MEMORANDUM OF UNDERSTANDING

Parties: Michigan Department of State Police
         Michigan Department of Information Technology
         United States Fish and Wildlife Service
         Office of Law Enforcement
         United States Fish and Wildlife Service
         Regional Director

Date: _________________

1. Statement of Purpose.

The purposes of this Memorandum of Understanding ("MOU" or "this agreement") are:

   (1) To allow the State of Michigan, by and through the Michigan State Police and
   Michigan Department of Information Technology, the administrators of the
   Michigan Public Safety Communications System ("MPSCS"), and their
   successors and assigns (collectively "MSP"), to perform a major scientific study
   of the potential dangers in the interaction between migrating birds and
   communications towers in the State of Michigan (the "Avian collision study");
   and

   (2) To establish with the U.S. Fish and Wildlife Service (the "Service" or "FWS")
   procedures and policies to be employed by MSP in connection with the Avian
   collision study to address concerns with migratory birds that may be injured or
   killed on property and facilities of the MPSCS that are used in the Avian collision
   study, during the period of this MOU.

It is the intent of the signatories to this voluntary MOU that the development and
implementation of the Avian collision study by MSP and the Service will be a cooperative,
non-adversarial endeavor, and all parties enter into this agreement with the intent to take
reasonable steps to facilitate its successful execution. The goal of the parties is to seek to obtain
reliable scientific information that will help assess the nature and scope of the problem of
migratory birds colliding with towers, and thereby assist Michigan, the Service, and others
throughout the country in evaluating the existence of the problem of injury or mortality of
migratory birds from collisions with such communications towers and reducing that problem to
the lowest practical level.

In order to achieve this goal, MSP will underwrite and implement, to the limits described
in the documents attached hereto as Attachment "A," the scientific study of certain aspects of the
impacts on migratory birds of selected towers (the "Avian collision study," as defined below). Once MSP has provided the Service with a complete application in compliance with 50 C.F.R. § 21.23, then the Service will, subject to 50 C.F.R. § 13.11(c), provide MSP with the necessary permits authorizing possession of any dead migratory birds, or parts of birds, handling of injured birds, and removal of migratory bird nests at the towers selected.

2. Period, Modification, and Termination.

This MOU will take effect immediately upon the date of its execution by the Service for a period of four (4) years. This MOU will be subject to termination upon sixty (60) days written notice by any of the parties. This MOU may be renewed or modified upon written consent of all the parties. The FWS contact for the Avian collision study will provide MSP with a written confirmation of the successful completion of the Avian collision study requirements.

3. Definitions.

For the purposes of this MOU, the following terms are defined:

a. "Avian collision study" is defined as the study, more specifically described in Attachment "A," entitled "Avian Collision Study for the Michigan Public Safety Communications System ("MPSCS"): Assessing the Role of Lighting, Height, and Guy Wires in Avian Mortality Associated with Wireless Communications And Broadcast Towers," and any other study that all parties to this agreement subsequently agree to include as a component of this study effort.

b. The terms "Michigan State Police" and the "Michigan Department of Information Technology" (collectively "MSP" herein) include the employees, contract employees, agents, representatives, designees, successors and assigns of those respective agencies.

c. "MSP property and facilities" means communication towers, their related structures, and associated properties that are part of the MPSCS. The MPSCS is a statewide 800 MHZ trunked emergency radio system that includes 180 tower sites covering approximately 58,000 square miles.

d. "Material breach" is defined as the failure to substantially comply with the terms and conditions of this MOU. "Material breach" is also the failure to timely seek to acquire necessary permit(s) and/or to provide annual permit reporting during the term of the Avian collision study at the towers within MPSCS that are selected to participate in the Avian collision study.

e. "Migratory birds" means the list of avian species described in 50 C.F.R. § 10.13 and also includes in the definition under 50 C.F.R. § 10.12, ". . .any part, nest, or egg."
f. "Imminent Danger" means a threat to the safety of migratory birds or their nests; or to human health, safety, or property; or an impediment to the safe and efficient operation of MSP property and facilities.

g. "Reasonable and prudent measures" as that term has been defined by the Endangered Species Act (ESA), means those modifications, changes, or measures that are technologically and economically feasible for MSP.

h. "Service" or "FWS" means the U.S. Fish and Wildlife Service.

i. "Migratory Bird Scientific Collecting Permit" and "SCCL" mean that permit described in 50 C.F.R. § 21.23 authorizing salvage, possession, and transport of migratory birds, their nests, eggs, and parts at seventeen (17) select research towers within MPSCS, and any new towers that may be added to the sample subject to additional funding, and any other towers not owned by MSP but included in the study. An application for a SCCL should be submitted to the Migratory Bird Permit Office in the Service's Region 3 Office located at Fort Snelling, Minnesota (see Section 9.b of this agreement).

j. "Take" as applicable to this MOU is defined in 50 C.F.R. § 10.12, and means to "pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue; hunt, shoot, wound, kill, trap, capture, or collect."


The Avian collision study will be implemented as described in the documents attached as Attachment "A."

Contingent upon additional non-MSP funding (beyond the $200,000 committed and the other consideration to be provided by MSP as described in the Avian collision study), an additional component may, with the written agreement of MSP and the Service, be added to the Avian collision study involving the use of NEXRAD weather radar in Michigan to verify bird migration and numbers (dispersion and distribution). In addition, again contingent on securing additional non-MSP funding and the same written agreement, more towers may be added to the sample size. In the event additional towers are added, final details regarding the addition of the NEXRAD component will be worked out between MSP, Dr. Paul Kerlinger (MSP's avian expert), and the Division of Migratory Bird Management.

Subject to the time needed to prepare, acquire permits, and garner FAA approval, the Avian collision study, with or without the NEXRAD component, will begin in the Fall of 2003. The FWS will be provided with all data and results from the study. Subject to a 60-day review period by FWS, beginning from its receipt of the study in collated form from MSP, final research results from the Avian collision study may be offered by the Service in coordination with MSP, for publication to one or more reputable, peer-reviewed ornithological journals. Any pertinent and statistically significant research discoveries that demonstrate the potential to significantly
reduce avian mortality may be shared by the Service, or by MSP, with the Federal Communications Commission (FCC) and the Federal Aviation Administration (FAA). After the completion of the FWS's 60-day review period, the Service may also distribute such pertinent and statistically significant research to the Communication Tower Working Group formed by the Service.

5. Subsequent Use of the Avian Collision Study.

Within 90 days after the completion of the Avian collision study, MSP and the Service will evaluate findings from the study regarding lighting, in order to develop reasonable and prudent measures to address the lighting configuration for the MPSCS. Such measures must meet all FCC and FAA requirements for safety to aviation. The Service will assist Michigan in seeking review and approval by the FAA for the proposed lighting configuration. No lighting configurations, including any lighting variances, that are not approved by the FAA in writing, or that are not clearly allowable under current FAA guidelines will be used on any MPSCS tower. Upon receiving the approval of the FCC, the Service, and, if applicable, the FAA, MSP will configure the existing lighting on all towers of the MPSCS according to procedures described in this paragraph. Subject to the results of the study, and subject to the availability of appropriations, the parties will work out a schedule for retrofitting the lighting of the towers where such retrofitting is necessary, within one year after the completion of evaluation of the study by MSP and the Service.

In addition, within the same 90-day time period, MSP and the Service will evaluate the results of the Avian collision study and discuss what non-lighting related changes, if any, can be made to the MPSCS to substantially reduce the danger of avian collision mortality. Thereafter, but within one year of completing the 90-day evaluation period, MSP and the Service will each seek in good faith to reach an agreement on the implementation at appropriate towers of any FWS recommended reasonable and prudent measures, that analysis of the results of the Avian collision study indicate will result in substantially reducing the danger of avian mortality.


The Migratory Bird Treaty Act ("MBTA") is the cornerstone of migratory bird conservation and protection in the United States. The MBTA provides the Service with the authority to pursue criminal liability in all cases where migratory birds are taken without authorization. The unauthorized take or possession (permanent or temporary) of a protected species is a violation. Specifically, the MBTA states:

"Unless and except as permitted by regulations made as hereinafter provided in this subchapter, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to
be carried, or receive for shipment, transportation, carriage, or export, any migratory bird, any part, nest, or eggs of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or part, of any such bird or any part, nest, or egg thereof."

While neither the MBTA nor the Bald and Golden Eagle Protection Act (BGEPA) allow take except pursuant to regulation, the Service realizes that some birds may be killed even if all reasonable measures to avoid the take are implemented. The Service recognizes MSP's willingness to voluntarily enter into this MOU and to implement beneficial migratory bird conservation measures described herein. The Fish and Wildlife Service's Office of Law Enforcement will exercise its discretionary authority not to submit for prosecution any unlawful take of migratory birds which may occur on MSP property and facilities, as a result of otherwise lawful conduct to maintain or operate the MPSCS, provided the MSP is in compliance with this MOU.

7. Permit Processing, Issuance and Duration.

Once this MOU is executed, and subject to the provisions of 50 C.F.R. §§ 21.23, and 13.11(c), MSP will apply to the Service for, and the Service will grant, a "Migratory Bird Scientific Collecting Permit" ("SCCL") that will authorize the retrieval, transport, and temporary possession of injured birds and carcasses of migratory birds, and their nests, parts, and eggs, according to the terms of the permit(s), with several exceptions listed below for bald and golden eagles and federally listed endangered or threatened species. The duration of the permit will be for the term of the Avian collision study, and will be for at least two (2) years. To the extent possible, and subject to the provisions of 50 C.F.R. § 13.11(c), the Service will process a complete application and any required renewal applications, for a SCCL and/or any other required permit within thirty (30) days of receipt by the issuing office.

8. Miscellaneous Requirements for Temporary Possession of Migratory Birds and Nests.

A. Reporting and Record Keeping.

In accordance with 50 C.F.R. § 21.23, MSP will keep records relating to all dead or injured birds found by MSP at any towers participating in the Avian collision study in accordance with the terms of the SCCL. MSP will report annually to the Service on activities conducted under their SCCL pursuant to 50 C.F.R. § 21.23, and in accordance with the terms of the SCCL.

B. Injured Birds.

In compliance with the SCCL, MSP will promptly notify the Service through its representative (see 9.c of this agreement) of any injured bird that they discover at any tower participating in the Avian collision study, according to the terms of MSP's SCCL. The notification will include a general description of the apparent nature and extent of the injury, along with information on the number and species of birds discovered and the location of the
towers where they were found.

To address situations where injured migratory birds may be discovered by MSP during the period of this MOU, under non-research towers where a Scientific Collecting Permit would not apply, MSP will post a printed notice containing procedures for the prompt notification to the Service of an injured bird, at every tower in the MPSCS. The notification procedures will, at a minimum, instruct employees to include a general description of the apparent nature and extent of the injury, along with a description and location of the bird. MSP will also provide notice to relevant employees alerting them of the notification procedures.

C. Retrieval Procedures.

At any MSP property or facility where an injured bird is discovered by MSP, the Service may authorize, but will not require, MSP to take temporary possession of such injured bird. If, in the judgment of MSP, an injured bird is in imminent danger, or presents an imminent danger to the facility or to facility personnel or others, retrieval of the bird by MSP may be authorized telephonically by the Service on a case-by-case basis.

D. Bird Nests.

All actions taken regarding the nests of migratory birds will be in accordance with the terms and conditions of a SCCL, this MOU, or other authorization, as follows:

Active nests of migratory birds present on MSP property or facilities shall not be moved, molested or disturbed by the MSP unless first approved by the Service or otherwise authorized within this MOU.

The active nests of migratory birds, except those listed below, that pose an imminent danger to human health, safety, or property, or an impediment to the safe and efficient operation of the communication tower may be removed by the MSP without prior approval of the Service. Prior to any such emergency nest removal, however, the MSP must make a diligent attempt to notify the Service and seek approval for the removal. If such notification cannot be accomplished prior to the emergency nest removal, the MSP will notify the Service during the first business day following the emergency nest removal of the date, of the conditions and of the reason(s) for the removal of the nest.

Where imminent danger exists, the nest material may be trimmed or other practices may be used that will maintain the nest, ensure safety of the birds, and humans, and provide for safe operation of the communication tower.

Nests of eagles and listed species. Any nest of a migratory bird listed as endangered or threatened under the Endangered Species Act or any nest of a bald or golden eagle may not be removed, molested, or disturbed without prior approval of the Service. Actions taken by the MSP that effect bald or golden eagles and their nests, or endangered or threatened bird species or
their nests may require the issuance of permits by the Service under the BGEPMA or the ESA. Issuance of these permits will be on a case-by-case basis.

**Inactive nests.** Consistent with current Service policy, MSP may destroy the inactive nests of non-listed, non-eagle migratory birds without prior approval or subsequent notification, provided no possession occurs during the destruction. Therefore, MSP may destroy any inactive nest (without birds or eggs) of a migratory bird that is not listed as endangered or threatened under the ESA and that is not an eagle nest.


a. The primary point of contact for the Service will be Craig Czarnecki, field supervisor for the East Lansing Field Office at 2651 Coolidge Road, Suite 101, East Lansing, Michigan, 48823; telephone at 517/351-8470; email at <craigczarnecki@fws.gov>.

b. The necessary permits for handling dead and injured birds, their nests, and eggs in connection with the Avian collision study can be obtained from Steve Wilds, Chief, Division of Migratory Birds, USFWS Region 3 Office, Bishop Henry Whipple Federal Building, Division of Migratory Birds, Permits, 1 Federal Drive, Fort Snelling, Minnesota, 55111; telephone at 612/713-5432; email at <Steve Wilds@fws.gov>. All other inquiries or required notifications to the FWS may be directed towards the Service's primary contact, as provided in 9.a. above.

c. Service contacts for the Avian collision study are Dr. Albert Manville, USFWS, Region 9 Headquarters, Division of Migratory Bird Management, 4401 N. Fairfax Dr., MS. MBSP 4107, Arlington, Virginia, 22203; telephone at 703/358-1963; email at <albert_manville@fws.gov>; Steve Lewis, Division of Migratory Birds, USFWS Region 3 Office, Bishop Henry Whipple Federal Building, Division of Migratory Birds, Permits, 1 Federal Drive, Fort Snelling, Minnesota, 55111; telephone at 612/713-5473; email at <Steve J. Lewis@fws.gov>.

d. The Service law enforcement contact for the reporting of and issues regarding handling of dead and injured birds is Robert Lumadue, USFWS Region 3 Ann Arbor Office of Law Enforcement, 3800 Packard Rd., Room 160, Ann Arbor, MI 48108; telephone at 734/971-9755; email at <Robert_Lumadue@fws.gov>. The Service's Region 3 law enforcement contact for other enforcement issues will be Mary Jane Lavin, USFWS, Region 3 Office, Bishop Henry Whipple Federal Office, 1 Federal Drive, Fort Snelling, Minnesota, 55111; telephone at 612/713-5320; email at <maryjane_lavin@fws.gov>.

e. The point of contact for MPS will be Mary P. Levine, Administrative Assistant, Agency Services, Department of Information Technology, 4000 Collins Rd., P.O. Box 30631, Lansing, Michigan 48909-8131; telephone at 517/336-6616; email at <levinemp@michigan.gov>.

f. Any point of contact may be changed by written notice to the other parties from the agency changing its own point of contact. The change of a point of contact does not require consent of the other parties.
Executed on the dates indicated by the following officers or agents, each of whom warrant that they have full authority to bind the party for whom they are signing.

**State of Michigan**  
**Michigan Department of State Police**

Date: _______________________________
By: _______________________________
Name: _______________________________
Title: _______________________________

**State of Michigan**  
**Michigan Department of Information Technology**

Date: _______________________________
By: _______________________________
Name: _______________________________
Title: _______________________________

**U.S. Fish and Wildlife Service**  
**Office of Law Enforcement**

Date: _______________________________
By: _______________________________
Name: _______________________________
Title: _______________________________

**U.S. Fish and Wildlife Service**  
**Regional Director**

Date: _______________________________
By: _______________________________
Name: _______________________________
Title: _______________________________