenue  
Bismarck, ND 58501

Subject: November 2005 Draft Environmental Assessment  
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Grand Forks, North Dakota

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If you choose to submit via mail or email, please compile your comments and submit them by January 9<sup>th</sup>, 2006 to:

Jon Scraper, PE  
Project Manager  
Ulteig Engineers, Inc.  
3350 - 38<sup>th</sup> Avenue South  
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Email: [Jon.Scraper@Ulteig.com](mailto:Jon.Scraper@Ulteig.com)

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November 3, 2005

Mr. Doug Van Daalen  
USDA - NRCS  
PO Box 1458  
Bismarck, ND 58502-1458

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November 3, 2005

Mr. Daniel Cimarosti  
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1513 South 12<sup>th</sup> Street  
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Subject: November 2005 Draft Environmental Assessment  
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November 3, 2005

Mr. Frank Argenziano  
University of North Dakota Aerospace  
2806 Airport Drive  
Grand Forks, ND 58203

Subject: November 2005 Draft Environmental Assessment  
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November 3, 2005

Mr. Dan Stepan  
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PO Box 9018  
Grand Forks, ND 58202-9018

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November 3, 2005

Mr. Dale Frink  
ND State Water Commission  
900 East Boulevard Avenue  
Bismarck, ND 58505

Subject: November 2005 Draft Environmental Assessment  
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November 3, 2005

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November 3, 2005

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November 3, 2005

Mr. David Glatt, PE  
North Dakota Department of Health  
PO Box 5520  
Bismarck, ND 58502-5520

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November 3, 2005

Ms. Diane Strom  
Grand Forks Air Force Base  
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GFAFB, ND 58205-6434

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November 3, 2005

Mr. Brad Crowder  
EPA - Region 8 Code NEPA Review, 8EPR-N  
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Denver, CO 80033

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Jon Scraper, PE

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Enclosure



**Ulteig**

# **WETLAND DELINEATION REPORT**



*Prepared for:*

*Grand Forks International Airport  
Grand Forks, North Dakota*

***Ulteig Engineers***

*5201 East River Road, Suite 308*

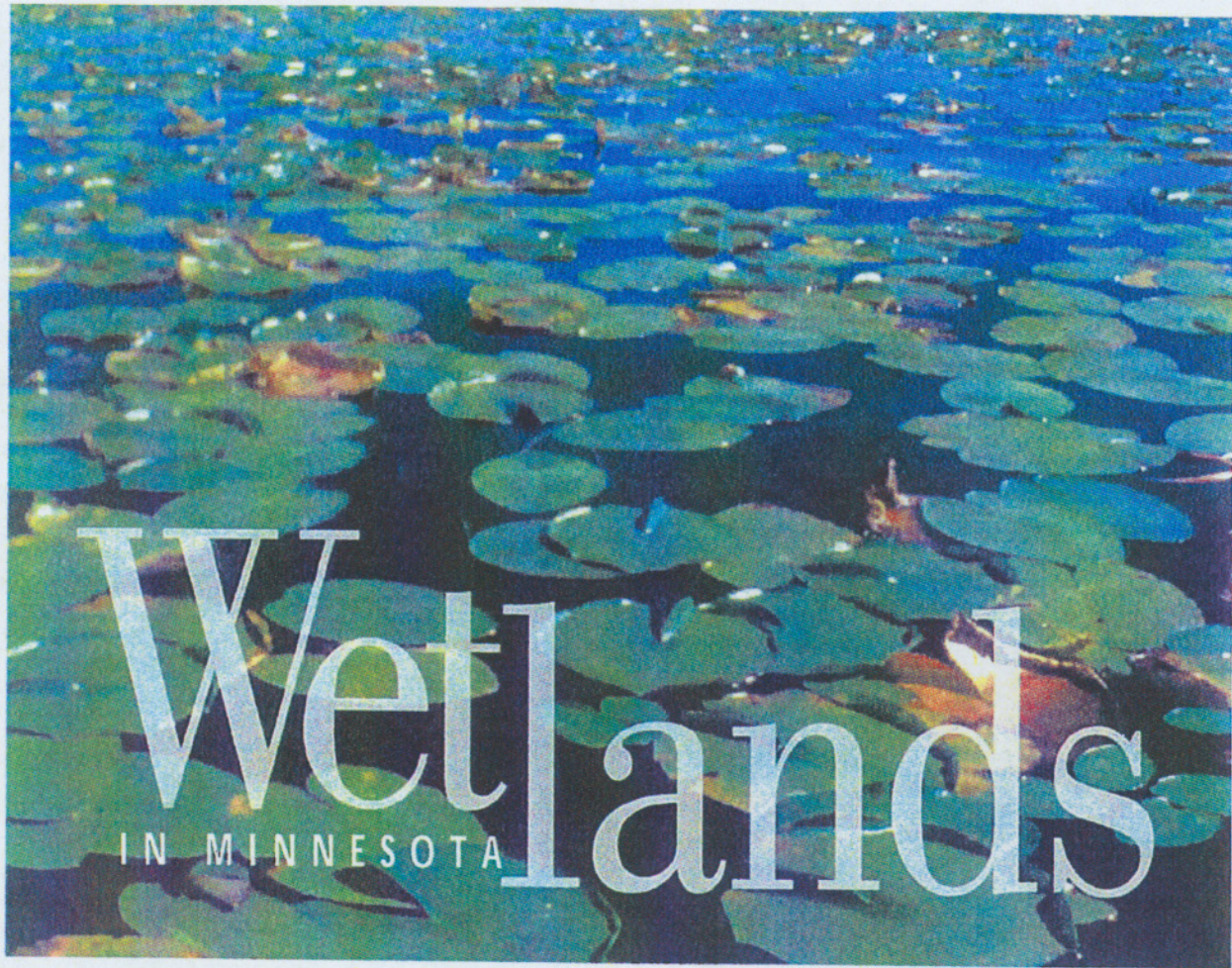
*Minneapolis, Minnesota 55421*

*763-571-2500*

*Also Located in: Fargo, ND ♣ Sioux Falls, SD ♣ Bismarck, ND ♣  
Detroit Lakes, MN*

***August 17, 2004***

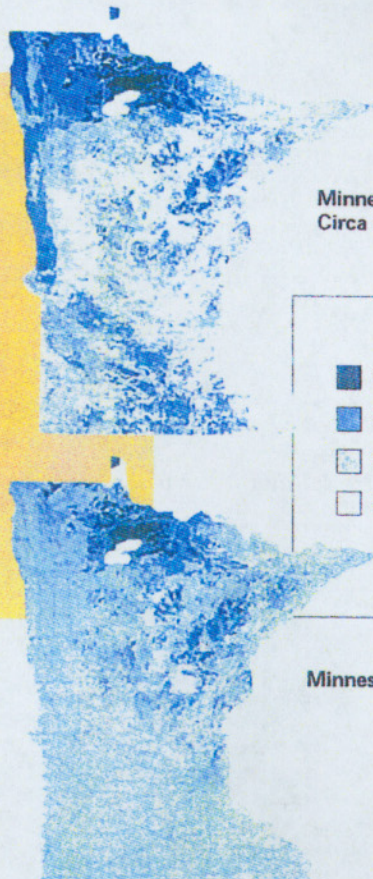




## History of Wetlands in Minnesota

Despite their benefits, wetlands have long been considered a nuisance and have been drained or filled for agricultural production or urban development. Lack of awareness about the benefits of wetlands and governmental policies that encouraged draining and filling are largely to blame for this loss.

Until the settlement of Minnesota in the 1860s, about 18.6 million of its 53.6 million acres were wetland. Today, only half remain.



Minnesota Wetlands  
Circa 1860s

### Legend

- Peat soil wetlands
- Mineral soil wetlands
- Upland areas
- Deep water areas

Source:  
Growing Energy Crops on  
Minnesota's Wetlands:  
The Land Use Perspective (1994)  
by Jeffrey P. Anderson and William L. Cross

Minnesota Wetlands Today



One West Water Street, Suite 200  
St. Paul, MN 55107

*The BWSR is an equal opportunity employer.*

*Prepared with cooperation from the Minnesota  
Department of Natural Resources and the U.S. Fish  
and Wildlife Service.*



# Wetland Benefits

## Water quality.

Wetlands surround some of Minnesota's most valuable resources: our lakes and rivers. Wetlands filter and absorb polluted surface water runoff before it enters lakes and rivers downstream.

## Flood control and low flow augmentation.

Wetlands serve as holding areas for water. When rainfall is heavy, wetlands slow the waters, reducing flood damage and soil erosion downstream. During drought, slow release of water from wetlands maintains stream flows, and may help recharge underground water supplies (called groundwater) often used for drinking.

## Fish and wildlife habitat.

Wetlands provide a permanent or seasonal home to fish and wildlife, including some threatened or endangered species. Wetlands also indirectly support many species by breaking down large amounts of leaves and stems for food for insects, amphibians and fish.

## Education and recreation.

Wetlands offer great opportunities for education and recreation. Many schools visit wetlands to learn about aquatic plants and animals; some have even restored or created wetlands on school grounds. Recreational benefits include fishing, hunting, bird-watching and hiking.

## Commercial benefits.

Wetlands are used for development of specialty products such as vegetable farming, peat mining, sod farming, minnow harvesting and timber harvesting.



## What is a wetland?

Bog, slough, swamp, marsh, wetland—for most of us, those words mean a peaceful pond with cattails, water lilies, waterfowl and frogs.

That's accurate for some wetlands, but not all. Some may have visible surface water only a few weeks each year. Some are farmed or mowed for hay, or maintained as a lawn.



All wetlands, however, share these characteristics:

- they have mostly hydric soils, soils that developed in wet conditions.
- they are wet either above the ground or wet within 12 inches of the ground surface during all or part of the growing season.
- they have vegetation adapted to wet soil conditions.

*Top photo: Some wetlands hold standing water only a few weeks a year.*

*Left photo: Many wetlands are farmed.*



## Wetland Classifications

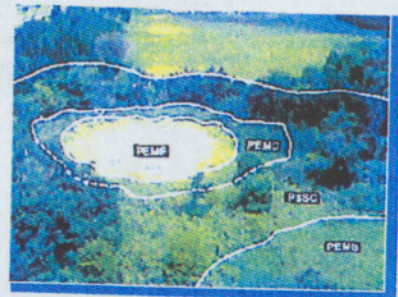
Two different systems are commonly used in Minnesota to classify wetlands.

The Circular 39 system, developed by the U.S. Fish and Wildlife Service in 1956, divides wetlands in Minnesota into eight types. The main differences between them are depth of water and variety of vegetation.

The Cowardin classification, developed by the U.S. Fish and Wildlife Service in 1979, is far more precise. It uses a tier system, with each tier describing the components of a wetland more specifically and narrowly than the last.

The components of the wetland pictured below are described by the Cowardin method. For example, the center of the wetland is classified as PEMF. P means its system is Palustrine (shallow ponds, marshes, swamps, sloughs), EM means its class is Emergent Vegetation (erect, rooted and herbaceous vegetation adapted to wet soil conditions), and its hydrology modifier is F (Semi-permanently Flooded).

By contrast, the entire wetland is classified under the Circular 39 system as a Type 4.





## **WETLAND DELINEATION REPORT**

Prepared for

Grand Forks International Airport  
Grand Forks, North Dakota  
August 17, 2004

Ulteig Engineers Project Number: 104.396  
Written by: Marisol Velilla

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<b>Appendix A</b>	<b>Sample Locations</b>
<b>Appendix B</b>	<b>Data Forms</b>
<b>Appendix C</b>	<b>National Wetland Inventory Map</b>
<b>Appendix D</b>	<b>Grand Forks County Soil Survey</b>
<b>Appendix E</b>	<b>Pictures</b>

## **Wetland Delineation Report**

### **Introduction**

The purpose of this report was to investigate and identify areas meeting the technical criteria for wetlands. These wetlands were delineated to determine their type, size and location.

### **Site description**

The property is Located in section 28, 33, and 34, T.152 N. R.51 Grand Forks County, North Dakota. A map depicting the investigated area is included in Appendix A, Location.

Land use of the adjacent properties is agricultural.

### **Methodology**

The U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (EPA) define wetlands jointly as follows:

*"Those areas that are inundated or saturated by surface or ground water 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 soils conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."*

According to USACE, one positive indicator (except in certain situations) from each of three elements must be present in order to make a positive wetland determination, which are as follows:

- Greater than 50 percent dominance of hydrophytic plant species;
- Presence of hydric soil; and
- The area is either permanently or periodically inundated, or soil is saturated to the surface during the growing season of the dominant vegetation.

We consulted several data sources prior to the field investigation. These included:

- USGS 1:24,000 Scale Topographic Maps.

To locate marsh symbols, lakes, ponds, rivers, etc. Wetlands are likely nearby.

- Aerial Photography from March 2002.
- Aerial Photography from July 2003
- National Wetland Inventory (NWI) Map (Appendix C)  
To see if wetlands were already identified and classified.
- Grand Forks County Soil Survey Report (Appendix D)  
To identify areas with hydric map units that may be wetlands.

These documents provide information on where wetlands have been previously identified or areas that possess a high likelihood of wetlands occurring.

We field examined the project site on August 17, 2004 for areas meeting wetland criteria in accordance with the Corps of Engineers Wetland Delineation Manual (USACE, 1987). The manual requires all three parameters (soils, vegetation and hydrology, as discussed above) be present.

During the site inspection, four basins were delineated using the "Routine Determination with Onsite Inspection Necessary" method; the boundaries were flagged and located with GPS Survey equipment.

We visually inspected the rest of the site and took random soil tests to confirm soil type. In addition, we visually confirmed the wetland basins shown on the aerial photo and the homogeneity of the vegetation.

We superimposed the flag locations on the aerial photo. The aerial photo interpretation edge was extremely close to the flagged edge. This confirmed our opinion that the delineation with the aerial photograph for the rest of the site will have a minimum error.

Since we have sufficient information to characterize the vegetation, soils and hydrology of a portion, but not all, of the project area we delineated the entire site applying a combination of Onsite Inspections Unnecessary and Onsite Inspections Necessary, following the Manual technical guidelines Part IV, Section D, Subsection 3.

We used AutoCAD with the aerial photo in the background and located the edges in the ND State Plane Coordinate System. This will help the applicant evaluate the impacts.

We transferred the collected information to RODM data forms, which are included in Appendix A. One data form was completed for each of the sample point locations. The data forms describe the plant community, soils information, and hydrologic indicators at each sample point. We labeled the sample point as follows:

U-2 / W-2

Example: U-2 is a point in the upland outside of basin 2

2= basin or edge number

W = for point below the edge or in the wetland

U = for point in the upland or outside the edge

Ulteig will retain photographs of the sites on file, although we presented representative photographs in Appendix E.

We observed the soils for hydric characteristics and examined by digging with a soil auger or spade to a depth of at least 18" at a representative location and periodically along the wetland boundary. Soil color determination were made using MUNSELL Soil Color Charts (Kollmorgen Instruments Corporation, 1990).

The Wetland boundaries of Basin 1, 2 3 and 4 wetland boundaries were located and marked with sequentially numbered pink wetland flags with "wetland delineation" inscription. The highest extent of the wetland basin is the wetland edge; areas above the boundary fail to meet the three required wetland parameters while areas below the edge meet the wetlands parameters required by the field delineation methodology. The boundaries of the remaining basins were located from an aerial photograph based on the typical wetlands observed in basins 1-4.

The locations of the delineated wetland boundaries were surveyed and mapped using a Trimble GeoXT Global Positioning System. Data collection followed the Ulteig protocol for wetland mapping. Ulteig mapped the wetlands boundaries by collecting the wetland boundary as a series of points and converting those points into a line feature. We reviewed the collected data for accuracy and it was acceptable.

## Results

Ulteig conducted the field delineation under a sunny sky with an average temperature of 75 F. The precipitation conditions were above normal as compared to the historical average for the region.

We identified forty- two wetland basins. Four of the basins were field delineated and the rest were located from the aerial photograph.

Sample pictures of the basins are in Appendix E.

- Field Delineated Basins

Basin 1 is Type 5 (Open water, less than six feet deep and fringed by a border of emergent vegetation) and mapped as PEM/AB fx (Palustrine Emergent / Aquatic Bed Semi permanently Flooded Excavated) on the National Wetland Inventory (NWI).

Cattail and golden rod are the dominate species.

Other species found were from the flat sedges, horsetail family, asters and willows. The upland has a variety of native grasses like big bluestem and Indian grass. We also identified some induced species like smooth brome grass.

The soils test confirmed the mapped type as Lallie Silty Clay

The adjacent land is airport property and farmland to the southwest.

Basin 2 has species similar to basin 1 and is a Type 3 wetland (Soil is usually waterlogged early in the spring and often covered with six inches of water).

The Soil Survey mapped the soils as Silty Clay Loam Bearden Perella and we confirmed that in the field.

Basin 3 also presents the same species as 1 and 2 falling in the Type 2 -3 classification. We confirmed with a field test the Silty Clay Saline Bearden soils. A field road divides this basin.

Basin 4 is a Type 3 wetland with species and characteristics similar to Basin 2. The Great Water Dock dominates this basin.

- Aerial Photo identified Basins

The Basins 5, 6, 14, and 21 are Type 3 wetlands with vegetation characteristics similar to the basin number 3. We delineated them based on colors from aerial photos and field observations.

Constructed Drainage Features are excavated drainage ditches

The rest of the basins are type 1 and 2 wetlands seasonally flooded basins, poorly drained and may have standing water for a few weeks each year.

The dominant species are cattail in the inundated areas and Great Water Dock in the saturated soils. Some small basins have only Great Water Dock as the dominant species. See pictures Appendix E.

The soils types in the area are listed in the Hydric Soil List of North Dakota and confirmed with random soil tests in the field.

### Basins Tabulation

Basin number	Ac	Type **
1	12.62	5
2	1.96	3
3	1.02	2
4	5.67	2
5	0.49	2
6	1.55	2
7	0.43	1
8	0.41	1
9	0.53	1
10	0.29	1
11	0.74	1
12	0.16	2
13	0.74	1
14	0.23	1
15	0.41	2
16	1.37	2
17	0.92	1
18	0.19	1
19	1.30	1
20	0.19	2/3
21	10.23	1
22	0.98	1
23	0.48	1
24	0.09	1
25	2.94	1
26	1.82	1
27	3.26	1/2
28	1.97	1
29	0.16	1/2
30	3.54	1/2
31	2.47	1



32	2.55	1
34	2.45	1
33	0.60	1/2
34	0.55	1
35	1.48	1
36	1.54	2
37	6.17	2
38	1.34	2
39	0.25	1
40	4.25	2
41	0.43	1
42	1.37	1
Total	82.16	

\*\*Wetland Types are described on the first two pages of this report.

### **Project Impacts**

Several agencies may regulate these wetlands at the local, regional, state, and federal levels including the U.S. Army Corps of Engineers, The United States Fish and Wild Service, The Unites States Department of Agricultural and the Environmental Protection Agency at the federal level, the State Water Commission at the state level.

Constructions plans that proposed any direct alteration or indirect impact to wetlands within the project area, will require permits from the appropriate regulatory agencies. Violations of wetlands regulations can result in substantial civil/or criminal penalties.

## Conclusion

Ulteig Engineers performed a wetland determination and delineation on the GFK property.

The property investigated is located in the SW ¼ of Section 28, NE and SE ¼ of Section 33, W1/2 of Section 34 T.152 N. R.51 in Grand Forks County, North Dakota. See Appendix A Location.

Forty- two basins were identified. Boundaries were flagged for four of them. The rest of the boundaries were defined with the aerial photography.

Please note that this delineation identified the wetland boundary per current federal and state guidelines. The local, county or municipal planning organization may restrict land use in close proximity to the wetland through setbacks, zoning, buffers or environmental corridors.

The information provided by Ulteig Engineers is an estimate of wetland boundaries based on the conditions at the time that we viewed the wetlands and the conditions at the time of the aerial photography.

This determination is not final until all the regulatory agencies have reviewed and approved it. As a result, there may be adjustment to boundaries based upon review by the regulatory agency. An agency determination can vary from time to time depending on various factors including, but not limited to, recent precipitation patterns and season of the year. In addition, the physical characteristics of the site can change with time, depending on the weather, vegetation patterns, drainage activities on adjacent parcels, or other events.

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**APPENDIX A**  
**LOCATION**



Send To Printer Back To TerraServer Change to 11x17 Print Size Show Grid Lines Change to Landscape

USGS 9 km W of Grand Forks, North Dakota, United States 01 Jul 1975

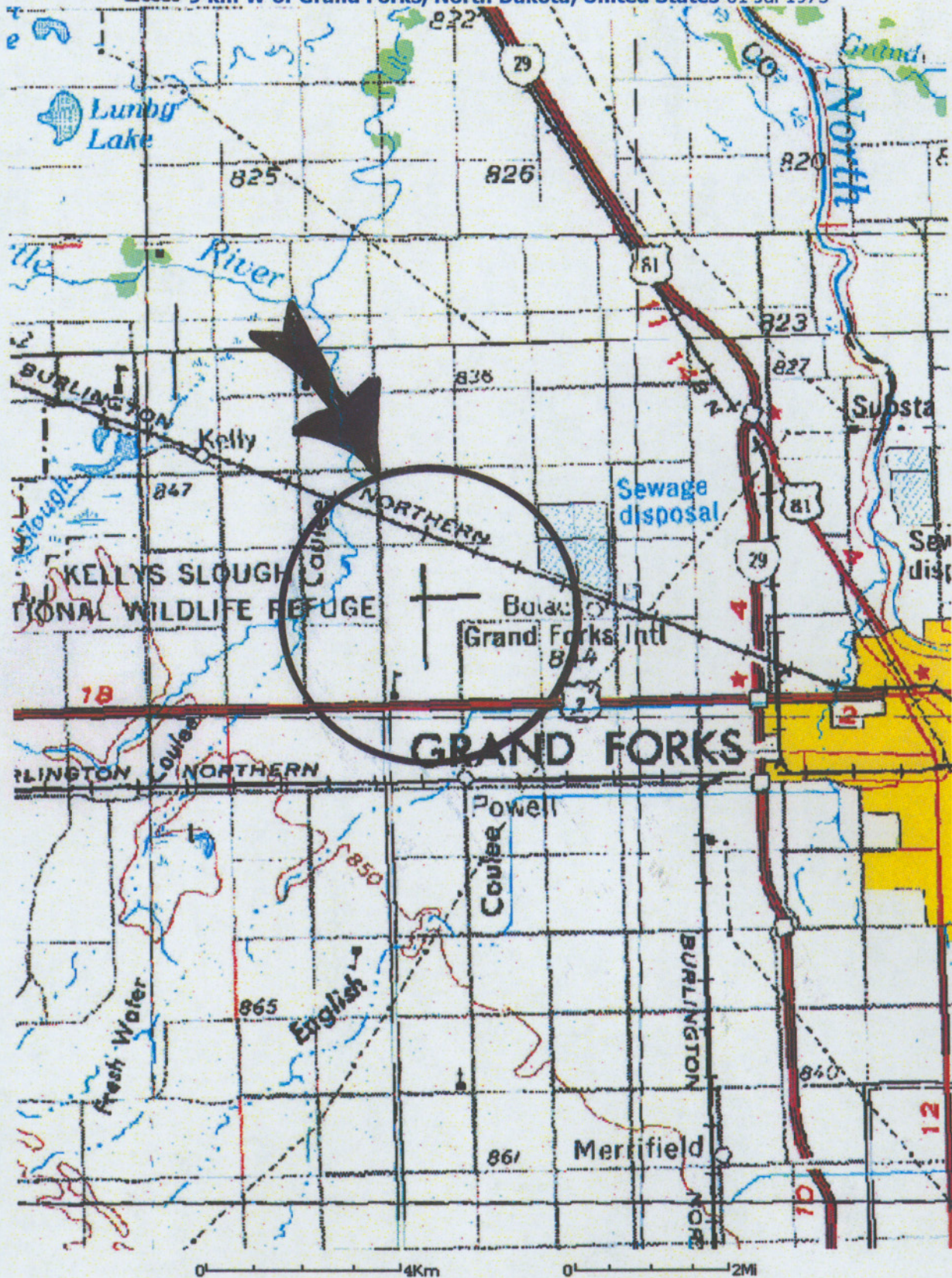

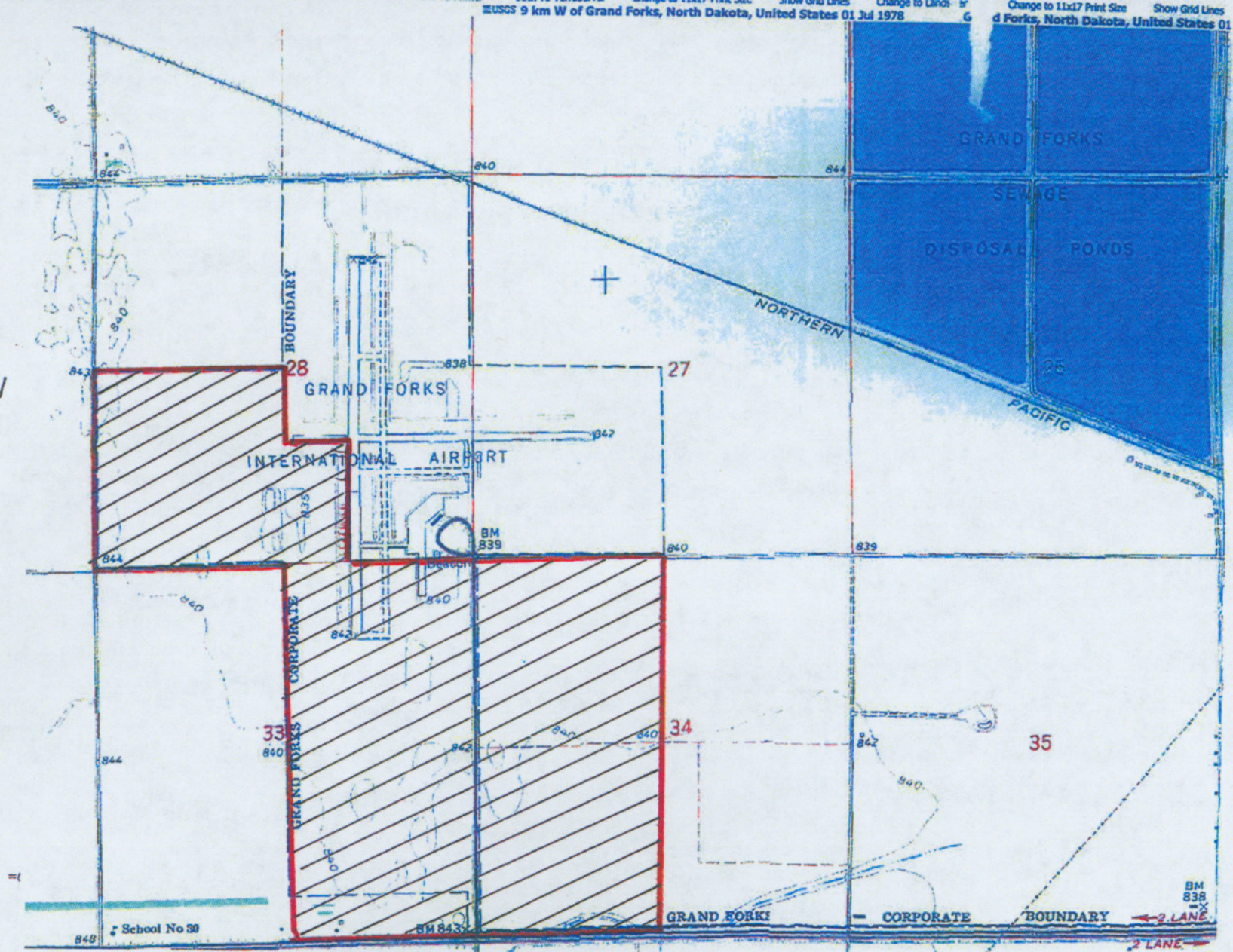


Image courtesy of the U.S. Geological Survey  
© 2004 Microsoft Corporation. Terms of Use Privacy Statement



  
*Investigated  
area*



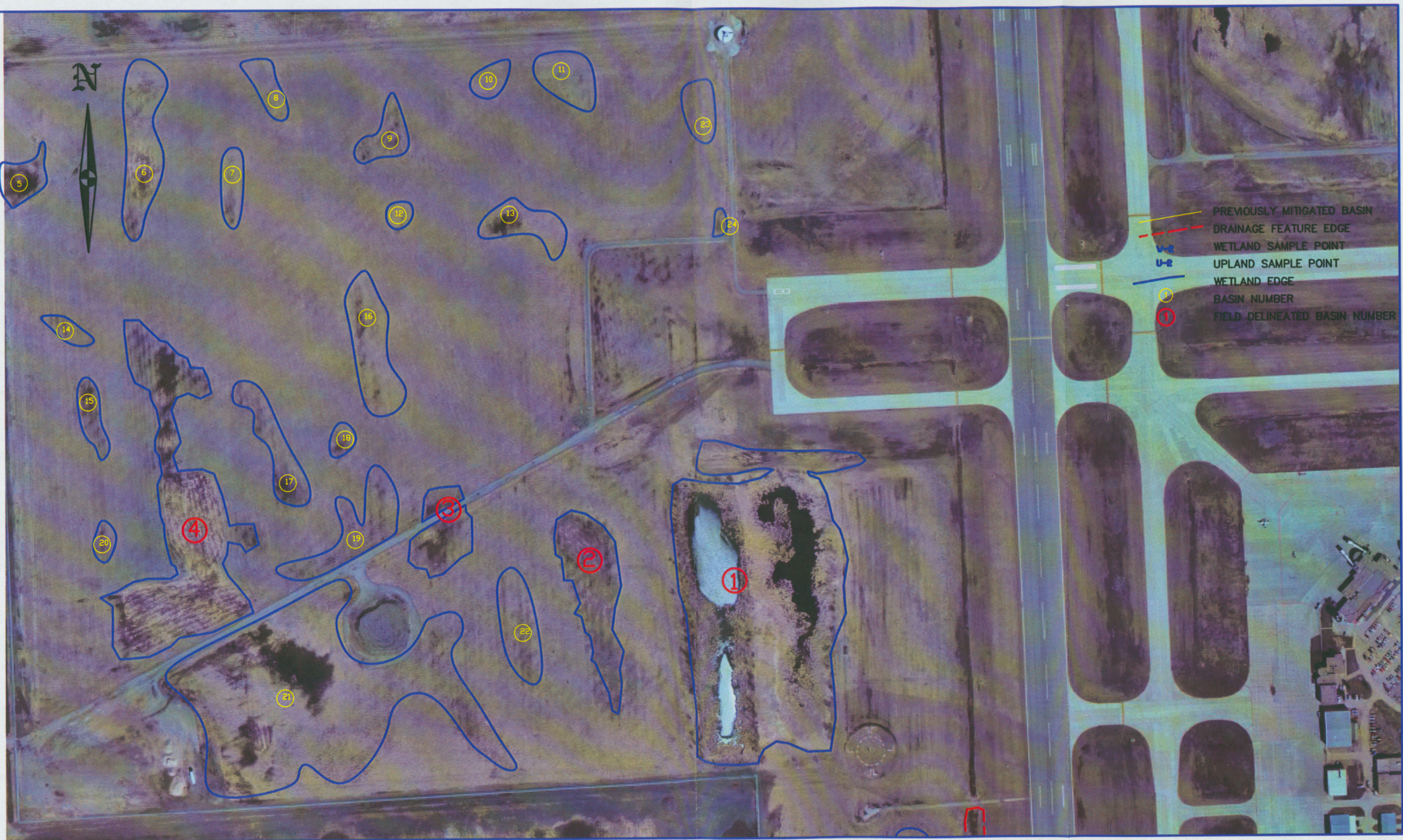
























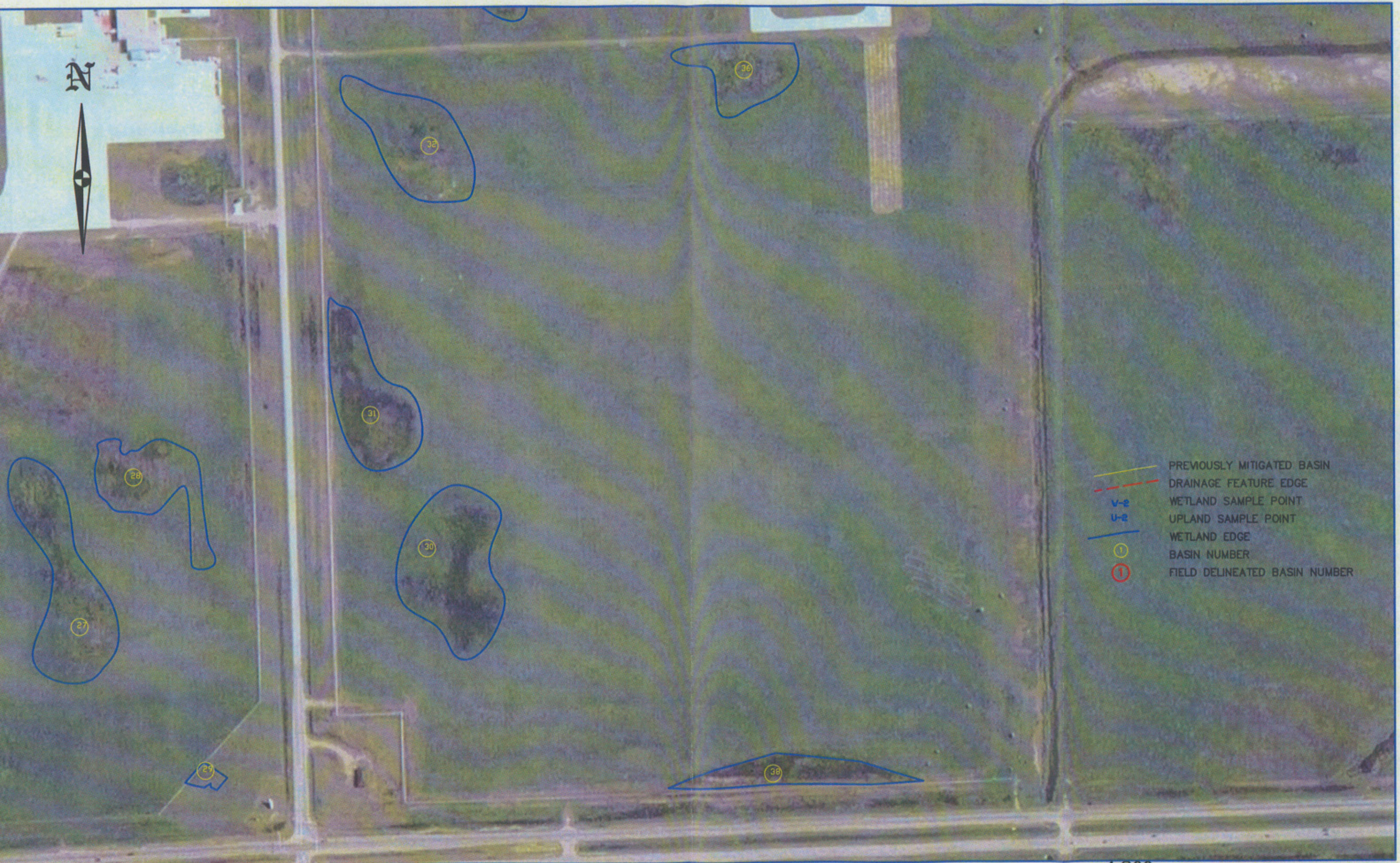
1:300 scale F3 SUMMER



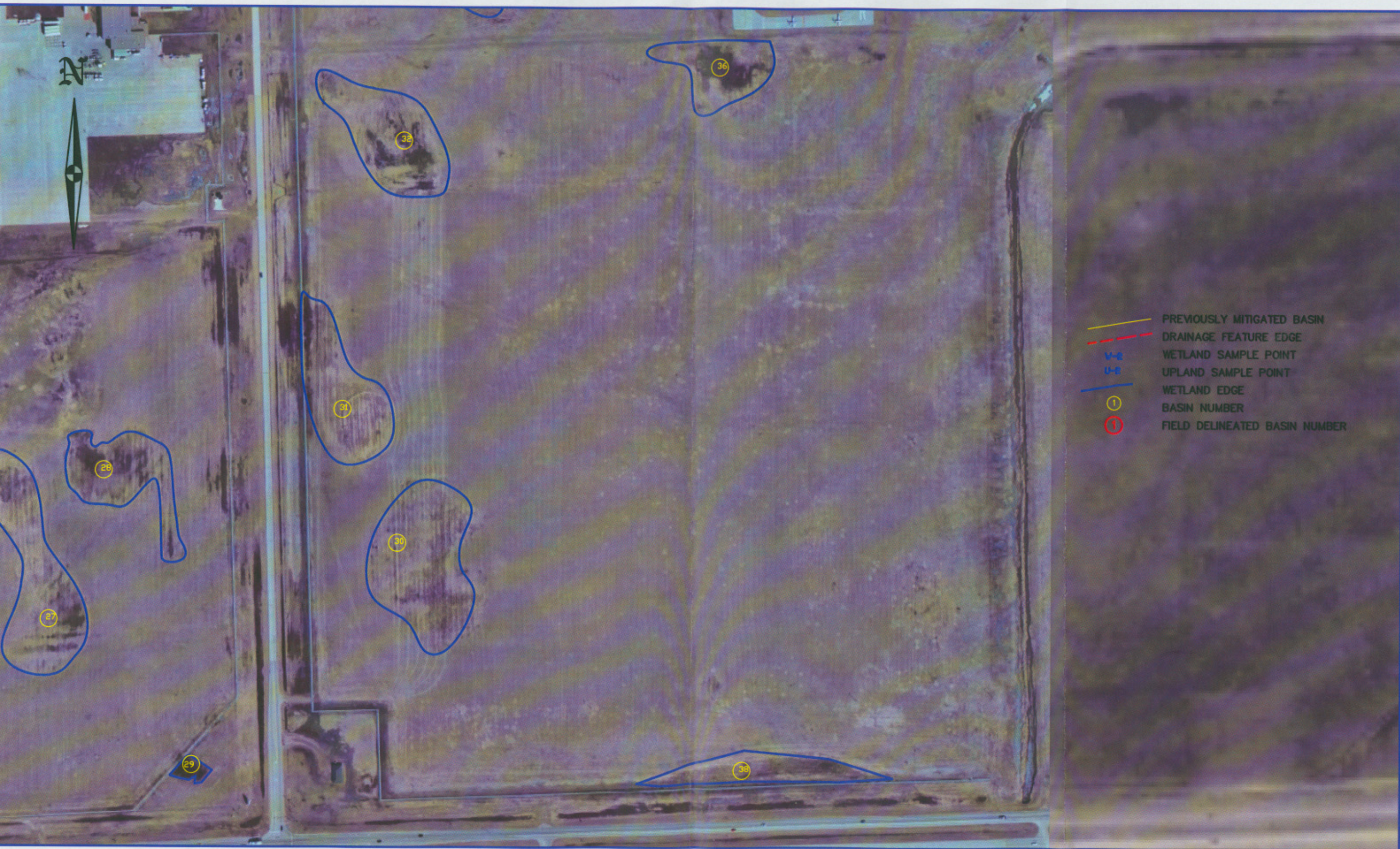


1:300 scale F3 WINTER











## **APPENDIX B**

### **ROUTINE WETLAND DETERMINATION DATA FORMS**

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>GFK International Airport</u>	Date: <u>9-17-04</u>
Applicant/Owner: _____	County: <u>Grand Forks</u>
Investigator: <u>Marisol Velilla</u>	State: <u>North Dakota</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>1</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>U</u>
(If needed, explain on reverse.)	

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Solidago Canadensis</u>	<u>H</u>	<u>FACW</u>	9. _____	_____	_____
2. <u>Koeleria macrantha</u>	<u>H</u>	<u>UP</u>	10. _____	_____	_____
3. <u>Andropogon gerardii</u>	<u>H</u>	<u>FAC-</u>	11. _____	_____	_____
4. <u>Bromus inermis</u>	<u>H</u>	<u>UP</u>	12. _____	_____	_____
5. <u>Sorghastrum nutans</u>	<u>H</u>	<u>FACU+</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC  
(excluding FAC-). <50%

Remarks: \_\_\_\_\_

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other  <input checked="" type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches  <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands  <b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations:</b>  Depth of Surface Water: _____ (in.)  Depth to Free Water in Pit: <u>30</u> (in.)  Depth to Saturated Soil: <u>15</u> (in.)	
Remarks: _____	

## SOILS

Map Unit Name					
(Series and Phase):	<u>Lallie Silty Clay Loam Ponded</u>	Drainage Class:	<u>Very poorly drained</u>		
Taxonomy (Subgroup):	<u>Typic Fluvaquents</u>	Field Observations			
		Confirm Mapped Type?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Profile Descriptions:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-4	O	2.5YR 2/1			Silty Clay Loam
4-8	A	5YR 3/1			Silty Clay Loam
>8	C	10YR 4/4			Silty Clay
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions				
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils				
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking in Sandy Soils				
<input type="checkbox"/> Aquic Moisture Regime	<input checked="" type="checkbox"/> Listed on Local Hydric Soils List				
<input type="checkbox"/> Reducing Conditions	<input checked="" type="checkbox"/> Listed on National Hydric Soils List				
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (Explain in Remarks)				
Remarks:					

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Check) Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(Check) Is this Sampling Point Within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks	

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>GFK International Airport</u>	Date: <u>9-17-04</u>
Applicant/Owner: _____	County: <u>Grand Forks</u>
Investigator: <u>Marisol Velilla</u>	State: <u>North Dakota</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>1</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain on reverse.)	Plot ID: <u>W</u>

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Solidago Canadensis</u>	<u>H</u>	<u>FACW</u>	9. _____	_____	_____
2. <u>Typha Latifolia</u>	<u>H</u>	<u>OBL</u>	10. _____	_____	_____
3. <u>Cyperus L./ Flat sedge</u>	<u>H</u>	<u>OBL</u>	11. _____	_____	_____
4. <u>Equisetum palustre</u>	<u>H</u>	<u>FACW</u>	12. _____	_____	_____
5. <u>Rumex orbiculatus</u>	<u>H</u>	<u>OBL</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC  
(excluding FAC-). 100%

Remarks: All dominant species are FACW and OBL Hidric soils could be assumed

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other  <input checked="" type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches  <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands  <b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations:</b>  Depth of Surface Water: _____ (in.)  Depth to Free Water in Pit: <u>24</u> (in.)  Depth to Saturated Soil: <u>12</u> (in.)	
Remarks: _____	



## SOILS

Map Unit Name				Drainage Class: <u>Very poorly drained</u>	
(Series and Phase): <u>Lallie Silty Clay Loam Ponded</u>		Field Observations			
Taxonomy (Subgroup): <u>Typic Fluvaquents</u>		Confirm Mapped Type?		<input type="checkbox"/> Yes <input type="checkbox"/> No	

Profile Descriptions:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-2	O	2.5YR 2.5/1			Silty Clay Loam
2-4	A	5YR 4/1			Silty Clay Loam

Hydric Soil Indicators:

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input checked="" type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input checked="" type="checkbox"/> Listed on Local Hydric Soils List <input checked="" type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
---	--

Remarks: Soil investigation was done to confirm Hydric soils

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Check) Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(Check) Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks	

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>GFK International Airport</u>	Date: <u>9-17-04</u>
Applicant/Owner: _____	County: <u>Grand Forks</u>
Investigator: <u>Marisol Velilla</u>	State: <u>North Dakota</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>2</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>U</u>
(If needed, explain on reverse.)	

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. _____	_____	_____	9. _____	_____	_____
2. _____	_____	_____	10. _____	_____	_____
3. <u>Andropogon gerardii</u>	<u>H</u>	<u>FAC-</u>	11. _____	_____	_____
4. <u>Bromus inermis</u>	<u>H</u>	<u>UP</u>	12. _____	_____	_____
5. <u>Sorghastrum nutans</u>	<u>H</u>	<u>FACU+</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). <u>&lt;50%</u>					
Remarks: _____					

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other  <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches  <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines  <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands  Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches  <input type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data  <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations:  Depth of Surface Water: _____ (in.)  Depth to Free Water in Pit: <u>30</u> (in.)  Depth to Saturated Soil: <u>15</u> (in.)	
Remarks: _____	

## SOILS

Map Unit Name				Drainage Class:			
(Series and Phase):		Silty Clay Loam Bearden Perella		Field Observations		Very poorly drained	
Taxonomy (Subgroup):		Areic Calciaquols/ Typic Hplaquolls		Confirm Mapped Type?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Profile Descriptions:		Matrix Color	Mottle Colors	Mottle Abundance/	Texture, Concretions,
Depth	Horizon	(Munsell Moist)	(Munsell Moist)	Size/Contrast	Structure, etc,
(inches)					
0-8	O	N 2/0			Silty Clay Loam
8-20	A	10YR 6/1			Silty Clay Loam
>20	C	2.5YR 5/4	2.5YR 3/6	few prom	SiltyLoam

Hydric Soil Indicators:

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input checked="" type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input checked="" type="checkbox"/> Listed on Local Hydric Soils List <input checked="" type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
--	---

Remarks:

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No    (Check) Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(Check) Is this Sampling Point Within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks	

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>GFK International Airport</u>	Date: <u>9-17-04</u>
Applicant/Owner: _____	County: <u>Grand Forks</u>
Investigator: <u>Marisol Velilla</u>	State: <u>North Dakota</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>2</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain on reverse.)	Plot ID: <u>W</u>

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Solidago Canadensis</u>	<u>H</u>	<u>FACW</u>	9. _____	_____	_____
2. <u>Typha Latifolia</u>	<u>H</u>	<u>OBL</u>	10. _____	_____	_____
3. <u>Cyperus L./ Flat sedge</u>	<u>H</u>	<u>OBL</u>	11. _____	_____	_____
4. <u>Equisetum palustre</u>	<u>H</u>	<u>FACW</u>	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC  
(excluding FAC-). 100%

Remarks: All dominant species are FACW and OBL. Hydric soils could be assumed

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other  <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches  <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands  Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations:  Depth of Surface Water: _____ (in.)  Depth to Free Water in Pit: <u>24</u> (in.)  Depth to Saturated Soil: <u>6</u> (in.)	
Remarks: _____	



## SOILS

Map Unit Name				Drainage Class:			
(Series and Phase):		Silty Clay Loam Bearden Perella		Field Observations		Very poorly drained	
Taxonomy (Subgroup):		Areic Calciaquols/ Typic Hplaquolls		Confirm Mapped Type?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Profile Descriptions:		Matrix Color	Mottle Colors	Mottle Abundance/	Texture, Concretions,
Depth	Horizon	(Munsell Moist)	(Munsell Moist)	Size/Contrast	Structure, etc,
0-10	A	N 2/0			Silty Clay Loam
10-20	C1	10YR 6/1			Silty Clay Loam
>20	C2	2.5YR 5/4	2.5YR 3/6	few prom	Silty Loam

Hydric Soil Indicators:

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input checked="" type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input checked="" type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input checked="" type="checkbox"/> Listed on Local Hydric Soils List <input checked="" type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
---	---

Remarks:

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    (Check) Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(Check) Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks	

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>GFK International Airport</u>	Date: <u>9-17-04</u>
Applicant/Owner: _____	County: <u>Grand Forks</u>
Investigator: <u>Marisol Velilla</u>	State: <u>North Dakota</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>3</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>U</u>
(If needed, explain on reverse.)	

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Hordeum jubatum</u>	<u>H</u>	<u>FACW</u>	9. _____	_____	_____
2. <u>Carduus crispus</u>	<u>H</u>	<u>UP</u>	10. _____	_____	_____
3. <u>Andropogon gerardii</u>	<u>H</u>	<u>FAC-</u>	11. _____	_____	_____
4. <u>Bromus inermis</u>	<u>H</u>	<u>UP</u>	12. _____	_____	_____
5. <u>Sorghastrum nutans</u>	<u>H</u>	<u>FACU+</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC  
(excluding FAC-). <50%

Remarks: \_\_\_\_\_

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other  <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches  <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines  <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands  Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches  <input type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data  <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations:  Depth of Surface Water: _____ (in.)  Depth to Free Water in Pit: <u>36</u> (in.)  Depth to Saturated Soil: <u>18</u> (in.)	
Remarks: _____	

## SOILS

Map Unit Name				Drainage Class:			
(Series and Phase):		Silty Clay Loam Bearden Saline		Field Observations		Very poorly drained	
Taxonomy (Subgroup):		Areic Calciaquolls		Confirm Mapped Type?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Profile Descriptions:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-10	A	2.5YR 2/1			Silty Clay Loam
10-20	C	5YR 3/1			Silty Clay Loam
>20	C	10YR 4/4			Silty Loam

Hydric Soil Indicators:

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input checked="" type="checkbox"/> Listed on Local Hydric Soils List <input checked="" type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
--	--

Remarks:

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No    (Check) Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(Check) Is this Sampling Point Within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks	

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>GFK International Airport</u>	Date: <u>9-17-04</u>
Applicant/Owner: _____	County: <u>Grand Forks</u>
Investigator: <u>Marisol Velilla</u>	State: <u>North Dakota</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>3</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>W</u>
(If needed, explain on reverse.)	

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Solidago Canadensis</u>	<u>H</u>	<u>FACW</u>	9. _____	_____	_____
2. <u>Typha Latifolia</u>	<u>H</u>	<u>OBL</u>	10. _____	_____	_____
3. <u>Cyperus L./ Flat sedge</u>	<u>H</u>	<u>OBL</u>	11. _____	_____	_____
4. <u>Rumex orbiculatus</u>	<u>H</u>	<u>OBL</u>	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC  
(excluding FAC-). 100%

Remarks: All dominant species are FACW and OBL. Hydric soils could be assumed

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other  <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches  <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands  Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations:  Depth of Surface Water: _____ (in.)  Depth to Free Water in Pit: <u>12</u> (in.)  Depth to Saturated Soil: <u>0</u> (in.)	
Remarks: _____	



## SOILS

Map Unit Name				Drainage Class:			
(Series and Phase):		<u>Silty Clay Loam Bearden Saline</u>		Field Observations		<u>Very poorly drained</u>	
Taxonomy (Subgroup):		<u>Areic Calciaquolls</u>		Confirm Mapped Type?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Profile Descriptions:		Matrix Color	Mottle Colors	Mottle Abundance/	Texture, Concretions,
Depth	Horizon	(Munsell Moist)	(Munsell Moist)	Size/Contrast	Structure, etc,
(inches)					
0-8	A	2.5YR 2.5/1			Silty Clay Loam
8-15	C	5YR 4/1			Silty Clay Loam
15	C	2.5YR 3/6			SiltyLoam

Hydric Soil Indicators:

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input checked="" type="checkbox"/> Listed on Local Hydric Soils List <input checked="" type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
--	--

Remarks:

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Check) Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(Check) Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks	

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>GFK International Airport</u>	Date: <u>9-17-04</u>
Applicant/Owner: _____	County: <u>Grand Forks</u>
Investigator: <u>Marisol Velilla</u>	State: <u>North Dakota</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>4</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>U</u>
(If needed, explain on reverse.)	

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Hordeum jubatum</u>	<u>H</u>	<u>FACW</u>	9. _____	_____	_____
2. <u>Carduus crispus</u>	<u>H</u>	<u>UP</u>	10. _____	_____	_____
3. <u>Bromus inermis</u>	<u>H</u>	<u>UP</u>	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC  
(excluding FAC-). <50%

Remarks: \_\_\_\_\_

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other  <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches  <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands  Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations:  Depth of Surface Water: _____ (in.)  Depth to Free Water in Pit: <u>30</u> (in.)  Depth to Saturated Soil: <u>15</u> (in.)	
Remarks: _____	

## SOILS

Map Unit Name				Drainage Class:			
(Series and Phase):		Silty Clay Loam Bearden Saline		Field Observations		Very poorly drained	
Taxonomy (Subgroup):		Aeric Calciaquolls		Confirm Mapped Type?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	2.5YR 3/1			Silty Clay Loam
6-18	C	5YR 3/1			Silty Clay Loam
>18	C	10YR 5/4			Silty Loam

Hydric Soil Indicators:

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input checked="" type="checkbox"/> Listed on Local Hydric Soils List <input checked="" type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
--	--

Remarks:

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No    (Check) Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(Check) Is this Sampling Point Within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks	

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>GFK International Airport</u>	Date: <u>9-17-04</u>
Applicant/Owner: _____	County: <u>Grand Forks</u>
Investigator: <u>Marisol Velilla</u>	State: <u>North Dakota</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>4</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>W</u>
(If needed, explain on reverse.)	

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Rumex orbiculatus</u>	<u>H</u>	<u>OBL</u>	9. _____	_____	_____
2. <u>Typha Latifolia</u>	<u>H</u>	<u>OBL</u>	10. _____	_____	_____
3. <u>Cyperus L./ Flat sedge</u>	<u>H</u>	<u>OBL</u>	11. _____	_____	_____
4. <u>Equisetum palustre</u>	<u>H</u>	<u>FACW</u>	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC  
(excluding FAC-). 100%

Remarks: All dominant species are FACW and OBL. Hydric soils could be assumed

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other  <input checked="" type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches  <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines  <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands  <b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input checked="" type="checkbox"/> Local Soil Survey Data  <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations:</b>  Depth of Surface Water: _____ (in.)  Depth to Free Water in Pit: <u>24</u> (in.)  Depth to Saturated Soil: <u>6</u> (in.)	
Remarks: _____	



## SOILS

Map Unit Name				Drainage Class:			
(Series and Phase):		<u>Silty Clay Loam Bearden Saline</u>		Field Observations		<u>Very poorly drained</u>	
Taxonomy (Subgroup):		<u>Areic Calciaquolls</u>		Confirm Mapped Type?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Profile Descriptions:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc,
0-6	A	2.5YR 2.5/1			Silty Clay Loam
6-18	C	5YR 4/1			Silty Clay Loam
>18	C	10YR 5/4			Silty Loam

Hydric Soil Indicators:

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input checked="" type="checkbox"/> Listed on Local Hydric Soils List <input checked="" type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)
--	--

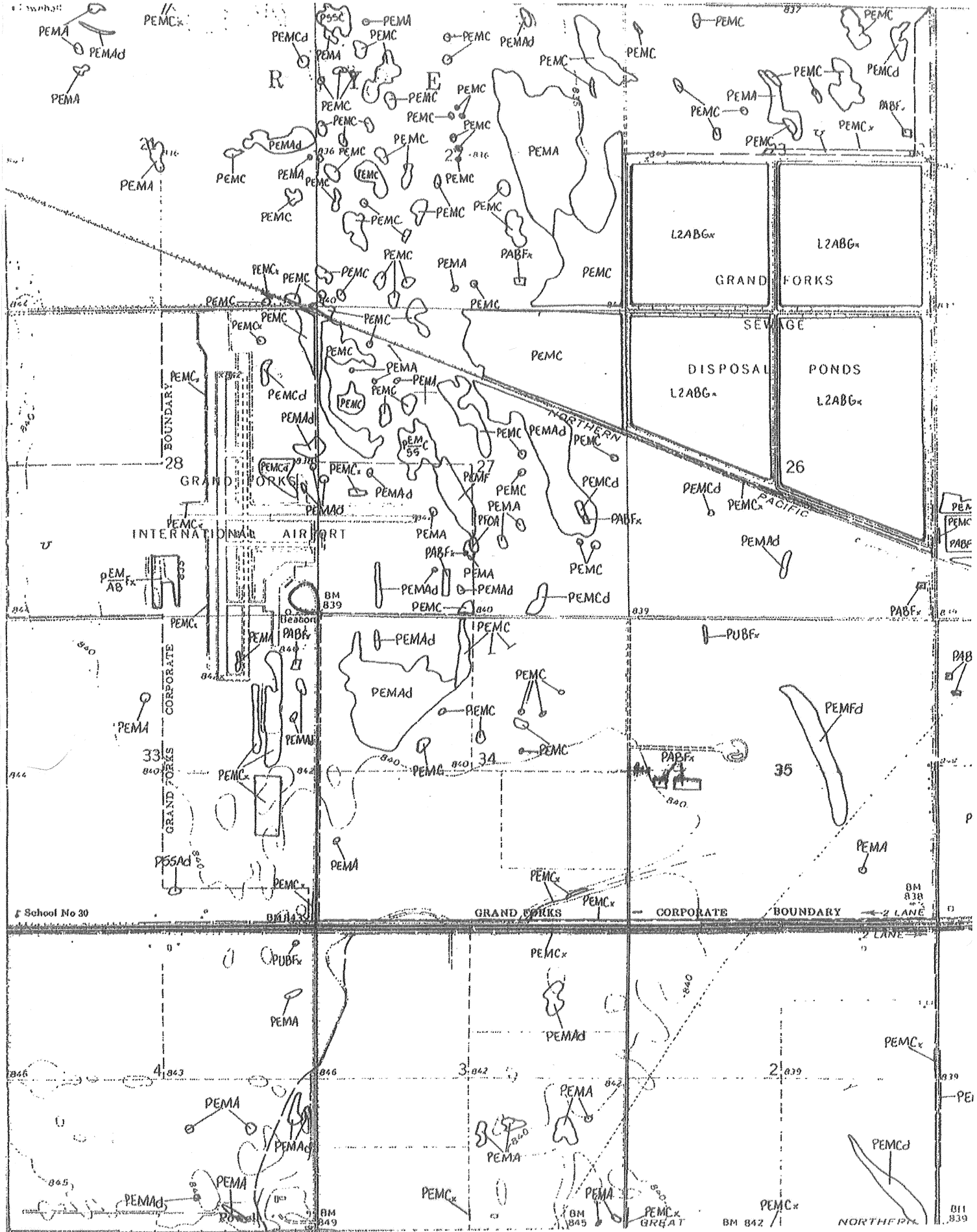
Remarks:

## WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    (Check) Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(Check)  Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks	

## **APPENDIX C**

### **NATIONAL WETLANDS INVENTORY MAPPING GRAND FORKS, NORTH DAKOTA**



## **APPENDIX D**

### **SOIL SURVEY MAP GRAND FORKS, NORTH DAKOTA**

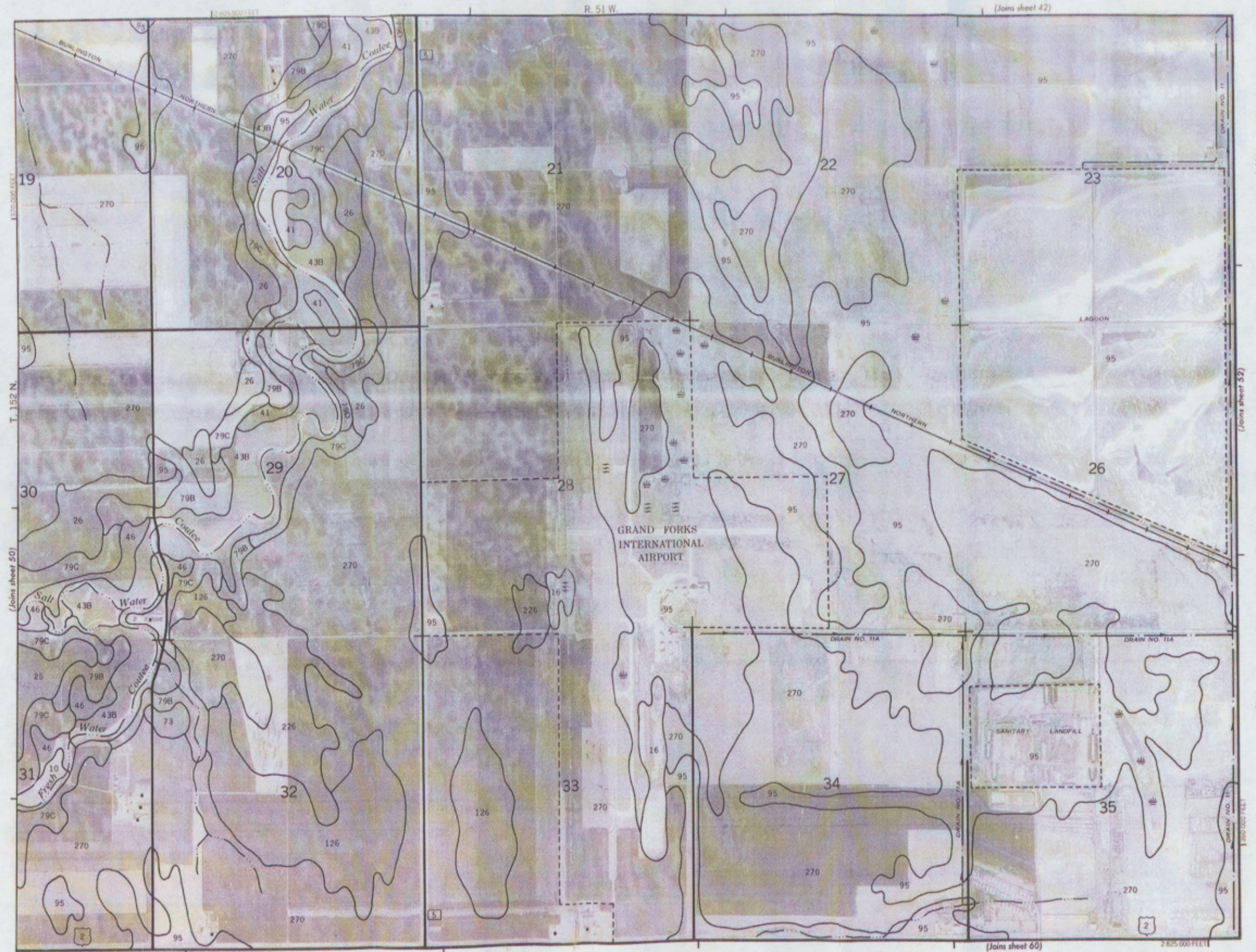


**Legend**

- 16 Lallie Silty Clay Loam
- 95 Ojata Silty Clay Loam
- 226 Bearden-Perella Silty Clay Loams
- 270 Bearden Silty Clay Loam, Saline

GRAND FORKS COUNTY, NORTH DAKOTA 110, 51

This map is compiled on 1911 aerial photographs by the U. S. Department of Agriculture, Soil Conservation Service and cooperating agencies. Contour lines and spot elevations are shown on approximately 10-foot intervals.





## **APPENDIX E**

### **PICTURES**



Figure 1 – Basin 1 Southern View



Figure 2 – Soil sample





Figure 3 –Vegetation



Figure 4 – Vegetation







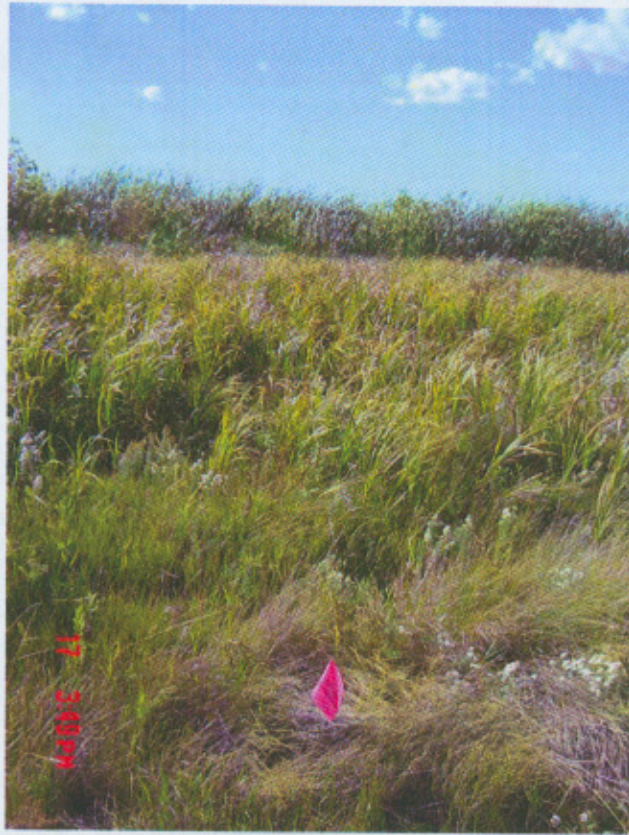


Figure 8 – Basin 1 East View



Figure 9 Vegetation Typical

ARCHAEOLOGY & GENERAL CULTURAL  
RESOURCES MANAGEMENT SERVICES

ANTHROPOLOGY RESEARCH  
P.O. BOX 7094  
GRAND FORKS, NORTH DAKOTA 58202-7094  
PHONE (701) 777-2436  
FAX (701) 777-2435

25 January 2005

Jonathan D. Scraper, PE  
Ulteig Engineers, Inc.  
3350 38<sup>th</sup> Ave S  
Fargo, ND 58104-7079

**Re: Grand Forks International Airport Archeological, Historical, and Cultural Resource File Survey, GFK Environmental Assessment for Wetland Closure Project, Grand Forks County, North Dakota: UEI Project No. 104.396.**

Dear Mr. Scraper:

This letter report presents the results of a Class I inventory (file and literature search) for the above-referenced project.

Your firm requested that Anthropology Research, University of North Dakota, Grand Forks (UND) conduct this file search in advance of proposed land-altering operations at the Grand Forks International Airport. An Environmental Assessment is being prepared to analyze the elimination wildlife attractants at the airport. The elimination of attractants would involve the filling and draining of wetlands in the project area; mitigation of the impacts of such work would occur off-site. Such modifications to the landscape have the potential to affect cultural resource sites that might exist in the project area.

#### Project Area

The project area encompasses a significant portion of the Grand Forks International Airport (Figures 1 and 2). The legal location of the project area is T152N, R51W, the SW1/4 of Section 28, the E1/2 of Section 33, and all of Section 34.

The project area is located within the Red River Valley region of the Central Lowlands physiographic province (see Fenneman 1938). This location places the project area in the Northeastern Plains subarea of the Great Plains culture area, near the boundary with the Eastern Woodlands culture area (see Wedel 1961; Willey 1966). In regional terms, one could expect to find Plains Archaic, Plains Woodland, Plains Village, and Historic period occupations in the area. Earlier Paleoindian sites may be located on glacial beach strandlines south and west of the project area, however, they are not anticipated in the project area. The project area is located on the floor of the former glacial Lake Agassiz, which would have been inundated for most if not all of the Paleoindian period.

According to the General Soil Map in the Grand Forks County soil survey (Doolittle et al. 1981), the project area is located within the Ojata and Bearden-Antler soil associations. Soils in the Ojata association are described as deep, level, poorly drained, moderately fine textured, and very strongly saline. Soils in the Bearden-Antler association are described as deep, level, somewhat poorly drained, moderately fine textured, and saline. Both associations are typified by fine-grained, low-lying glacial lake bed sediments that are saline and poorly drained (Doolittle et al. 1981:10-11). These areas are not as productive as other, non-saline soil areas in the Red River valley.



### File Search Results

A Class I file search of the State Historical Society of North Dakota (SHSND) archeological and historical site files was conducted by Amy Sakariassen on 11 January 2005. The records search returned one previous cultural resource survey and no previously recorded sites.

In 1981 and 1982, UND personnel conducted a Class III inventory (intensive survey), as well as some Class II inventory (reconnaissance survey) work for the English Coulee rechannelization project (Flanigan and Gregg 1982). They surveyed a 500 ft wide corridor (152 m) along many miles of the English Coulee; about one linear mile of the surveyed area exists within the present project area (Figures 1 and 2). They did not identify any cultural resource sites. They surmised that the totally negative results were ... representative for the lake plain away from the higher beaches, major tributaries, and the Red River (Flanigan and Gregg 1982:17)."

A second survey, which did not appear in the file search of the SHSND database, has also been carried out in the project area. In 2002, UND personnel surveyed the location of a proposed runway to be used by UND flight school operations (Jackson 2002). The survey area totaled 97 acres and was present at the southeast edge of the developed airport runway system (Figures 1 and 2). No cultural resource sites were identified by the survey. The report for this project did not turn up in the SHSND database, apparently, because the report has not been submitted to the SHSND by Ulteig Engineers or the Grand Forks Airport Authority, the original funding companies.

### Concluding Remarks

Two intensive, pedestrian cultural resource surveys have been conducted in portions of the project area. No sites have been recorded as a result of these, or any other, investigations. Previous researchers have attributed the lack of sites in the area to (1) distance to reliable, potable water, (2) low-lying, poorly drained ground surfaces, and (3) retarded plant growth caused by high soil salinity. Given the setting of the project area and the previous negative survey results, the likelihood of cultural resource sites in the project area appears to be negligible. Further, it appears that additional, on-the-ground survey work would be unlikely to find unrecorded cultural resource sites.

Thank you for the opportunity to conduct this research for Ulteig Engineers, Inc. UND Grants and Contracts will be submitting a bill to your office for this work. Please do not hesitate to contact me if you have any questions or require additional information. My direct line is 701-777-4081 and my email is michael\_jackson@und.nodak.edu.

Sincerely yours,



Michael A. Jackson, M.A.  
Associate Research Archeologist



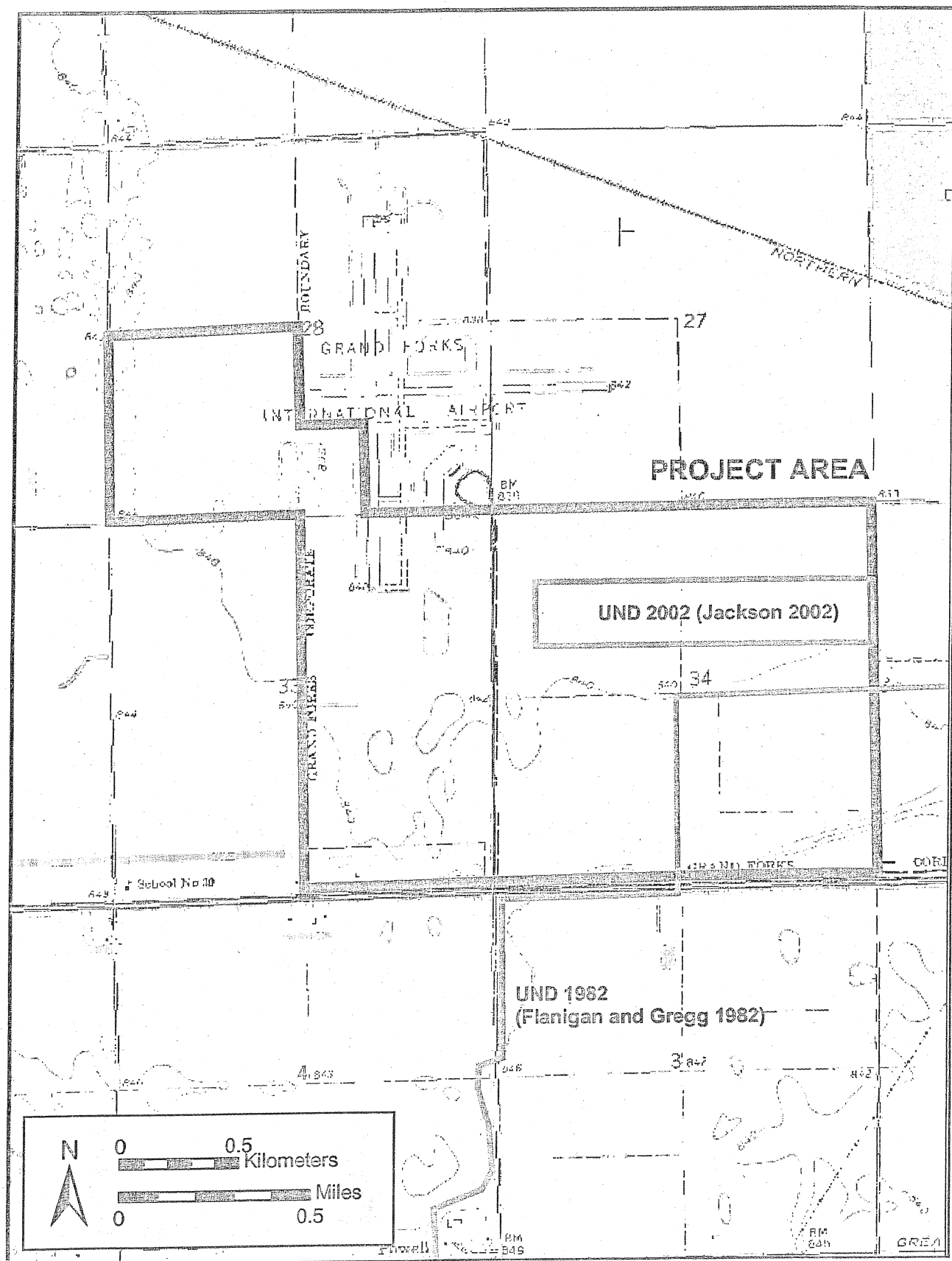


Figure 1. Project area plotted on the 7.5' USGS Kelly, ND quadrangle.

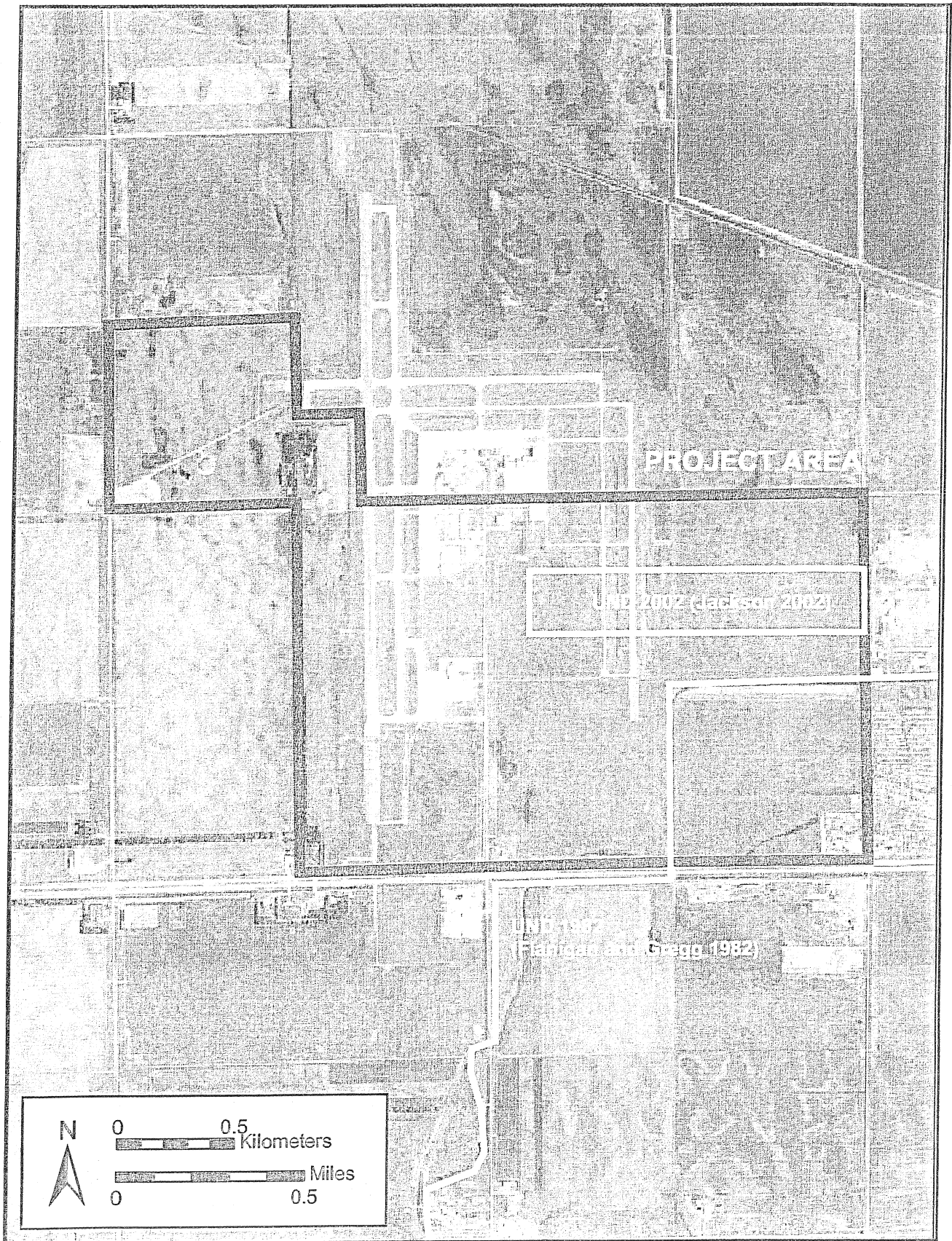


Figure 2. Project area plotted on a mosaic color aerial photograph of Grand Forks county.

## References Cited

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- Fenneman, N. M.  
1938 *Physiography of the Eastern United States*. McGraw-Hill Book Company, New York.
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1982 *English Coulee Rechannalization, Grand Forks County, North Dakota: Class II Cultural Resources Inventory*. Archaeological Research, Department of Anthropology and Archaeology, University of North Dakota, Grand Forks. Prepared for Eastern Grand Forks County Soil Conservation District, USDA Soil Conservation Service.
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1961 *Prehistoric Man on the Great Plains*. University of Oklahoma Press, Norman.
- Wiley, G. R.  
1966 *An Introduction to American Archeology: North and Middle America, Volume 1*. Prentice-Hall, Englewood Cliffs, New Jersey.

## Jon Scraper

---

From: Jon Scraper  
Sent: Monday, April 18, 2005 2:58 PM  
To: 'Jason.J.Renschler@usace.army.mil'  
Subject: FW: PDFfrom Konica



2805.pdf

Jason,

As you know, I am working on an EA at the Grand Forks International Airport to minimize wildlife hazards. As part of this EA, we are investigating filling wetlands on the airport. We have submitted the wetland delineation report to you already.

The delineation report shows a wetland North of the Federal Express facility that was previously mitigated. We have correspondence from another consultant that explains the history of that area. We do not have a response from USACE on that matter. It is likely that the majority of this file was lost in the flood of '97.

Do you have the trail of correspondence that occurred before and after the attached scanned letter? If so, can you send me copies? I would like to include it in the appendices of this EA.

Thank you,

Jon Scraper

-----Original Message-----

From: Konica@Ulteig.Com [mailto:Konica@Ulteig.Com]  
Sent: Monday, April 18, 2005 8:45 AM  
To: Jon Scraper  
Subject: PDFfrom Konica

This is image data from the scanner.





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CRAWFORD, MURPHY & TILLY, INC.  
CONSULTING ENGINEERS  
2 AIRPORT CIRCLE, SUITE 201  
ROCKFORD, IL 61109  
(815) 963-9375 FAX (815) 963-9678

November 19, 1997

U. S. Army Corps of Engineers  
North Dakota Regulatory Office  
1513 South 12th Street  
Bismarck, ND 58504

Attn: Mr. Jason Renschler

Re: Grand Forks International Airport  
Grand Forks, North Dakota  
Air Cargo Apron Expansion  
Wetland Coordination

Dear Mr. Renschler:

Pursuant to our teleconference on Wednesday, November 12, 1997 related to a small area adjacent to the proposed air cargo apron expansion limits, the following comments summarize the general discussion, as well as the document search performed by Steve Johnson of the Airport Authority.

During 1970, the Airport extended to the south its main north-south runway and parallel taxiway. To facilitate this construction, borrow material was excavated from at least three onsite locations adjacent to the project limits. Over time, these three man-made features began to hold water on a seasonal basis, and were subsequently labeled as PEMCx wetland areas on the NWI Map. Our research substantiates that these man-made features were filled and subsequently mitigated by the Airport in 1986 via a property exchange with the U.S. Fish and Wildlife Service. This exchanged property was adjacent to the Kellys Slough National Wildlife Refuge. The subject area that exists today appears to be the result of poor drainage associated with the original construction of the air cargo apron in 1991. Confusion initially arose when this possible wetland area appeared to be coincidentally located near one of the previously mitigated PEMCx borrow excavation areas that are now filled.

Because the area of concern was initially man-made (excavated) and was subsequently mitigated by land purchase, it appears that no further wetland mitigation measures will be necessary in order to construct the air cargo apron expansion project. We hereby request your written concurrence on this matter.

Thank you for your assistance and prompt attention to this matter. If you have any question or comments, please feel free to contact this office.

Very Truly Yours,

CRAWFORD, MURPHY & TILLY, INC.



Michael J. Reiter, P.E.

L97235-03-00cmjr.wpd


cc: Ted Anderson - GFIA  
Steve Johnson - GFIA  
Brian Welker / Steve Moulton - CMT

2787 Airport Drive  
Grand Forks, ND 58203  
(701) 795-6981  
Fax (701) 795-6979

**Grand Forks  
Regional Airport  
Authority**

# Fax

**To:** Jon Scraper, Ulteig

**From:** Steve Johnson 

**Fax:**

**Pages:** 3

**Phone:**

**Date:** 1/24/05

**Re:** Airport Wetlands

**CC:**

☐ Urgent    ☒ For Review    ☐ Please Comment    ☐ Please Reply    ☐ Please Recycle

• **Comments:**

Re: 255-0015

December 16, 1997

North Dakota Regulatory Office  
1513 South 12th Street  
Bismarck, North Dakota 58504

Crawford, Murphy & Tilly, Inc.  
Attn: Michael J. Reiter, P.E.  
2 Airport Circle, Suite 201  
Rockford, Illinois 61109

Dear Mr. Reiter:

This is in reference to your request, on behalf of the Grand Forks International Airport, for Department of the Army authorization under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act for the proposed air cargo apron expansion project. This project is located in Section 33, Township 152 North, Range 51 West, Grand Forks, North Dakota.

Based on the information you provided to this office, it is the Corps understanding the wetland(s) present within the cargo apron expansion area have been previously mitigated on property adjacent to Kellys Slough National Wildlife Refuge. Therefore, a Section 10/404 permit would not be required for this project. However, should contrary information be received, this project would be considered unauthorized and subject to the appropriate enforcement action.

The fact that a Section 10/404 permit is not required does not relieve the Grand Forks International Airport of the obligation to obtain required approvals from other agencies that may have regulatory jurisdiction over the project.

Should you have any questions regarding this determination, please do not hesitate to contact this office by letter or telephone (701)-255-0015 and reference project number 199762008.

Sincerely,

James M. Winters  
Regulatory Program Manager  
North Dakota



**Federal Statutes, Regulations, Executive Orders, and Guidance,  
Including FAA Advisory Circulars<sup>1</sup>**

Statute	Implementing Regulations and Other Guidance
<b>Air Quality</b>	
<ul style="list-style-type: none"> <li>Clean Air Act (CAA), as amended, 42 U.S.C. §§ 7401–7671 (1990).</li> </ul>	<ul style="list-style-type: none"> <li>40 C.F.R. Parts 9, 50 - 53, 60, 61, 66, 67, 81, 82, and 93 (2004).</li> </ul>
<b>Coastal Resources</b>	
<ul style="list-style-type: none"> <li>Coastal Barrier Resources Act of 1982, as amended by the Coastal Barrier Improvement Act of 1990, 16 U.S.C. §§ 3501–3510 (1990).</li> </ul>	<ul style="list-style-type: none"> <li>U.S. Department of Interior (DOI) Coastal Barrier Act Advisory Guidelines, 57 Fed. Reg. 52730 (November 5, 1992).</li> </ul>
<ul style="list-style-type: none"> <li>Coastal Zone Management Act, as amended, 16 U.S.C. §§ 1451–1464 (1999).</li> </ul>	<ul style="list-style-type: none"> <li>15 C.F.R. Parts 930, Subparts C and D (2005).</li> <li>15 C.F.R. Part 923 (2005).</li> </ul>
<ul style="list-style-type: none"> <li>Coral Reef Protection, Exec. Or. 13089 and 63 Fed. Reg. 32701 (June 11, 1998).</li> </ul>	
<b>Compatible Land Use</b>	
<ul style="list-style-type: none"> <li>Aviation Safety and Noise Abatement Act of 1979, as amended, 49 U.S.C. §§ 47501–47507 (2000).</li> </ul>	<ul style="list-style-type: none"> <li>14 C.F.R. Part 150 (2005).</li> </ul>
<b>Department of Transportation Act</b>	
<ul style="list-style-type: none"> <li>Department of Transportation Act of 1966, Section 4(f), recodified at 49 U.S.C. § 303 (c) (1983).</li> </ul>	
<b>Farmlands</b>	
<ul style="list-style-type: none"> <li>Farmland Protection Policy Act, 7 U.S.C. §§ 4201–4209, as amended by section 1255 of the Food Security Act of 1985, 100 Stat. 45.</li> </ul>	<ul style="list-style-type: none"> <li>7 C.F.R. Part 658 (2005).</li> <li>7 C.F.R. Part 657 (2005).</li> <li>The President's Council on Environmental Quality (CEQ) Memorandum on Analysis of Impacts on Prime and Unique Agricultural Lands in Implementing the National Environmental Policy Act, 45 Fed. Reg. 59189 (September 8, 1980).</li> </ul>
<b>Fish, Wildlife, and Plants</b>	
<ul style="list-style-type: none"> <li>Endangered Species Act of 1973, 16 U.S.C. §§ 1531–1544 (1973).</li> <li>Marine Mammal Protection Act of 1972, 16 U.S.C. §§ 1361–1421(h) (1972).</li> <li>Related Essential Fish Habitat Requirements of the Magnuson-Stevens Act, as amended by the Sustainable Fisheries Act, 16 U.S.C. § 1855(b)(2) (1996).</li> </ul>	<ul style="list-style-type: none"> <li>50 C.F.R. Parts 17 and 22 (2004).</li> <li>50 C.F.R. Part 402 (2004).</li> <li>50 C.F.R. Parts 450 – 453 (2004).</li> <li>50 C.F.R. § 600.920 (2004).</li> <li>Memorandum of Understanding (MOU) among 14 Federal agencies on Implementation of the Endangered Species Act, <a href="http://environment.fhwa.dot.gov/guidebook/vol1/doc4a.pdf">http://environment.fhwa.dot.gov/guidebook/vol1/doc4a.pdf</a>, November 8, 1994.</li> <li>"Memorandum of Understanding to Foster the Ecosystem Approach", <a href="http://environment.fhwa.dot.gov/guidebook/vol1/doc17b.pdf">http://environment.fhwa.dot.gov/guidebook/vol1/doc17b.pdf</a>, December 15, 1995.</li> <li>CEQ Guidance on Incorporating Biodiversity Considerations into Environmental Impact Analysis, <a href="http://www.eh.doe.gov/nepa/tools/guidance/Guidance-PDFs/iii-9.pdf">http://www.eh.doe.gov/nepa/tools/guidance/Guidance-PDFs/iii-9.pdf</a> (January 1993).</li> </ul>
<ul style="list-style-type: none"> <li>Sikes Act Amendments of 1974, 16 U.S.C. §§ 670–670(f) (1997).</li> </ul>	
<ul style="list-style-type: none"> <li>Fish and Wildlife Coordination Act of 1958, 16 U.S.C. §§ 661–666c (1958).</li> </ul>	

<sup>1</sup> All Federal Statutes, Regulations, Executive Orders, and Guidance, including Federal Aviation Administration (FAA) Advisory Circulars (AC) are referenced in FAA Order 1050.1E, Environmental Impacts: Policies and Procedures, effective June 8, 2004, and all citations are accurate as of July 19, 2005.

**Federal Statutes, Regulations, Executive Orders, and Guidance,  
Including FAA Advisory Circulars<sup>1</sup>**

Statute	Implementing Regulations and Other Guidance
<ul style="list-style-type: none"> <li>• Fish and Wildlife Conservation Act of 1980, 16 U.S.C. §§ 2901–2912 (1980).</li> <li>• Invasive Species, Exec. Or. 13112, 64 Fed. Reg. 6183 (February 8, 1999).</li> <li>• Migratory Bird Treaty Act of 1981, 16 U.S.C. §§ 703–712.</li> <li>• Responsibilities of Federal Agencies to Protect Migratory Birds, Exec. Or. 13186, 66 Fed. Reg. 3853 (January 10, 2001).</li> <li>• Presidential Memorandum on Environmentally and Economically Beneficial Landscape Practices on Federally Landscaped Grounds, April 26, 1994; Greening the Government Through Leadership in Environmental Management, Exec. Or. 13148 (April 21, 2000).</li> <li>• The Animal Damage Control Act of 1931, as amended, 7 U.S.C. §§ 426–426c (2000), 46 Stat. 1468.</li> </ul>	<ul style="list-style-type: none"> <li>• 50 C.F.R. Part 83 (2004).</li> <li>• Department of Transportation (DOT) Policy on Invasive Alien Species, <a href="http://www.fhwa.dot.gov/environment/rdsduse/rdus3_11.htm">http://www.fhwa.dot.gov/environment/rdsduse/rdus3_11.htm</a>, April 22, 1999.</li> <li>• 50 C.F.R. Part 10 (2004).</li> <li>• Environmental Protection Agency, Office of the Federal Environmental Executive, Guidance for Presidential Memorandum on Environmentally and Economically Beneficial Landscape Practices on Federal Landscaped Grounds, 60 Fed. Reg. 40837 (August 10, 1995).</li> <li>• DOT Order 5610.1C, Paragraph 3f of attachment 2.</li> </ul>
<p><b>Floodplains</b></p> <ul style="list-style-type: none"> <li>• Floodplain Management, Exec. Or. 11988, 42 Fed. Reg. 26951 (May 24, 1977).</li> <li>• Appropriate State and Local construction statutes.</li> </ul>	<ul style="list-style-type: none"> <li>• DOT Order 5650.2, Floodplain Management and Protection.</li> <li>• Federal Emergency Management Agency "Protecting Floodplain Resources: A Guidebook for Communities", <a href="http://www.fema.gov/hazards/floods/lib268.shtm">http://www.fema.gov/hazards/floods/lib268.shtm</a>, June 1996.</li> </ul>
<p><b>Hazardous Materials, POLLUTION PREVENTION, and Solid Waste</b></p>	
<ul style="list-style-type: none"> <li>• Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 and the Community Environmental Response Facilitation Act of 1992, 42 U.S.C. §§ 9601–9675</li> </ul>	<ul style="list-style-type: none"> <li>• 40 C.F.R. Parts 300, 311, 355, and 370 (2004).</li> </ul>
<ul style="list-style-type: none"> <li>• Pollution Prevention Act of 1990, 42 U.S.C. §§ 13101–13109.</li> </ul>	<ul style="list-style-type: none"> <li>• CEQ Memorandum to Heads of Federal Departments and Agencies Regarding Pollution Prevention and the National Environmental Policy Act, 58 Fed. Reg. 6478 (January 12, 1993).</li> </ul>
<ul style="list-style-type: none"> <li>• Toxic Substances Control Act of 1976, as amended, 15 U.S.C. §§ 2601–2692 (1976).</li> </ul>	<ul style="list-style-type: none"> <li>• 40 C.F.R. Parts 761 – 763 (2004).</li> </ul>
<ul style="list-style-type: none"> <li>• Resource Conservation and Recovery Act of 1976 (RCRA), 42 U.S.C. § 6972 as amended by the Solid Waste Disposal Act of 1980 (SWDA), 42 U.S.C. § 6901(1976), the Hazardous and Solid Waste Amendments of 1984, and the Federal Facility Compliance Act of 1992, (FFCA), 42 U.S.C. §§ 6901–6992(k) (1992).</li> </ul>	<ul style="list-style-type: none"> <li>• 40 C.F.R. Parts 240 – 280 (2004).</li> </ul>
<ul style="list-style-type: none"> <li>• Federal Compliance with Pollution Control Standards Exec. Or. 12088, 43 Fed. Reg. 47707 (October 13, 1978) amended by Exec. Or. 12580, 52 Fed. Reg. 2923 (January 23, 1987).</li> </ul>	
<ul style="list-style-type: none"> <li>• Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements, Exec. Or. 12856, 58 Fed. Reg. 41981 (August 3, 1993).</li> </ul>	

**Federal Statutes, Regulations, Executive Orders, and Guidance,  
Including FAA Advisory Circulars<sup>1</sup>**

Statute	Implementing Regulations and Other Guidance
<ul style="list-style-type: none"> <li>• Superfund Implementation, Exec. Or. 12580, 52 Fed. Reg. 2923 (January 23, 1987). Amended Exec. Or. 12777, 56 Fed. Reg. 54757 (1991).</li> </ul>	
<b>Historical, Architectural, Archeological, and Cultural Resources</b>	
<b>Laws Governing National Historic Preservation Programs, National Natural Landmarks, and National Historic Landmarks</b>	
<ul style="list-style-type: none"> <li>• National Historic Preservation Act of 1966, as amended Exec. Or. 11593, 36 Fed. Reg. 8921(May 13, 1971). Protection and Enhancement of the Cultural Environment, 16 U.S.C. § 470 (1992).</li> </ul>	<ul style="list-style-type: none"> <li>• 36 C.F.R. Parts 60, 61, 63, 65, 68, 73, 78, 79, and 800, and §§ 62.1 and 65.1, as revised (2004); 65 Fed. Reg. 77695 (December 12, 2000).</li> </ul>
<b>Laws Governing the Federal Archeology Program</b>	
<ul style="list-style-type: none"> <li>• Antiquities Act of 1906, 16 U.S.C. §§ 431 – 433 (1996).</li> </ul>	<ul style="list-style-type: none"> <li>• 43 C.F.R. Part 3 (2004).</li> <li>• 25 C.F.R. Part 261 (2005).</li> </ul>
<ul style="list-style-type: none"> <li>• Archaeological and Historic Preservation Act of 1974, as amended, 16 U.S.C. §§ 469–469c (1974).</li> </ul>	<ul style="list-style-type: none"> <li>• DOI Guidelines for Archeology and Historic Preservation: Standards and Guidelines, 48 Fed. Reg. 44716 (September 29, 1983).</li> <li>• 36 C.F.R. Part 68 (2004).</li> </ul>
<ul style="list-style-type: none"> <li>• Archaeological Resources Protection Act of 1979, as amended, 16 U.S.C. §§ 470aa–470mm (1979).</li> </ul>	<ul style="list-style-type: none"> <li>• 43 C.F.R. Parts 3 and 7 (2004).</li> <li>• 36 C.F.R. Part 79 (2004).</li> <li>• 25 C.F.R. Part 262 (2005).</li> <li>• National Strategy for Federal Archeology, <a href="http://www.cr.nps.gov/aad/TOOLS/Natlstrg.htm">http://www.cr.nps.gov/aad/TOOLS/Natlstrg.htm</a></li> </ul>
<ul style="list-style-type: none"> <li>• Native American Graves Protection and Repatriation Act of 1990. 25 U.S.C. § 3001 (1990).</li> </ul>	<ul style="list-style-type: none"> <li>• 43 C.F.R. Part 10 (2004).</li> <li>• 25 C.F.R. § 262.8 (2005).</li> </ul>
<b>Other Major Federal Historic and Cultural Resource Preservation Laws and Executive Orders</b>	
<ul style="list-style-type: none"> <li>• American Indian Religious Freedom Act of 1978, 42 U.S.C. § 1996 (1978).</li> </ul>	<ul style="list-style-type: none"> <li>• 43 C.F.R. §§ 7.32 and 7.77 (2004).</li> <li>• 25 C.F.R. § 262.7 (2005).</li> </ul>
<ul style="list-style-type: none"> <li>• Department of Transportation Act, 49 U.S.C. § 303 (1983) (recodification of the Department of Transportation Act of 1966, Section 4(f)).</li> </ul>	
<ul style="list-style-type: none"> <li>• Public Building Cooperative Use Act of 1976, 40 U.S.C. §§ 601 (a), 601(a)(1), 606, 611(c), and 612(a)(4) (2002).</li> </ul>	<ul style="list-style-type: none"> <li>• 41 C.F.R. §§ 101 - 117, 101–117.002(l), (m), and (n), 101.17.002(i)(2), and 101–19 (2004).</li> </ul>
<ul style="list-style-type: none"> <li>• Locating Federal Facilities on Historic Properties in Our Nation's Central Cities, Exec. Or. 13006, 61 Fed. Reg. 26071 (May 21, 1996).</li> </ul>	
<ul style="list-style-type: none"> <li>• Indian Sacred Sites, Exec. Or. 13007, 61 Fed. Reg. 26771 (May 24, 1996).</li> </ul>	
<ul style="list-style-type: none"> <li>• Consultation and Coordination with Indian Tribal Governments, Exec. Or. 13175, 65 Fed. Reg. 67249 (November 6, 2000), and the Presidential Memorandum for Government-to-government Relations with Native American Tribal Governments, 59 Fed. Reg. 2295 (April 29, 1994).</li> </ul>	
<ul style="list-style-type: none"> <li>• Protection and Enhancement of the Cultural Environment, Exec. Or. 11593, 36 Fed. Reg. 8921, (May 13, 1971), 16 U.S.C. § 470 (1980).</li> </ul>	

**Federal Statutes, Regulations, Executive Orders, and Guidance,  
Including FAA Advisory Circulars<sup>1</sup>**

Statute	Implementing Regulations and Other Guidance
<p><b>Noise</b></p> <ul style="list-style-type: none"> <li>• Aviation Safety and Noise Abatement Act of 1979, as amended, 49 U.S.C. §§ 47501–47507 (1994).</li> <li>• Federal Aviation Act of 1958, et seq., as amended, 49 U.S.C. § 40101 (2005).</li> <li>• Control and Abatement of Aircraft Noise and Sonic Boom Act of 1968, 49 U.S.C. § 44709 (2003).</li> <li>• Airport and Airway Improvement Act, 49 U.S.C. §§ 47101 – 47142 (2000).</li> <li>• Airport Noise and Capacity Act of 1990, 49 U.S.C. §§ 2101, et seq.</li> <li>• Noise Control Act of 1972, 49 U.S.C. § 44715.</li> </ul>	<ul style="list-style-type: none"> <li>• 14 C.F.R. Part 150 (2005).</li> <li>• FAA AC 150/5020-1, Noise Control and Compatibility Planning for Airports.</li> <li>• 14 C.F.R. Part 161 (2005).</li> </ul>
<p><b>Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks</b></p> <ul style="list-style-type: none"> <li>• Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations Exec. Or. 12898, 59 Fed. Reg. 7629 (February 11, 1994).</li> <li>• Protection of Children from Environmental Health Risks and Safety Risks, Exec. Or. 13045, 62 Fed. Reg. 19885 (April 21, 1997).</li> <li>• Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Pub. L. 91-646, January 2, 1971, 84 Stat. 1894. (JAN 4, 2005)</li> </ul>	<ul style="list-style-type: none"> <li>• DOT Order 5610.2, Environmental Justice in Minority and Low-Income Populations, April 15, 1997</li> <li>• CEQ Environmental Justice: Guidance Under the National Environmental Policy Act, <a href="http://www.epa.gov/compliance/resources/policies/ej/ej_guidance_nepa_ceq1297.pdf">http://www.epa.gov/compliance/resources/policies/ej/ej_guidance_nepa_ceq1297.pdf</a>, December 10, 1997.</li> <li>• Final Guidance for Consideration of Environmental Justice in Clean Air Act 309 Reviews, <a href="http://www.epa.gov/compliance/resources/policies/nepa/enviro_justice_309review.pdf">http://www.epa.gov/compliance/resources/policies/nepa/enviro_justice_309review.pdf</a>, July 1999.</li> <li>• 42 U.S.C. 4601 <i>et seq.</i>; 49 CFR 1.48(cc).</li> <li>• 40 C.F.R. § 1508.27 (2004).</li> <li>• 49 C.F.R. Part 24 (2004).</li> <li>• FAA Order 5100.37A, Land Acquisition and Relocation Assistance for Airport Projects.</li> <li>• FAA AC 150/5100-17, Land Acquisitions and Relocation Assistance for Airport Improvement Program Assisted Projects.</li> </ul>
<p><b>Water Quality</b></p> <ul style="list-style-type: none"> <li>• Federal Water Pollution Control Act, as amended (also known as the Clean Water Act), 33 U.S.C. §§ 1251–1387 (1987).</li> <li>• Safe Drinking Water Act, as amended, 42 U.S.C. § 300f to 300j-26 (1996).</li> <li>• Fish and Wildlife Coordination Act of 1980, 16 U.S.C. §§ 661–666c (1980).</li> </ul>	<ul style="list-style-type: none"> <li>• 40 C.F.R. Parts 110 - 112, 116, 117, 122, 125, 129, 130, 131, 136, and 403 (2004).</li> </ul>
<p><b>Wetlands</b></p> <ul style="list-style-type: none"> <li>• Clean Water Act, section 404, 33 U.S.C. § 1344 (1987).</li> <li>• Rivers and Harbors Appropriation Act of 1899, 43 U.S.C. §401, et seq., Section 10.</li> <li>• Protection of Wetlands, Exec. Or. 11990, 42 Fed. Reg. 26961 (May 24, 1977).</li> </ul>	<ul style="list-style-type: none"> <li>• 33 C.F.R. Parts 320 – 330 (2004).</li> <li>• DOT Order 5660.1A, Preservation of the Nation's Wetlands.</li> </ul>



**Federal Statutes, Regulations, Executive Orders, and Guidance,  
Including FAA Advisory Circulars<sup>1</sup>**

Statute	Implementing Regulations and Other Guidance
<p><b><i>Wild and Scenic Rivers</i></b></p> <ul style="list-style-type: none"> <li>• Wild and Scenic Rivers Act of 1968, 16 U.S.C. §§ 1271–1287 (1968).</li> </ul>	<ul style="list-style-type: none"> <li>• 36 C.F.R. Part 297 (2004).</li> <li>• DOI and the U.S. Department of Agriculture, Wild and Scenic River Guidelines for Eligibility, Classification and Management of River Areas, 47 Fed. Reg. 39454 (September 7, 1982).</li> <li>• CEQ Memorandum on Interagency Consultation to Avoid or Mitigate Adverse Effects on Rivers in the Nationwide Inventory, 45 Fed. Reg. 59190 (September 8, 1980).</li> </ul>

<ul style="list-style-type: none"> <li>• FAA AC 150/5020-1, Noise Control and Compatibility Planning for Airports.</li> <li>• FAA AC 150/5200-33A, Hazardous Wildlife Attractants On or Near Airports.</li> <li>• FAA AC 150/5300-13, Airport Design.</li> <li>• FAA AC 150/5325-4B, Runway Length Requirements for Airport Design.</li> <li>• FAA AC 150/5370-10B, Standards for Specifying Construction of Airports.</li> <li>• 14 C.F.R. Part 77 (2005).</li> </ul>
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