

**Making Communications Work
For Kirtland's Warbler
Conservation**

*A Recommended Information and Education
Program for the Kirtland's Warbler*



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Submitted To
U.S. Forest Service,
U.S. Fish & Wildlife Service,
and
Michigan Department of Natural Resources

by
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Introduction

The status of the Kirtland's warbler in the year 2040 will depend, to a large degree, on how well we communicate today with the myriad interests who affect its plight.

Reaching and maintaining the Kirtland's Warbler Recovery Plan objective of 1,000 breeding pairs will require that an intensive, costly habitat management program be sustained in perpetuity. Implementing this program will require the cooperation and support of thousands of people representing many different viewpoints and interests in Michigan and across the nation.

To address this challenge, the 1985 version of the Kirtland's Warbler (KW) Recovery Plan identified the need to "develop and maintain an information and education program."

A First Step

A variety of KW information and education (I&E) efforts, most notably the tours, have been undertaken. However, no systematic program has been developed.

As a first step in developing this I&E program, the U.S. Forest Service (FS) and U.S. Fish & Wildlife Service (FWS) hired D.J. Case & Associates to conduct an assessment of current I&E efforts and provide recommendations on future efforts.

The recommended I&E program described here is based on:

1. Formal and informal interviews by phone and in person with Recovery Team members, state and federal resource agency personnel, conservation groups, local residents, timber industry representatives, and others (Appendix 1).
2. A review of current KW I&E products and activities (Appendix 2).
3. A review of popular and technical literature including "internal" communications such as Recovery Team meeting minutes.
4. Our experience and expertise with other wildlife conservation projects in Michigan and across the country.

A Leadership Role

Development of a comprehensive I&E program to address factors limiting the recovery of a federally endangered species would, surprisingly, be a first. Although I&E efforts are identified as important in many recovery plans, development comprehensive programs involving all agencies and organizations has not been done. The KW Recovery Team will be blazing a new trail once again.

Report Format

The report is divided into the following sections:

- * **Current Situation** An assessment of past and present efforts
- * **Goals** What should the I&E program be designed to accomplish?
- * **Target Audiences and Key Messages** Who should we communicate with and what should we say?
- * **I&E Guidelines** Criteria for an effective program
- * **Actions** Specific strategies to develop
- * **Implementation** The next steps
- * **Appendices**

Current Situation

The information and education (I&E) program to date has included a variety of products and activities undertaken by the various agencies and organizations with an interest in KW conservation. Other than KW tours, I&E efforts have been conducted on a relatively small scale and efforts have usually fallen low on the priority lists of individuals involved in KW management.

However, in recent years, growing public concern in KW management areas and across the country concerning timber harvesting, fire management, and endangered species conservation has pointed to the need for a more comprehensive and intensive I&E program. In fact, the factors limiting KW population growth - funding, continued cowbird control, use of prescribed burning, and others - are critically dependent on successful I&E efforts. The recent passage of a resolution by the Michigan legislature concerning KW management underscores the importance of the public.

Although the Endangered Species Act provides a "hammer" by which agencies should be able to insure KW protection, the "hammer" approach is expensive and usually not long-term. "Victories" won with the hammer approach are almost always challenged.

The key strengths and weaknesses of past and present KW I&E efforts are listed below. A detailed assessment of the current situation from the perspective of various groups who have an interest in or influence on KW management is provided in Appendix 3.

Strengths

Partnerships. The partnerships between agencies and organizations involved in KW management and I&E efforts have been excellent. This cooperation increases the effectiveness of I&E efforts and brings more resources - both expertise and money - to

the table.

Multi-disciplinary. Management of the KW offers an unprecedented opportunity for different, often divergent, interests to work together in a positive, cooperative way. For example, KW management incorporates endangered species conservation, timber management and harvest, watchable wildlife, neotropical migrant bird conservation, biodiversity protection, environmental education, and tourism.

Dedicated Conservationists. The cadre of professional and volunteer conservationists involved in KW management is exceptional. If the same dedication and commitment to KW research and management over the past 15 years can be put to KW I&E efforts, the results will be impressive.

Weaknesses

Communications Not Targeted. To date, most KW I&E efforts have been designed to reach all audiences using the same messages. However, different groups of people will view KW management in different ways. A Cleveland, Ohio birder, Mack Lake homeowner, and Grand Rapids deer hunter are not likely to have the same knowledge, interests, or concerns. Communications (brochures, videos, interpretive signs) intended for different groups have to be designed to address their different perspectives.

Lack of Information. Very little information is available on how the various groups of people feel about KW management. Interviews with agency personnel indicated that perceptions of how the "public" feels and why varied considerably. Designing an interpretive sign to persuade someone to do or not do something is difficult if you don't know how they feel about what you are discussing.

Heavy Jargon. Most communications products to date contain a large amount of technical jargon. This not only fails to communicate with readers or viewers, but can even make them antagonistic.

Emphasis on "Extensive" Communications Techniques. Most KW I&E efforts (brochures, videotapes, news releases) have been extensive. In other words, the messages have been communicated through impersonal or "arms length" media. However, the most effective communications, particularly with people who are literally right down the road, are those delivered one-on-one. Current KW I&E efforts have not emphasized techniques such as small group meetings, tours for key people, or just having personnel out on the ground talking with people.

Internal Communications. Outside of personnel directly involved in KW management, many people within the FS, FWS, and DNR are not getting information about the KW program and the role they can or should play. This occurs not only "on the ground" but at the regional and national levels. Unfortunately, many of the least informed personnel

have the most daily contact with local people, the media, and with decision-makers.

Goals

Based on the current situation, the overall goals of the KW I&E program should be:

1. Develop the understanding and action among key target audiences necessary to implement management strategies (clearcutting, fire as a management tool, area closures, etc.) that will insure the recovery of the Kirtland's Warbler.
2. Develop the internal and external support necessary for funding the KW management program.
3. Help residents and homeowners in KW management areas protect themselves and their property from damage caused by fire in an area prone to wildfires.
4. Use the KW to increase the level of public understanding and action regarding the conservation of wildlife, endangered species, neotropical migrant birds, and biodiversity.

Prior to implementing the I&E program, specific annual objectives should be established.

Target Audiences and Key Messages

Virtually everyone living in the counties where KW nest are affected by KW management activities in some manner. Described below are the specific groups who have a stake in KW conservation and who should be the target of I&E efforts. Each of these target audiences influences or has the potential to influence KW management in a significant way. For each audience, a summary of the messages that need to be communicated is provided. The issues/concerns for the target audiences are listed in Appendix 3. Potential target audiences on the wintering range of the KW in the Bahamas have not been included.

1. Full-time residents and homeowners in KW management areas
 - a. why so much time and money are spent to protect this endangered species
 - b. why clearcutting large areas of forests is necessary
 - c. the role of fire in the jack pine ecosystem
 - d. how KW management activities are designed to maintain the natural ecosystem
 - e. what they can do to protect themselves and their property from fire
 - f. alternative areas in which to recreate when KW areas are closed
 - g. how they can provide input and get involved

2. Summer homeowners

Same as full-time residents

3. Tourists (campers, visitors)

- a. the jack pine ecosystem is unique and home of the critically endangered KW
- b. guided tours and other interpretive information/activities are available
- c. how KW management activities are designed to maintain the natural ecosystem
- d. why it is important to conserve wildlife, endangered species, and biodiversity
- e. what they can do to help

4. Tourism/business interests (motel, restaurant owners)

Same as full-time residents plus

- a. economic impact of KW management on local communities - tourism, timber, etc.
- b. availability of tours and other opportunities to attract visitors

5. Hunters (bear, deer, turkey, rabbit, hare, grouse)

- a. why so much time and money are spent to protect this endangered species
- b. how various game species respond to KW management
- c. why clearcutting large areas of forests is necessary
- d. the role of fire in the jack pine ecosystem

6. Trout fishermen

- a. why so much time and money are spent to protect this endangered species
- b. how KW management affects streams and water quality
- c. why clearcutting large areas of forests is necessary
- d. the role of fire in the jack pine ecosystem

7. Timber industry

- a. how they can help tell the KW story
- b. how the KW management program can serve as an example of forest management being used to achieve endangered species recovery
- c. how their involvement can be used in a positive way

8. Oil and gas industry

- a. why their activities are restricted by KW management

- b. what the standard restrictions on their activities are
- c. how the KW management program can serve as an example of responsible resource extraction efforts working in concert with endangered species recovery
- d. how their involvement can be used in a positive way

9. Conservationists/environmentalists

- a. the jack pine ecosystem is unique and home of the critically endangered KW
- b. how KW management activities are designed to maintain a naturally occurring ecosystem
- c. why clearcutting large areas of forests are necessary
- d. funding and other support are critically to recovery of the KW
- e. guided tours and other interpretive information/activities are available
- f. what they can do to help

10. Conservation organizations (listed separately from 9. because many are not members of conservation organizations)

Same as 9., plus

- a. How specific organizations can participate in KW efforts and help with the I&E program
- b. How KW management is serving additional conservation agendas - neotropical migrants, biodiversity, etc.

11. Agency employees - FWS, FS and MI DNR

Same as all target audiences

I&E Guidelines

The following guidelines should be considered in developing all I&E efforts, both formal and informal. These guidelines are the basis for the Actions recommended in the next section.

1. Be sure the biological needs of the KW as identified in the Recovery Plan are the basis for I&E activities.
2. To the degree possible, communicate with local people "face-to-face."
3. Communicate with language understandable to the target audiences - avoid jargon.
4. Use a team approach. Work closely with the Recovery Team and use the expertise of agencies, organizations and individuals involved in Kirtland's warbler management. Don't re-invent the wheel.
5. Emphasize the importance of the entire ecosystem, not just the Kirtland's warbler.
6. Emphasize the multiple benefits of the jack pine ecosystem.
7. Incorporate and tie-in with current state and national issues such as biodiversity, neotropical migrants, international conservation, and watchable wildlife.
8. Discuss negative aspects, concerns, and failures as well as successes - be honest with people.
9. Communicate alternatives to restrictions imposed by KW management to all target audiences.
10. Don't spend too much time trying to distinguish between agencies. Although this is important organizationally, it takes time and money with little net effect.
11. Communicate continuously. This I&E program should be viewed as a process, not an event. The target audiences, KW management activities, and the world are changing constantly.
12. Be cautious about emphasizing fire as a positive attribute of KW management. Although this may be interesting to the visitor from Muskegon, it's deadly serious to the local homeowner.
13. Make sure internal audiences are included in all I&E efforts.
14. Identify who you are trying to communicate with and be sure the I&E effort is targeted to that audience.

15. Consider evaluation. How will you know if a given I&E effort communicated effectively?
16. Involve local people in the process of communicating about the KW. Most of the actions listed in this report provide opportunities for involving local people and other target audiences. Involving people is time consuming, particularly at the District level where time and money are in short supply. However, addressing KW management properly will require time. If the amount of time is not increased through additional personnel, then existing personnel will have to cut something else. There really are no shortcuts.

Actions

Sixteen actions that should be undertaken to achieve the objectives of this I&E program are listed below in general order of priority. For each action, the target audience(s) and a brief description are provided.

Action 1 Conduct "by invitation" tours

Audience: All

Descrip: There is no better way to communicate what KW management is all about than to have people accompany a knowledgeable, enthusiastic expert into the field. A significant effort should be made to get key people on the tours - the best way is to ask them. Groups that should be invited include:

- chambers of commerce
- homeowners association
- agency employees - required
- community leaders
- legislators - sponsored by Audubon
- conservation organization leaders
- media
- school groups

Special meetings or presentations should be given before or after the tours.

Action 2 Pay overtime or additional salaries for agency personnel to communicate with target audiences

Audience: All

Descrip: The most knowledgeable, credible sources of information are the biologists and other people responsible for KW management. However, their time is very limited, often preventing them from seeking opportunities to make presentations to local sportsmen's organizations, hold meetings with concerned individuals, or just spend time talking with people.

Action 3 *Develop a series of informational flyers for various target audiences*

Audience: The five highest priorities are:

1. Hunters
2. Local residents and homeowners
3. Visitors/Tourists
4. Tourism/Business Interests - schedule of tours, number of people on tours and their economic impact, income from KW timber sales, etc.
5. Timber harvesters - flyer for them to hand out if they are approached by people while they are cutting timber.

Descrip: The flyers would summarize the aspects of KW management important to different target audiences (see Key Messages section). The flyers should be low cost and distributed through channels appropriate to the target audiences. The flyers could be updated as often as needed.

Action 4 *Develop a fire protection information campaign*

Audience: Local homeowners and residents

Descrip: The objectives would be to persuade homeowners to take measures to reduce accidental wildfires and show them how to protect their property in the event a wildfire occurs. Should be done in close cooperation with local fire departments and agency fire prevention specialists.

Action 5 *Implement a media relations campaign*

Audience: All

Descrip: Development of the actions described here will provide numerous opportunities or "news hooks" for disseminating information to the target audiences through the media - TV, radio, newspapers, and magazines. For example, the development of an KW auto tour (Action 9) could be announced through the media. A plan outlining the specifics should be developed.

Action 6 Develop materials for use in schools

Audience: Local residents

Descrip: Curriculum materials that could be used in classrooms. Consider having MUCC develop a special edition of Tracks. Tracks is distributed to 70,000 4-6 graders in Michigan. Sets of Tracks along with other materials could be provided to all schools in KW management areas. MUCC will handle everything. The cost for a special edition of Tracks is \$4,000

Action 7 Develop a interpretive hiking trail in Mack Lake area

Audience: Local residents, visitors

Descrip: In progress. Include interpretive information/signage. Need to identify other walking trails through KW habitat.

Action 8 Develop "what's happening here" interpretive signs for harvesting and planting operations

Audience: All, with emphasis on local residents

Descrip: The recently developed interpretive signs describe an area after it has been planted. Additional signs should be developed for areas that are in the process of being harvested and that have been harvested but are not yet planted. Should be erected at most areas on major roads and be changed each year to reflect changes.

Action 9 Develop a KW management automobile interpretive tour

Audience: All

Descrip: At least one (Mio) and possibly two (Harrisville/Tawas) auto interpretive tours should be developed. The tours should include a brochure that guides people to 8 to 10 specific locations along a loop route on main roads. The brochure would interpret each site. Caution should used to not guide people to specific nesting locations.

Action 10 Develop a KW "Update" newsletter

Audience: Internal, conservation organizations, media

Descrip: Because of the many organizations and individuals involved, information

pertaining to on-the-ground KW management and other activities that affect KW conservation must be communicated continuously. The newsletter should be in a simple format, designed to communicate key information at a glance. Contents could include tour schedules/locations, summaries of media coverage, decisions regarding KW management activities, timber harvest schedules and much more. It should be sent directly to all DNR, FS and FWS employees involved in KW management. It should be distributed as needed, but at least three times per year.

Action 11 Increase the number of people participating in tours

Audience: All, but particularly tourists/visitors

Descrip: The tours offer a tremendous "educatable moment" on issues including forest management, biodiversity, and endangered species. Few other places in the country offer this opportunity. Increasing the number of people on the tours should be done cautiously and slowly for two reasons: 1. to protect KW from disturbance, 2. to maintain the quality of experience for participants. No cost at current capacity. If additional tours or resources are needed, it would cost more. This funding would be available from a number of sources.

Action 12 Conduct tours out of the Harrisville and Tawas Districts through Lumbermen Monument

Audience: All, with emphasis on tourists/visitors

Descrip: Visitation at Lumbermen Monument is 140,000/year. Since the Mio District has the highest concentration of birds, it's probably the best place for the birder to get one for the list. The tours out of Lumbermen Monument should be designed more for wildlife enthusiasts and local residents than for the birder.

Action 13 Incorporate KW management into fall color tours

Audience: Tourists/Visitors

Descrip: A large number of people travel north each year to see the fall colors. The opportunity for combining a color tour with a KW management area tour would seem appealing. Although the KW will not be present, there are plenty of other things to show people and to talk about. The Harrisville District conducted such a tour and had a very good response from participants.

Action 14 *Send package of information to each person or family that buys a home or property in the area*

Audience: Local residents, summer homeowners

Descrip: Cover letter should welcome them and describe the KW management activities. Information described in the other action items could be included.

Action 15 *Develop a set of visual/presentation aides*

Audience: All

Descrip: There is currently a lack of materials for use in communicating about the KW and KW management.

The following should be developed:

1. Color slides and black and white photographs of the KW and KW management activities. Hire photographer to get high quality images of all aspects of KW management, other critters that occur there, and the KW itself. Multiple original copies should be kept in a central location for use by anyone who wants them.
2. Video - same as above.
3. A time-line

The time-line would be a year-by-year account of what happens on a KW area. Talk about what species use the area, how it changes, etc. Might do the same thing for a child that is born in same year - at fifty, the adult becomes a grandfather/grandmother. Uses could include educational materials for schools, interpretive signs, placemats for restaurants, etc.

Action 16 *Update the Kirtland's Warbler video*

Audience: All

Descrip: Quality videos are expensive to produce. Only "outside" or special funding should be used. In other words, if producing a video will prevent the implementation of other Action items listed here, production should be delayed. However, funding should be available from outside sources.

Implementation

This report provides specific recommendations for developing and implementing a comprehensive I&E program to assist in achieving the KW Recovery Plan objectives.

The degree to which this I&E program is implemented and successful depends on:

1. The degree to which the individuals responsible for implementing the I&E program (biologists, I&E specialists, administrators) "buy in" to what is described here.
2. Funding.
3. Coordination between agencies and organizations.

The six steps outlined below are recommendations on where to go from here to develop the most effective program:

1. Distribute this report to the KW Recovery Team and others.
2. Review the I&E program with the KW Recovery Team at the February meeting.
3. Assign or hire a person to coordinate the I&E program.
4. Further develop this report into an implementable program in cooperation with all appropriate individuals. This would include:
 - a. Developing one-year objectives
 - b. Fine-tuning the target audiences and key messages
 - c. Identifying priorities, lead agencies, and timetables for each of the actions
 - d. Developing cost estimates and identifying funding sources for each of the actions
 - e. Developing techniques for evaluating the overall I&E program and specific actions. This is a critical step. Some of the evaluation techniques that may be used include comment cards, a survey of people who participate on tours, phone surveys of people living in the area, and focus groups.
5. Package components of the I&E program and submit for funding. Sources of funding include:
 - a. Agency budgets - FWS, FS, DNR through normal budgeting process
 - b. FS Eyes on Wildlife Program
 - c. FWS Watchable Wildlife Program
 - d. MI DNR Nongame Wildlife Fund (checkoff \$)
 - e. Conservation organizations
 - f. Foundations
 - g. Tourism industry
 - h. Timber industry
6. Begin implementation.

Appendix 1

The following people were formally interviewed by phone or in person as part of this project. Numerous other people were interviewed informally.

USFS

Supervisors Office

Rex Ennis, Forest Wildlife Biologist
Bill Gardner, Administrative Officer
Erica Haspiel-Szlosek, Public Affairs
Steve Kelley, Forest Supervisor
Horace LaBumbard, Team Leader
Ron Scott, Team Leader

Harrisville District

Chuck Andrina, District Ranger
Nick Schmelter, TMA

Mio District

Connie Chaney, District Ranger
Phil Huber, Wildlife Biologist
Carol Boll, Recreation Planner
Ann Todd, Recreation Technician and Mack Lake resident
Chris Grant, Information Receptionist
Doug Munson, Timber Technician and KW Tour Guide
Randy Marzolo, Reforestation Forester

Tawas District

Cal Norton, District Ranger

Other

Bill Jarvis, Wildlife Biologist
Timm Kaminski, Endangered Species Program, Washington, DC
Mark Nelson, Wildlife Technician
John Probst, Research Ecologist
Cindy Swanson, Coordinator, Eyes on Wildlife Program, Missoula, MT

USFWS

Mike DeCapita, Wildlife Biologist
Cameron Kepler, Wildlife Biologist (Research)
Ron Refsnider, Staff Fish and Wildlife Biologist
Mike Tansy, Manager, Seney National Wildlife Refuge

MI DNR

Wildlife Division

George Burgoyne, Assistant Chief
Jerry Weinrich, Wildlife Habitat/Research Biologist

Bob Hess, Nongame and Endangered Species Program Coordinator
Tom Wiese, Endangered Species Biologist
Gary Boushelle, Regional Supervisor
Forest Management Division
Bill Mahalak, State Silviculturist
Office of Public Information
Pat Stewart, Assistant Chief

Others

Barb Anderson, Public Affairs Director, MUCC
Carol Bocetti, Researcher, Ohio State University
Dave Ewert, Director of Science and Stewardship, Michigan Chapter of The Nature Conservancy
Mary Harmon, District 6 Co-Chair, Michigan Forest Resource Alliance
Greg Huntington, Environmental Coordinator, Dept. of Military Affairs
Paul Pasternak, President, Mio Area Chamber of Commerce
Joe Pillars, Special Projects Coordinator, NE MI Sportsmen Club
Mary Story, President, Mack Lake Homeowners Association
Terry Yonker, Executive Director, Michigan Audubon Society

Appendix 2

Current Information and Education Products

Listed below are current KW I&E related products or activities that are available or underway. Where appropriate, evaluation comments have been included.

1. Bird of Fire booklet (recent edition)

- * The booklet is written to appeal to a broad range of audiences. It will be useful for handing out at tours and as background information to respond to inquiries.
- * The booklet doesn't address the concerns/issues of residents, summer home owners, hunters and other target audiences: why clearcuts; size of clearcuts; why so much time and money is being spent on a single bird; why activities are restricted; etc.
- * The Endangered status of KW - not mentioned until page 9 and then only indirectly.
- * Extremely heavy jargon - promulgated, ornithological, winter range, restrictive habitat requirements, stands, conifer zone, monogamy, etc.
- * The "How You Can Help" section tells people they can help by doing nothing. No positive way to help is mentioned - join conservation organizations, give money, learn more, volunteer, tell a friend, etc.

2. Interpretive signs - just recently completed

For posting at areas just recently planted with trees. Addresses habitat requirements of bird and describes planting rotation.

3. Tours - by FWS and FS (with slide-tape program)

Tours consistently are rated very highly. Concerns expressed by some include:

- disturbance of KW
- resources to conduct them - people and \$
- interference with population surveys

Poor facilities for FWS tours. FWS person changes each year. Estimated that 60-70% of tour participants are hard-core birders.

4. "Bird of Fire" film
 - * Needs to be updated
5. "Bird of Fire" video
 - * Needs to be updated
6. KW Fact Sheet. U.S. Forest Service.
7. Wildlife Notes, Kirtland's Warbler. National Wildlife Federation information flyer
8. Our Vanishing Heritage, Kirtland's Warbler. MUCC information flyer
9. KW poster. Artwork from 1989 Symposium.
10. Personal presentations
11. Popular articles
12. TV programs and news stories - annual news releases on census results and tour availability
13. Scientific papers

Appendix 3

Concerns/Issues of Target Audiences

Full-time residents and homeowners in Kirtland's Warbler management areas

- extreme concern about fires. Many feel KW management increases fire risk. Haven't forgotten Mack Lake Fire.
- do not like having large areas closed to activities - blueberry picking, hiking, walking, ORVing, etc. Feel resentment to being "hemmed-in"
- opposed to the clearcutting
- do not agree with spending so much money on a single bird that may become extinct anyway
- for most part don't see/understand economic benefits of KW management
- don't understand forest management aspects
- don't feel they are kept informed of what is going on DNR and FS lands
- very interested in wildlife, natural areas and recreation in the area
- not notified of prescribed burns or harvesting activities until they happen
- don't understand role federal Endangered Species Act plays in "forcing" agencies to manage for KW
- some not sure KW exists - "lived here many years and have never seen one!"
- many new people moving into area
- connection not made between early successional species (blueberries, white-tailed deer) and relationship to timber harvesting or burning
- most do not see KW as "something special"
- don't think agencies understand that the state and national forests belong to the public. Feel left out of decision-making process
- have come to wooded north country to retire and now is being cut down
- "all the birds together wouldn't weigh 15 pounds! - they wouldn't even fill a bushel basket."

Summer homeowners

- little information to say how different they are from full-time residents.
- may be more interested in the aesthetic aspects of the forest and be opposed to clearcutting. However, they may be more interested in the conservation issues.
- "surprised" to find their forest gone upon returning in the spring.

Tourists (campers, visitors)

- many not aware of KW tours
- often looking for something to do

Tourism/business interests

- unknown if state tourism officials are aware of the potential draw of the KW
- potential for sales of materials to people on KW tours is good

Hunters (Bear, deer, turkey, rabbit, hare, grouse)

- upset by large clearcuts and their perceived affect on wildlife populations
- special concern about cutting oak
- dislike having their traditional hunting camps "disappear" as result of logging operations
- some are concerned about restricted access in areas that are closed until September 10
- use of clearcuts by hunters in many areas is high
- don't understand why so much timber is being cut for a single bird
- don't feel they get information from agencies in face-to-face fashion
- little understanding of KW management specifically and forest management in general

Trout Fishermen

- concern over impact of clearcutting on streams and aesthetics
- Trout Unlimited managing lands for KW

Timber Industry/Companies

- Concerned about large clearcuts and fact that it is bad for forest product industry image - may spill over to other forest management aspects
- some may view jack pine as less valuable cover crop than red pine
- don't know how to explain KW management to public
- for most part, have not taken advantage of KW as an endangered species that depends on disturbance and survives as a result of timber harvest.

Oil and gas interests

- feels it restricts their activities
- may not recognize that operating responsibly in an endangered species area may be a positive community relations tool

Conservationists/Environmentalists

- many are not aware of what KW management is all about - restoration of jack pine barrens
- some opposed to clearcutting
- get requests from all over the world for information and tours

Conservation organizations

- generally supportive of efforts

Agency employees - FWS, FS and MI DNR

- many within agencies are uninformed about KW ecology and management.
- some disagree with management practices and share concerns of other publics - amount of money spent and the restrictions caused by KW management
- employees on the ground (recreation technicians, campground hosts, volunteers) with the most public contact are often the least informed and last to know about KW management activities
- information concerning cuts, closures and other activities often are not communicated within and between agencies

Media

- have difficult time getting access to photos and video to show bird