

# BEST MANAGEMENT PRACTICE FOR WRITING MULTI-PROJECT GRANTS

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\* Continue with additional studies/projects as applicable

## **GRANT**

### **1. SUMMARY:**

**Provide a brief summary of the grant/program under which all projects are grouped (i.e., Research, Habitat Management, Surveys).**

**This should be a simple and easy to understand summary (layman's terms) to help orient the reviewer.**

### **2. NEED:**

**Describe the need for the grant/program under which all projects are grouped. Broadly describe the overarching relation among the projects included in the grant.**

**Provide sound and rational justification.**

**Cite appropriate references such as State and Federal agency codes, mission statements, strategic plans, operational plans, or publications.**

#### **- Example (Michigan's Wildlife Research, Surveys, and Monitoring Program):**

##### *1. NEED:*

*The Wildlife Division's statewide research program is essential to the wise management of Michigan's wildlife resources. It provides much of the technical knowledge used in developing and carrying out management programs. Research provides summaries and synthesis of existing technical knowledge; discovery, creation and evaluation of new empirical relationships, concepts, and hypotheses; develops mathematical models useful in predicting outcomes of management alternatives; develops monitoring protocols to evaluate the status and health of wildlife resources through time; develops protocols to evaluate public demands and values for wildlife resources; and evaluates the effects of management actions.*

*The State of Michigan recognizes the importance of research in The Natural Resources and Environmental Protection Act (Public Act 451) which states "The department shall perform such acts as may be necessary to conduct and establish wildlife restoration, management, and research projects and areas in cooperation with the federal government under the Pittman-Robertson wildlife restoration act...". The wildlife resources of Michigan are considerable and the role of research is an integral part of the mission of the Wildlife Division.*

### **3. PURPOSE AND OBJECTIVES:**

**Provide a defined purpose statement separate from the objectives that explains the purpose of the grant/program under which all projects are grouped.**

**Provide objectives that focus on end products and results, not activities to be undertaken.**

**Objectives should clearly link with overall State mission, strategic plans, operational plans, goals, objectives, policies, and philosophies for fisheries and wildlife management.**

**Provide a descriptive title for each objective.**

**- Example (Michigan’s Wildlife Research, Surveys, and Monitoring Program):**

*PURPOSE*

*Wildlife Division’s research needs are fulfilled by existing staff and through contracts with outside experts and Department collaborators. This project statement includes 17 research projects that will be conducted in collaboration with university faculty and graduate students. These projects are designed to address identified research needs for bird and mammal population management in Michigan.*

*OBJECTIVES*

*Objective 1. Develop new protocols*

*To develop new survey and sampling schemes to monitor and evaluate the status of wildlife resources through time.*

*Objective 2. Design and conduct experiments*

*To design and conduct experiments to help describe and understand the nature and function of wildlife, including its natural components, its users, and the relationships between them.*

*Objective 3. Design and conduct evaluations*

*To design and conduct evaluations to determine the effects of specific management practices on wildlife species, populations and habitats.*

**4. EXPECTED RESULTS AND BENEFITS:**

**Provide a complete description of all expected results and benefits of the grant/program under which all projects are grouped.**

**Describe benefits in terms of fish and wildlife resources, management of those resources, and benefits to various user groups.**

**- Example (Michigan’s Wildlife Research, Surveys, and Monitoring Program):**

*EXPECTED RESULTS AND BENEFITS*

*By fulfilling management needs, results of the research program will improve the management of wildlife in the State. The research program will support the management*

*programs of the Division and provide information about wildlife species, populations, and their habitats, the social demand for wildlife, and the interpretation and dissemination of scientific information. This program will contribute to the scientific literature about wildlife needs, effective means of managing wildlife species, populations, and habitats, landscapes and ecosystems, and the public demand for, and valuation of wildlife.*

*Experience with Wildlife Division's process of establishing cooperative partnerships with university research faculty suggests that projects conducted under a partnership model produce high quality products that are more useful to the agency than traditional projects with less interaction and oversight by agency staff. There are also benefits to students who develop a greater understanding of agency culture and processes while working on a project relevant to agency policy or management questions.*

## **5. APPROACH:**

**Provide a complete description of programmatic activities, actions, methods, or procedures utilized to accomplish each objective.**

### **- Example (Michigan's Wildlife Research, Surveys, and Monitoring Program):**

#### **APPROACH**

*To meet the general objectives outlines above, we will conduct specific research projects that address identified management needs that are critical to the management of wildlife resources. The Division has established project partnerships in which full time Wildlife Division research staff share principal investigator duties with university faculty. Cooperative research projects begin with a management question or problem identified by the Wildlife Division research staff with expertise on the topic, and we then initiate collaboration with university faculty with similar interests and expertise to create a research proposal to address the research question.*

*Departmental grant agreements are used to transfer funds to the university once a cooperative research partnership has been established. Wildlife and university investigators work as a team to recruit graduate students, supervise project planning, and implement and complete the project. Typically, graduate students share time between offices at the university and at MDNR facilities to encourage the interchange of ideas and better incorporation of research results into management programs. Wildlife staff are included as co-investigators and serve on graduate student committees as co-advisors allowing the agency to retain substantial control over research objectives, data collection and analyses, and interpretation and communication of findings.*

*Details for each of the specific studies are described in the following sections. The Wildlife and Sport Fish Restoration program will be acknowledged by grant number as a funding source in all final reports, publications, theses, and contract research reports.*

## **6. USEFUL LIFE:**

**Provide a summary of capital improvement activities OR reference individual study/project plans.**

- **Example (Michigan’s Wildlife Research, Surveys, and Monitoring Program):**

*USEFUL LIFE*

*Not applicable to this grant, as no capital improvements greater than \$10,000 are being included as part of this grant.*

*OR*

- **Example (WSFR):**

*USEFUL LIFE*

*See individual study/project plans.*

**7. GEOGRAPHIC LOCATION:**

**Provide a summary of study/project locations OR reference individual study/project plans**

- **Example (Minnesota Statewide Fisheries Research):**

*GEOGRAPHIC LOCATION*

*Statewide.*

*OR*

- **Example (WSFR):**

*GEOGRAPHIC LOCATION*

*See individual study/project plans.*

**8. PRINCIPAL INVESTIGATORS:**

**Provide a summary of key personnel OR reference individual study/project plans.**

- **Example (Minnesota Statewide Fisheries Research):**

*PRINCIPAL INVESTIGATORS*

First	Last	Working Title	Phone
Melissa	Treml	Fisheries Research and Policy Manager	651-259-5231
David	Staples	Fisheries Biometrician	651-296-2682
Colleen	Telander	Fisheries Research Support Staff	651-259-5236
Peter	Jacobson	Fisheries Research Habitat Group Leader	218-699-7294
Tim	Cross	Fisheries Research Scientist	320-234-2550

			x233
Donna	Dustin	Fisheries Research Senior Biologist	218-846-8351
Cindy	Tomcko	Fisheries Research Senior Biologist	218-999-7829
Andy	Carlson	Fisheries Research Scientist	218-833-8726
Doug	Dieterman	Fisheries Research Scientist	651-345-3365
Eric	Katzenmeyer	Fisheries Biologist	x236
<i>Vacant</i>		Fisheries Research Biologist	320-234-2550
<i>Vacant</i>		Fisheries Research Applications Group Leader	651-259-5245
Mike	McInerny	Fisheries Research Scientist	320-634-4573
Jeff	Reed	Fisheries Research Senior Biologist	320-634-4573
Patrick	Schmalz	Fisheries Research Scientist	218-525-0853
			x204
Bethany	Bethke	Fisheries Research Biologist	218-525-0853
<i>Vacant</i>		Fisheries Research Scientist	x223
<i>Vacant</i>		Fisheries Research Senior Biologist	
		Fisheries Research	
Charles	Anderson	Populations/Community Ecology Group Leader	651-259-5188
Jerry	Younk	Fisheries Research Scientist	218-308-2345
Brian	Herwig	Fisheries Research Senior Biologist	218-308-2333
Steve	Shroyer	Fisheries Research Scientist	507-362-4223
			x227
Dale	Logsdon	Fisheries Research Senior Biologist	507-362-4223
			x228
Loren	Miller	Fisheries Research Scientist, Fish Geneticist	612-624-3019
John	Hoxmeier	Fisheries Research Scientist	651-345-3365
			x237
Beth	Holbrook	Fisheries Research Senior Biologist	218-833-8640
Tyler	Ahrenstorff	Fisheries Research Biologist	218-833-8612
Matthew	Hennen	Fisheries Biologist	218-753-2580

*OR*

- **Example (WSFR):**

*PRINCIPAL INVESTIGATORS*

*See individual study/project plans.*

**9. PROGRAM INCOME:**

**Provide a summary OR reference individual study/project plans.**

- **Example (Minnesota Statewide Fisheries Research):**

*PROGRAM INCOME*

*No program income will be generated from this grant.*

*OR*

- **Example (WSFR):**

*PROGRAM INCOME*

*See individual study/project plans.*

**10. BUDGET NARRATIVE:**

**Provide a complete table and an explanation/justification of the estimated costs for each study/project OR reference individual study/project plans.**

- **Example (Minnesota Statewide Fisheries Research):**

*BUDGET NARRATIVE*

*Estimated Costs*

*The costs associated with grant activities include, but are not limited to: labor, direct and indirect costs, travel, materials, supplies, minor equipment, contracts, rent, professional services, communications, training, and fleet charges necessary to accomplish the stated objectives. Equipment that must be recorded as State inventory will not be included for Federal reimbursement.*

*Accounting will be at the grant level and calculated from the Division's cost accounting system, based on eligible work activities for this project. Each study in this grant is tracked individually by our accounting system. Currently there is minimal overlap in any of the individual studies, though staff may collaborate across studies on the same water bodies (e.g., in previous years acoustic telemetry of multiple species by A. Carlson and muskellunge PIT tagging by J. Younk in Elk Lake; cumulative impacts study by D. Dustin and Slice study by Valley, Reed and Herwig). Staff are directed to code their time to the appropriate project.*

*See Table 4 for a summary of the proposed budget. More details for each research study are provided in the full research proposals.*

**Table 4.** *Proposed budget. Costs for each job in each study for years when the study is active, including ongoing studies and three new studies.*

<i>Segment</i>	<i>45</i>	<i>46</i>	<i>47</i>	<i>48</i>
<i>Year</i>	<i>2015-16</i>	<i>2016-17</i>	<i>2017-18</i>	<i>2018-19</i>
<i>Study #</i>				

<i>Segment</i>	45	46	47	48
<i>Year</i>	2015-16	2016-17	2017-18	2018-19
<i>Study #</i>				
652.3	\$0	\$4,000	\$10,000	
652.4	\$0	\$0	\$5,000	
665.1	\$0			
665.2	\$7,000			
665.3	\$7,000			
665.4	\$7,000			
665.5	\$25,000			
671.1	\$6,736	\$3,536	\$1,856	
671.2	\$29,702	\$27,468	\$28,656	
670.1	\$22,380	\$22,070		
670.2	\$24,479	\$24,479		
670.3	\$6,750	\$6,750		
670.4	\$5,000	\$20,000		
695	\$50,000	\$50,000		
698	\$300,000	\$300,000		
699	\$50,000	\$50,000		
<b><i>Subtotal</i></b>	<b>\$1,014,447</b>	<b>\$780,503</b>	<b>\$148,712</b>	<b>\$38,000</b>
<i>Indirect</i>				
<b><i>Costs<sup>1</sup></i></b>	<b>\$213,034</b>	<b>\$163,906</b>	<b>\$31,230</b>	<b>\$7,980</b>
<i>Direct</i>				
<b><i>Costs<sup>2</sup></i></b>	<b>\$263,756</b>	<b>\$202,931</b>	<b>\$38,665</b>	<b>\$9,880</b>
<b><i>Grand</i></b>				
<b><i>Total</i></b>	<b>\$1,491,237</b>	<b>\$1,147,340</b>	<b>\$218,607</b>	<b>\$55,860</b>

1 Indirect calculated at 21%

2 Direct calculated at 26%

State share of 2015-2016 Budget (25%): \$372,809.25

Federal Share of 2015-2016 Budget (75%): \$1,118,427.75

OR

- **Example (WSFR):**

*BUDGET NARRATIVE*

*See individual study/project plans.*

## 11. MULTIPURPOSE PROJECTS:

Provide a summary of multi-purpose projects OR reference individual study/project plans.

- **Example:**



*MULTIPURPOSE PROJECTS*  
*Not applicable to this Grant.*

*OR*

- **Example (WSFR):**

*MULTIPURPOSE PROJECTS*  
*See individual study/project plans.*

## **12. RELATIONSHIP WITH OTHER GRANTS:**

**Provide a summary OR reference individual study/project plans .**

- **Example (Minnesota Statewide Fisheries Research):**

*RELATIONSHIP WITH OTHER GRANTS*

*Related projects with Federal Aid are:*

- (1) *F-29-R, Statewide Fisheries Lake and Stream Management planning. This program fulfills the needs for assessing the physical and biological characteristics of the entire lake or stream and writing management plans for long term ecosystem health.*
- (2) *F-32-D, Cold, Cool, and Warm Water Sport Fish Restoration. This program provides for reimbursement of stocked species except sturgeon.*
- (3) *F-2-L, Statewide Fisheries Habitat Acquisition. This program provides management and fishing access on corridors of private lands along streams, purchasing AMA's, and protecting critical habitat on lakes and streams.*
- (4) *3-IJ, Lake Superior Commercial Fisheries Assessment. This program monitors the catch of commercial fishermen on Lake Superior. Incidental catches of anadromous salmonids will provide additional information on the interactions of various species.*

*OR*

- **Example (WSFR):**

*RELATIONSHIP WITH OTHER GRANTS*  
*See individual study/project plans.*

## **13. TIMELINE:**

**Provide a table or narrative indicating the anticipated timeline or significant milestones related to each study/project.**

- **Example (Minnesota Statewide Fisheries Research):**

## TIMELINE

Studies 695, 698 and 699 are ongoing. Table 5 lists timelines for all studies according to the three stages described in approach.

**Table 5.** Timelines for all studies according to the three stages of study execution.

<i>Study #</i>	<i>Anticipated Completion Date</i>	<i>Principal Investigator</i>	<i>Study Title</i>
<b>699</b>	<b>Stage 1</b>		<b>New study</b>
699	Ongoing	Various	
	<b>Stage 2</b>		<b>Study execution</b>
601	2019	P. Jacobson	Morphology and trophic ecology of ciscoes in
607	2019	T. Cross	Characterization of inshore bottom substrates
615	2016	M. Drake	and influence on fish communities and walleye
617	2017	A. Carlson	Evaluation of the Mille Lacs walleye harvest
			Seasonal variability in standard assessment
635	2018	B. Bethke	Largemouth bass in northeastern Minnesota:
632	2016	J. Reed	regulators and impacts of abundance
			Evaluation of fryling walleye stocking in
637	2016	M. McInerny	Factors affecting growth and relative
			abundance of largemouth bass and smallmouth
644	2017	D. Logsdon	Impacts of walleye fry stocking in lakes with
652	2016	S. Shroyer	walleye spawn-take operations
665	2016	B. Holbrook	Compilation and assessment of fall walleye
670	2017	S. Shroyer	Mille Lacs Lake bioenergetics
671	2018	J. Hoxmeier	Flathead catfish evaluation
			Guidelines for age and growth estimation of
<b>695</b>	<b>Stage 3</b>		<b>Study dissemination</b>
610	2015	D.	Sportfish Quality and Biotic Integrity, are they
			Cumulative effects of shoreline development on
625	2015	D. Dustin	fish habitat in northern Minnesota Lakes
630	2015	J. Reed	Largemouth bass reproductive biology, habitat
			use, and
677	2014	J. Hoxmeier	Effects of removing nonnative brown trout from
681	2015	J. Younk	a driftless area stream
			Muskellunge PIT tagging in a broodstock lake
<b>698</b>	<b>Continuous</b>		
		Melissa	Grant Admin., Research Manager
		Peter	Grant Admin., Habitat Group Leader
		Vacant	Grant Admin., Applications & HD Group

<sup>1</sup> For study dissemination, the completion date is the end of the calendar year following the year when the final report is due (or 21 months after the final report is due).

OR

- **Example (WSFR):**

*TIMELINE*

*See individual study/project plans.*

**14. GENERAL:**

**Provide information in the project statement that: Shows that the proposed activities are eligible for funding and substantial in character and design; and enables the Service to comply with the applicable requirements of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 and 4331-4347), the Endangered Species Act of 1973 (16 U.S.C.1531 et seq.) the National Historic Preservation Act (16 U.S.C. 470s), and other laws, regulations, and Policies.”**

- **Example (Minnesota Statewide Fisheries Research):**

*GENERAL*

*The Minnesota Department of Natural Resources believes that the work in this grant proposal is eligible for funding, scientifically based, and substantial in character and design.*

*The projects proposed under this grant will comply with the applicable requirements of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 and 4331-4347), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), the National Historic Preservation Act (16 U.S.C. 470s), and other laws, regulations and policies. The Statement of Assurances is signed and submitted annually by the Minnesota Department of Natural Resources to the USFWS Wildlife and Sport Fish Restoration Program Regional Office. This project will comply with all applicable federal ancillary laws, regulations, and Executive Orders including those specified in 523 FW 1, entitled “Federal Aid Compliance Requirements.” Additional details on compliance follow.*

*National Environmental Policy Act (NEPA)*

*The Minnesota Department of Natural Resources, Section of Fisheries believes that this grant proposal complies with the US Department of Interior (USDI) NEPA requirements as a categorical exclusion. A NEPA Compliance Checklist has been prepared for this grant and is included in the grant package.*

*Protection of Threatened and Endangered Species*

*The Section of Fisheries believes that this grant proposal will be in full compliance with the Endangered Species Act of 1973. Implementation of this grant proposal is not likely to adversely affect any federally listed threatened or endangered species or result in the destruction or adverse modification of designated critical habitats of these species.*

*The Section of Fisheries coordinates with the DNR's Rare Features database and the Division of Ecological and Water Resources to assess the potential for management activities to impact federally threatened or endangered species in Minnesota. Fisheries staff review lists of State and Federal Endangered, Threatened and Special Concern Species in Minnesota. Information on the locations of known or historic occurrences of these species is recorded in the State's Rare Features database. Fisheries staff are required to submit additional occurrence records when they are located. Fisheries staff will consult the Rare Features database for any project that will significantly disturb existing habitat. Any operations and maintenance projects that are likely to affect federally listed species will be reviewed by the DNR's Ecological and Water Resources staff and their recommendations for avoidance will be included in the project or survey plan before proceeding.*

*Fisheries research staff are trained professionals with an ecological background. Specialists on the biology and natural community ecology of listed species are consulted in cases where projects are initiated specifically to enhance and perpetuate rare species. A discussion of habitat requirements, range and information relevant to the protection of these species during fisheries planning is included in the Federal Aid Section 7 (Phase 1) Evaluation Form as part of this grant proposal.*

#### *Historic and Cultural Preservation Requirements*

*As this project does not involve any activities that meet the definition of "undertaking" under the National Historic Preservation Act, no notification or consultation with the State Historic Preservation Office or Indian communities will be done.*

#### *Access for People with Disabilities*

*In general, fisheries research projects only very rarely affect issues that may be related to human access to aquatic resources. Furthermore, the DNR will seek opportunities to improve access for people with disabilities when maintenance work is accomplished on state access areas. Uniform federal accessibility standards are published in the Federal Register and will serve as the guide for Americans with Disabilities Act of 1990 (ADA) standards. The Department maintains a facilities accessibility inventory, in which we move towards upgrading existing facilities to meet these standards.*

*OR*

#### **- Example (WSFR):**

##### **GENERAL**

*See individual study/project plans.*

## **15. STUDIES/PROJECTS:**

### **STUDY/PROJECT TITLE:**

**Provide a descriptive study title.**

- **Example (Minnesota Statewide Fisheries Research):**

*STUDY 230550: Energetics approach to predicting growth, maturation, and fecundity of largemouth bass, bluegill, and walleye.*

### **START DATE:**

**Date the study/project was initiated (not the Grant Period).**

- **Example (WSFR):**

*START DATE: October 1<sup>st</sup> 2015*

### **END DATE:**

**Date the study/project is projected to end (not the Grant Period).**

- **Example (WSFR):**

*END DATE: September 30<sup>th</sup> 2019*

### **STUDY/PROJECT SUMMARY:**

**Provide a brief summary of the study/project.**

**This should be a simple and easy to understand summary to help orient the reviewer.**

**Summary should use layman's terms to briefly describe that grant.**

**For review purposes, please describe any notable changes from the previous segment.**

- **Example (Michigan's Comprehensive State Wildlife Grant):**

*STUDY/PROJECT SUMMARY:*

*The jack pine forests of Michigan's northern Lower Peninsula are part of a uniquely adapted system that developed on the dry sand outwash glacial plains. Historically, the most important process maintaining this system was periodic wildfire. The goal of this project is to reestablish the disturbance regime necessary to provide a sufficient amount of early successional jack pine forest to maintain dependent species and aid in the recovery of the Kirtland's warbler. As part of adaptive management, this work will be*

*monitored, assessed, and modified as necessary to ensure proper application of techniques. This information will be used in planning efforts and as part of the recovery of the Kirtland's warbler.*

## **1. STUDY/PROJECT NEED:**

**Describe the need for the study/project as it relates to the objectives outlined in the grant.**

**Provide sound and rational justification.**

**Cite appropriate references such as State and Federal agency codes, mission statements, strategic plans, operational plans, or publications.**

### **- Example (Michigan's Comprehensive State Wildlife Grant):**

#### ***STUDY/PROJECT NEED:***

*The recovery of the federally listed Kirtland's warbler is dependent on sufficient acreage of early successional jack pine habitat. Historically, this habitat was created and maintained by periodic wildfires. Jack pine and other commensal plant species evolved to take advantage of this ecological process. In turn, wildlife species also adapted to the changes initiated by and successional stages maintained by fire. Over a century of fire suppression has interrupted the disturbance regime of the jack pine forest and eliminated the maintenance of much of the early successional stage on the landscape. Consequently, those species dependent on young jack pine stands also declined. Most notable of these declines is the federally listed endangered Kirtland's warbler, but other species such as the black-backed woodpecker, which depends on the standing dead pine left after burns, also declined.*

*Prescribed fires could be used to mimic this ecological process. Residential development in the area, however, restricts the extent to which prescribed fires can be used. Therefore, other mechanical techniques need to be developed and used to recreate the necessary disturbance regime within the parent ecosystem. In the absence of fire, seeding and planting needs to occur to generate new stands of jack pine. Monitoring and evaluation of regeneration techniques is needed, along with additional research in new techniques, as part of an adaptive management approach. The management of jack pine is still experimental; therefore, techniques used must be evaluated to ensure they are having the desired effect. The results of monitoring and evaluation need to be incorporated into a planning system to make sure management is suitably adapted to changing information.*

## **2. STUDY/PROJECT PURPOSE AND OBJECTIVES:**

**Provide a defined purpose statement separate from the objectives that explains the purpose of the study/project.**

**Objectives should be written using the SMART approach and complement the objectives stated in the grant.**

**Each objective should be prefaced with a descriptive title (this will be used as an organizational tool for review and performance reporting).**

- **Example (Michigan’s Comprehensive State Wildlife Grant):**

*STUDY PURPOSE:*

*The purpose of this project is to restore and maintain jack pine forest, which requires restoration of disturbance regimes and successful regeneration of the jack pine stands.*

*STUDY OBJECTIVE:*

*Objective 1. Regeneration of jack pine*

*To regenerate and/or maintain approximately 1,500 acres of jack pine annually by preparing sites, planting, and seeding.*

*Objective 2. Jack pine management*

*To annually assess impacts and benefits of current jack pine barrens management and recommend alterations for improvement. This includes conducting a regeneration analysis of acres treated under Objective 1.*

**3. STUDY/PROJECT EXPECTED RESULTS AND BENEFITS:**

**Provide a complete description of all expected results and benefits of the study/project**

**Describe benefits in terms of fish and wildlife resources, management of those resources, and benefits to various user groups.**

- **Example (Michigan’s Comprehensive State Wildlife Grant):**

*STUDY EXPECTED RESULTS AND BENEFITS:*

*Jack pine forests occur within the dry conifer ecosystem of Michigan’s northern Lower Peninsula. With its obvious importance to the federally listed endangered Kirtland’s warbler, this ecosystem component has global significance. This management will also benefit other SGCN within this ecosystem that depend on this community type.*

**4. STUDY/PROJECT APPROACH:**

**Provide a complete description of the activities, actions, methods, or procedures utilized. Each approach section should be prefaced with a title matching that of the corresponding objective being addressed.**

**Ensure the level of detail is commensurate with the nature and complexity of the project.**

**Use references to existing manuals, publications, or reports when applicable.**

**Provide a description of planned FY accomplishments or measureable annual milestones to be completed for the current year.**

- **Example (Michigan’s Comprehensive State Wildlife Grant):**

*STUDY APPROACH*

*Approach 1. Regeneration of jack pine*

*Sites will be selected based on appropriateness for regeneration. Regeneration efforts include site preparation that can involve roller chopping or prescribed fires to prepare the seedbed. Soil disking and trenching may also be required. If an adequate seed source does not exist, the site will be planted with 2-3 year old jack pine seedlings. A total of approximately 1,500 acres will be regenerated annually.*

*Any prescribed fires used as part of the site preparation on state owned lands will have burn plans developed in cooperation with MDNR's Forest Resources Division. Prescribed fires will be conducted in accordance with applicable state and federal laws and regulations.*

#### *Approach 2. Jack pine management*

*Regeneration evaluations will be conducted on previously planted sites to determine the need for additional plantings. Growth and stem density factors will be used determine the need for additional plantings to meet optimum stem densities (minimum 1,200 stems/acre) identified for Kirtland's warbler nesting habitat. Management activities will be coordinated with other state and federal agencies through the federal Kirtland's warbler recovery team. It is estimated that 1,000–1,500 acres will be affected each year, with some or all funded through this grant.*

#### **- Example of Planned Accomplishments (Indiana State Wildlife Grant):**

##### *FY 2016 Planned Accomplishments*

##### *Year 1 (September 30, 2015-September 29, 2016)*

- 1) Conduct eDNA sampling on all historic hellbender rivers and rivers identified as potential reintroduction sites*
- 2) Hire project coordinator*
- 3) Hire technician to assist project coordinator with habitat data collection*
- 4) Collect water quality, macro-invertebrate, and habitat data for 14 mile creek and Indian creeks*
- 5) Sort and classify all macro-invertebrates*
- 6) Classify habitat data*
- 7) Conduct nest searches and collection of eggs for headstarting*
- 8) Initiate rearing of 1-2 egg masses*
- 9) Provide a written progress report to the Wildlife Section of the Indiana Department of Natural Resources detailing the outcomes of Year 1 activities.*

#### **5. STUDY/PROJECT USEFUL LIFE:**



**Provide information regarding capital improvement activities OR reference the grant.**

- **Example (Michigan's Comprehensive State Wildlife Grant):**

*STUDY USEFUL LIFE:*

*Not applicable to this grant, as no capital improvements greater than \$10,000 are being included as part of this grant.*

*OR*

- **Example (WSFR):**

*STUDY USEFUL LIFE:*

*See grant narrative.*

## **6. STUDY/PROJECT GEOGRAPHIC LOCATION:**

**Provide a description of specific study sites or counties where grant-funded activities will occur OR reference the grant.**

- **Example (Michigan's Comprehensive State Wildlife Grant):**

*STUDY GEOGRAPHIC LOCATION:*

*Kirtland's warbler management areas in the northern portion of Michigan's Lower Peninsula.*

*OR*

- **Example (WSFR):**

*STUDY GEOGRAPHIC LOCATION:*

*See grant narrative.*

## **7. STUDY/PROJECT PRINCIPAL INVESTIGATORS:**

**Provide a summary of key personnel or reference individual study/project plans OR reference the grant.**

- **Example (Michigan's Comprehensive State Wildlife Grant):**

*STUDY PRINCIPAL INVESTIGATOR*

*Rex Ainslie*

*Northern Lower Region Supervisor*

*Wildlife Division*

*(989) 684-9141*

*OR*

- **Example (WSFR):**

*STUDY PRINCIPAL INVESTIGATOR*  
*See grant narrative.*

**8. STUDY/PROJECT PROGRAM INCOME:**

**Provide information regarding program income OR reference the grant.**

- **Example (Michigan’s Comprehensive State Wildlife Grant):**

*STUDY PROGRAM INCOME:*  
*No program income is expected from activities described in this project statement.*

*OR*

- **Example (WSFR):**

*STUDY PROGRAM INCOME:*  
*See grant narrative.*

**9. STUDY/PROJECT BUDGET NARRATIVE:**

**Provide a complete table of the estimated cost OR reference the grant.**

- **Example (Michigan’s Comprehensive State Wildlife Grant):**

*STUDY BUDGET NARRATIVE:*

<i>Objectives</i>	<i>FY2016</i>
<i>1. Regeneration of jack pine</i>	<i>\$130,000</i>
<i>2. Jack pine management</i>	<i>\$60,000</i>
<i>Total</i>	<i>\$190,000</i>

*OR*

- **Example (WSFR):**

*STUDY BUDGET NARRATIVE:*  
*See grant narrative.*

**10. STUDY/PROJECT MULTIPURPOSE PROJECTS:**

**Provide information regarding multipurpose projects OR reference the grant.**

- **Example (Michigan’s Comprehensive State Wildlife Grant):**

*STUDY MULTIPURPOSE PROJECTS:*  
*This is not a multipurpose project.*

*OR*

- **Example (WSFR):**

*STUDY MULTIPURPOSE PROJECTS:*

*See grant narrative.*

**11. STUDY/PROJECT RELATIONSHIP WITH OTHER GRANTS:**

**Provide information regarding relationship with other grants OR reference the grant.**

- **Example (Michigan’s Comprehensive State Wildlife Grant):**

*STUDY RELATIONSHIP WITH OTHER GRANTS*

*This project provides information to fishery managers to consider in their regulation and management planning (F-94) and in making stocking decisions (F-62). This project is dependent upon information collected by projects in F-81.*

*OR*

- **Example (WSFR):**

*STUDY RELATIONSHIP WITH OTHER GRANTS*

*See grant narrative.*

**12. STUDY/PROJECT TIMELINE:**

**Provide a description of which activities will be active during each year of the Study/Project OR reference the grant.**

- **Example:**

*STUDY TIMELINE*

<i>Jobs</i>	<i>2015-2016</i>	<i>2016-2017</i>	<i>2017-2018</i>	<i>2018-2019</i>
<i>Job 1: Habitat Suitability Assessment</i>	<i>X</i>	<i>X</i>	<i>N/A</i>	<i>N/A</i>
<i>Job 2: Hellbender Detection</i>	<i>X</i>	<i>X</i>	<i>N/A</i>	<i>N/A</i>
<i>Job 3: Post-Release Assessment</i>	<i>N/A</i>	<i>N/A</i>	<i>X</i>	<i>X</i>
<i>Interim Report</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>
<i>Final Report</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>X</i>

**13. STUDY/PROJECT GENERAL:**

**Provide information regarding general OR reference the grant.**

- **Example (WSFR):**

*STUFY GENERAL*  
*See grant narrative.*

DRAFT