



Montana Fish, Wildlife & Parks

**Official policy for approval and prioritization of research projects by the
FWP Wildlife Bureau.**

A handwritten signature in black ink that reads "Ken McDonald". The signature is written in a cursive, flowing style.

Ken McDonald
Wildlife Bureau Chief

May 24, 2010

Date

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Montana Fish, Wildlife, and Parks Wildlife Bureau research project approval process: summary

This document outlines the Montana Department of Fish, Wildlife, and Parks, Wildlife Bureau (hereafter FWP Wildlife) policy for prioritizing and approving research projects that occur within the boundaries of the state of Montana. *FWP Wildlife defines research as short-term (<5 years) research projects, long-term (5+ years) research projects, university-related MS/PhD/ Post-Doc studies, special projects, and technical support for management and conservation investigations. This definition of wildlife research includes every study or project except routine, ongoing monitoring of the status or trend of wildlife populations, habitats, or communities that directly supports FWP wildlife conservation and management programs and decisions.*

The mission of the FWP Wildlife research program is to use scientific knowledge, the scientific method, statistics, technology, wildlife health and veterinary services, laboratory services, and specialized fieldwork, survey, and data skills to provide reliable answers to questions and robust support to wildlife conservation activities. FWP Wildlife research also facilitates undergraduate and graduate student training, to help educate and shape future generations of wildlife professionals in the application of science and technology to real world, tangible wildlife conservation issues in Montana.

FWP Wildlife strives to promote, solidify, and enhance effective and responsible wildlife conservation and management in Montana for the current and future benefit of Montana wildlife and the Montana public. To maintain and enhance the close connection between Montana's public and wildlife resources, FWP Wildlife strives to provide and disseminate dependable knowledge gained through research that can be used as a basis for resource management programs and decisions. Recognizing that this sort of knowledge can come from different sources, FWP Wildlife distinguishes between three types of research projects in order to provide appropriately variable avenues for FWP participation in research ventures:

1. Research projects that are external to FWP Wildlife, and the investigators seek a permit and/or Institutional Animal Care and Use Committee (IACUC) review as required to complete their project,
2. Externally funded research projects in which the investigators seek review of methods or objectives, sanction, and/or philosophical support from FWP Wildlife, in order to ensure that a project is relevant and useful for agency programs, or any project that will take place on FWP-owned lands, and
3. Research projects that require FWP Wildlife resources, including staff time, equipment, data collected by FWP staff, and/or money from any FWP project account, to complete.

The sections that follow outline the processes for evaluating and approving projects that are classified under 1, 2, or 3 above. Figure 1 can be used to aid in determining which section(s) of this policy apply to a particular research project.

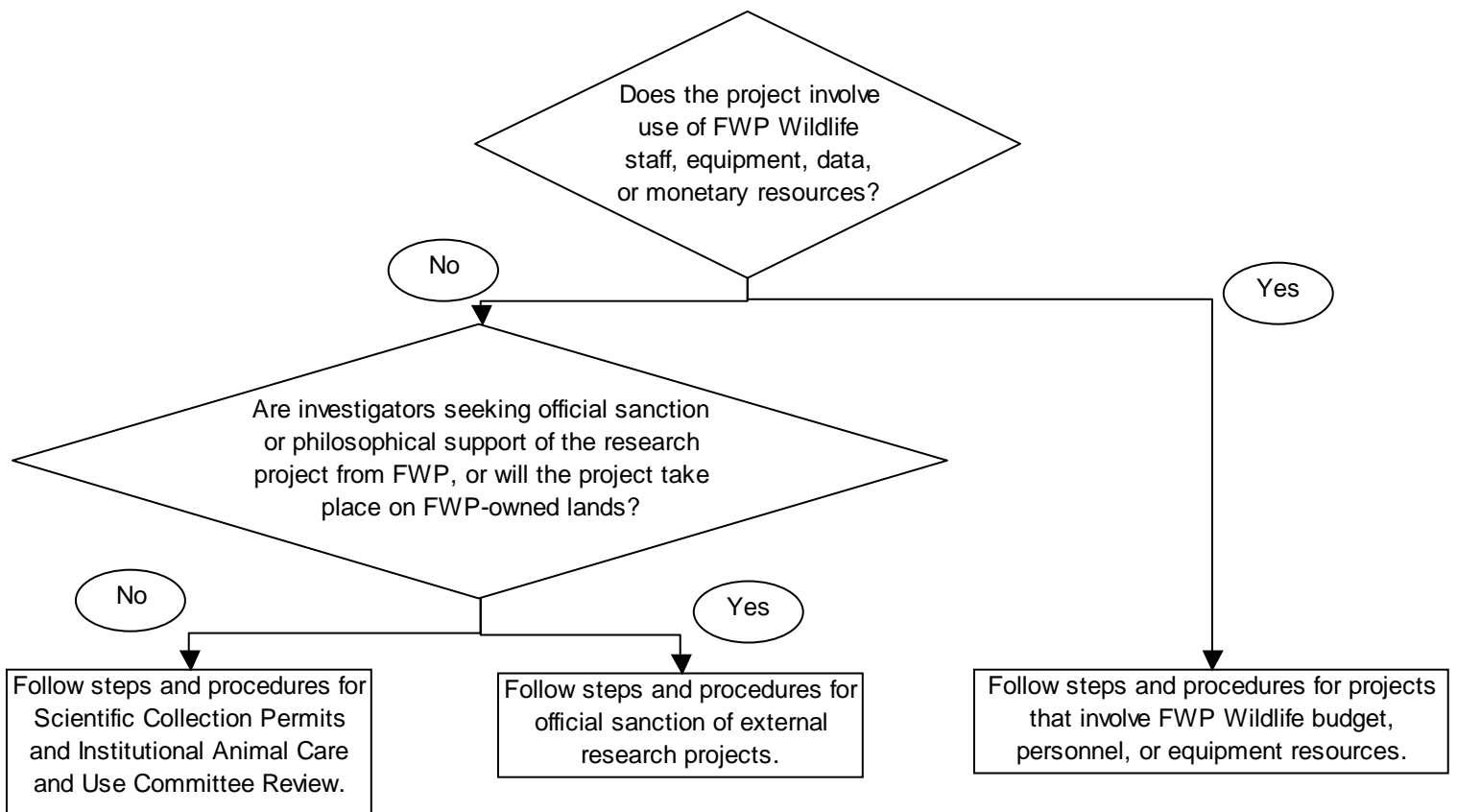


Figure 1. Process for determining which section(s) of this policy applies to a research project.

Permits and IACUC review for external research projects

A scientific collection permit from FWP Wildlife is required for all projects that include capture and handling of wild animals in Montana, including research projects. An Institutional Animal Care and Use Committee (IACUC) review is also required for all projects that include capture and handling of wild animals in Montana, though this review may be completed external to FWP Wildlife so long as documentation of the review can be provided. The steps for completing this process are as follows.

1. Permit applications are obtained from and submitted to FWP Wildlife.
 - a) Contact information is: Fish, Wildlife & Parks, Attn: Wildlife Division, PO Box 200701, Helena MT 59620, 406-444-2612, fwpwld@mt.gov.
 - b) A copy of the permit application can be found on the FWP website. <http://fwp.mt.gov/doingBusiness/licenses/wildlifeCollector.html>
2. Permits are not transferable.
3. Applications are reviewed according to the below schedule:

Permit applications received....	Jan & Feb	March & April	May & June	July & August	Sept & Oct	Nov & Dec
Permits reviewed....	March	May	July	Sept	Nov	Jan
Permits issued no later than....	April 15	June 15	August 15	Oct 15	Dec 15	Feb 15

4. Permits must be in permittee’s and/or subpermittees possession during collection or banding.
5. Any violation of the conditions of a permit may result in denial of future permit applications.
6. Permits will expire on project-end dates when appropriate and will not be issued for longer than 3-year time periods.
 - a) Example: A graduate project schedule from January 2010 through December 2013 may be permitted for that entire period but must include annual permit renewals.
 - b) Permits will be issued for one year only when deemed appropriate by the Wildlife Bureau and for projects with unclear end dates.
7. Annual renewals are required for all permits issued for multiple years. The annual renewal process provides a “check in” between the Department and permittee. Renewal forms are provided on the FWP website.
8. Annual reports are required under the provisions of granted permits by December 31 of the year issued. *Renewals and new permits will not be issued until the report for the previous year’s work has been submitted and accepted.* Deadline extensions for annual reports will be granted only for projects that include winter work that runs through the month of December. Email requests for an extension may be sent to: ljuvan-george@mt.gov. A copy of the

reporting process and form for collector permits and FWP IACUC applications can be found on the FWP website. Annual reports must include:

- a) Species and number of species handled,
 - b) Date handling occurred,
 - c) Handling locations including (GPS location in UTM coordinates, or latitude longitude if possible; legal description in Township, Range, Section, and Quarter Section; otherwise, a detailed descriptive location),
 - d) Known biological information including sex, age, cause of death, etc.,
 - e) Information used will be for administrative purposes, and to supplement location information in the Montana Natural Heritage Program on species of concern in Montana,
 - f) Specific information will not be published or made available to the general public without permission of the permit holder.
9. According to Sec. 87-2-806, Montana State Law provides for denial of permit for any of the following:
- a) The applicant is not qualified to make the scientific investigation;
 - b) The proposed collecting is not necessary for the proposed scientific investigation;
 - c) The method of collecting is not appropriate;
 - d) The proposed collecting may threaten the viability of the species; or
 - e) There is no valid reason or need for the proposed scientific investigation.
10. FWP Wildlife may place special authorizations or special requirements and limitations on any permit as necessary to protect the species to be collected, other species that may be affected and their habitats or to preserve the integrity of the scientific collection/bird banding methods.
11. Research projects that require capture and/or handling of wild animals must comply with the Animal Welfare Act 1966 and its amendments 1970, 1976, 1985 and 1990. An approval of animal capture, handling and care protocols must be provided from an approved IACUC. Applicants can apply for a review by the FWP IACUC if one is not available through other means. Capture or handling activities must not begin until an official review has been completed. If you have obtained an animal care and use committee approval through an agency other than Montana FWP, please submit a copy of that approval along with your permit application.
- a) A copy of the IACUC review application can be found on the FWP website.
<http://fwp.mt.gov/doingBusiness/licenses/wildlifeCollector.html>
12. Projects that have been approved by the FWP IACUC must report mortality events, injuries or adverse reactions observed during capture events and within 30 days of post-capture monitoring to the IACUC by January 31 following the year that IACUC approval is granted.
- a) A copy of the reporting process and form for collector permits and FWP Institutional Animal Care and Use Committee approvals can be found on the FWP website.

13. Students or associates under the supervision of the principal investigator must have specific training in the collection/banding methods proposed in the application and be listed as a subpermittee.
14. All of the above provisions apply equally to all applicants whether they are government, university or private.
15. For Scientific Collectors/Salvage Permits, Section 5 of 87-2-806, MCA requires permittee shall pay \$50.00 for the permit, except that a permittee who is a representative of an accredited school, college, university, or other institution of learning or of any governmental agency is exempt from payment of the fee. Rehabilitators are exempt from this fee.
16. A Federal Permit from the US Fish and Wildlife Service may be required prior to issuance of a state permit. However, possession of a federal permit does not guarantee a state permit will be issued.
 - a) Montana birds are protected by the Federal Migratory Bird Treaty Act of 1918 (as amended), with the exception of rock doves (domestic pigeons), house sparrows and starlings (both exotic species). Any project that entails handling or capturing of migratory bird species therefore requires a federal permit issued by the US Fish and Wildlife Service. A federal permit must be obtained before a Montana bird banding/possession permit can be issued.
 - b) A federal permit is required for any project that entails the handling or capturing of species listed as threatened or endangered under the federal Endangered Species Act or that may impact federally listed species. A list of Montana wildlife species that are listed under the federal ESA can be found on FWP's website (<http://fwp.state.mt.us/wildthings/tande/default.html>) and at the USFWS Montana Ecological Services Field Office.

U.S. Fish and Wildlife Service Migratory Bird Permit Office
PO Box 25486, D F C 960154
Denver, Colorado 80225-0486
(303) 236-8171
<http://migratorybirds.fws.gov>

USFWS Montana Ecological Services Field Office
100 N. Park, Suite 320
Helena, MT 59601
(406) 449-5225
<http://montanafieldoffice.fws.gov/>

17. Completion of a supplemental bird banding questionnaire may be required by permit applicants requesting to band birds.
 - a) A copy of the FWP Wildlife supplemental bird banding questionnaire is included as Appendix 1 of this document and can also be found on the FWP website.
<http://fwp.mt.gov/doingBusiness/licenses/wildlifeCollector.html>

18. Project proposals should be submitted when available and may be requested from any permit applicants at any time.

Official sanction of external research projects

Obtaining official sanction

The FWP Wildlife Bureau Chief (Wildlife Chief) can grant official sanction for an externally funded project that has potential to inform FWP Wildlife programs or initiatives. This sanction is the means by which FWP Wildlife can be considered a project cooperator, and listed as such in proposals, communications, and other media. Further, any external research project that will take place on FWP-owned lands requires official sanction from FWP Wildlife. Official sanction does not include financial support of a project by FWP Wildlife, contribution of data to a project by FWP Wildlife, nor obligate FWP Wildlife to contribute to the completion of the project in any way. The process for obtaining official sanction includes the following steps:

1. A written project proposal must be drafted by project staff in conjunction with an FWP Wildlife contact(s),
2. The written project proposal must be submitted to the Research and Technical Services Chief (RTS Chief) in electronic format by the Regional Wildlife Program Manager(s) responsible for the FWP Wildlife Program where the work is to be conducted, or the appropriate statewide contact from FWP Wildlife,
3. The RTS Chief will solicit and collect input from FWP Wildlife staff, the seven FWP Wildlife Program Managers, and other relevant FWP staff,
4. The RTS Chief will summarize input and make a recommendation to the Wildlife Chief for sanctioning or not sanctioning the research project,
5. The Wildlife Chief will inform the RTS Chief of the final decision, and
6. The RTS Chief will communicate the decision to project staff and the FWP contact(s), and will document the decision in an official memo.

Project proposal

In order to obtain official sanction for an externally funded research project from FWP Wildlife, a project proposal must be drafted and submitted to the RTS Chief via the Regional Wildlife Program Manager(s) responsible for the FWP Wildlife Program where the work is to be conducted, or the appropriate statewide contact from FWP Wildlife. The proposal should contain the following elements.

1. Project title
2. Project staff
 - a. External staff, including the Principle Investigator, field team, graduate students, subpermittees listed on Scientific Collectors permit application, etc.
 - b. FWP Wildlife staff, including at least one primary contact for the project from FWP Wildlife. This contact may be statewide FWP Wildlife staff, but preferably will be a regional wildlife biologist or program manager from the region(s) where work will be performed.
3. Description of project need and purpose

- a. The length of this section is limited to 1 page maximum.
 - b. This section should reference how the project is relevant to FWP Wildlife priorities, programs, and/or initiatives. Potential examples include explaining the relevance to wildlife conservation/ management programs, habitat conservation/ management programs, identified FWP wildlife research priorities, the Montana Comprehensive Fish and Wildlife Conservation Strategy, Species of Concern or federally listed threatened or endangered species, and whether graduate student training or any university student training is involved.
- 4. Description of study design
 - a. The length of this section is limited to 2 pages maximum.
 - b. This section should briefly describe both field and data analysis methods.
 - c. If handling of animals is involved in the research project, this section should also reference if permits and IACUC review have been obtained. Issuance and expiration dates of currently held permits should be listed here if they have been obtained.
- 5. Description of project resources
 - a. This section should include itemized, annual project budgets and funding sources, project personnel roles, and itemized shortfalls in either budget or personnel resources.
- 6. Description of project timelines and proposed products

Timelines and decision

Proposals should be submitted to the RTS Chief in electronic format, and can be submitted throughout the year. Input on the project proposal will be solicited and collected via email or written format by the RTS Chief. Within 60 days of proposal submission to the RTS Chief, the Wildlife Chief will reach a final decision, and that decision and rationale will be communicated to project staff and the FWP contact(s). The final decision will either (a) provide official sanction, (b) not provide official sanction, or (c) provide official sanction contingent on factors such as, but not limited to, procurement of federal permit or increased involvement of FWP staff. FWP objectives and considerations when making this final decision will include (1) involvement of FWP staff in developing the project need and purpose, (2) whether the project furthers FWP Wildlife priorities, programs, and/or initiatives, (3) whether the study design is adequate to provide the inferences and products expected by the project personnel, and (4) whether the project has adequate resources to provide the inferences and products expected by the project personnel.

Projects that involve FWP Wildlife budget, personnel, or equipment resources

FWP Wildlife recognizes three levels of research projects that require internal resources to complete:

1. Research that is primarily externally funded and staffed, but requires a contribution of data collected by FWP; research projects with a total budget of less than \$10,000 that require an FWP monetary, equipment, or personnel commitment to complete; or projects funded by endowments or court settlements for FWP Wildlife that are earmarked for use in specific areas or topics (hereafter, Level 1 projects),
2. Research in which FWP Wildlife invests money in graduate education from any FWP project account (hereafter, Level 2 projects), and
3. Research in which FWP Wildlife takes a collaborative or lead role in designing and implementing either short- or long- term research projects that have a total budget of more than \$10,000, including operational, personnel, and/or equipment resources, and potentially seeks external resources in order to complete (hereafter, Level 3 projects).

FWP Wildlife also recognizes seven distinct programs that exist within the Bureau:

1. Habitat management and conservation,
2. Big game management and conservation (including deer, elk, and antelope),
3. Special big game management and conservation (including moose, bighorn sheep, mountain goats, and bison),
4. Game bird management and conservation (including upland game birds, migratory game birds, and webless migratory game birds),
5. Non-game and threatened/ endangered species management and conservation,
6. Furbearer and carnivore management and conservation, and
7. Human dimensions of wildlife management and conservation.

FWP Wildlife program research project approval process for internal FWP wildlife research

In general, FWP Wildlife is not an organization that funds external wildlife research. Our professional staff will collaborate on research projects that involve use of FWP Wildlife resources. Therefore, allocation of any amount of resources to research projects will necessarily involve collaboration with FWP Wildlife staff. In an effort to develop a common understanding of the definition of collaboration with FWP Wildlife staff, the elements that will require involvement from FWP Wildlife staff on research projects are included below. On collaborative projects, FWP Wildlife staff should have involvement in:

1. Defining key questions, with ample time to work with FWP Regional Wildlife Program Managers and FWP Regional Area Wildlife Biologists to confirm these questions are relevant and priorities for them,
2. Identifying hypotheses related to key questions,

3. Designing research approaches (field and analysis) and collecting data that can be used to evaluate hypotheses and questions,
4. Drafting any proposal, study plan, or other document related to the research, data, questions, or hypotheses,
5. Selection of university staff or students that will work on the project, and selection/ solicitation of other collaborators,
6. Fundraising and the allocation of funds to different tasks related to completing the research project, if appropriate,
7. Conducting statistical analyses, and interpreting results, to answer questions and evaluate hypotheses in order to draw appropriate inferences,
8. Serving on graduate student committees, or helping to oversee the work of post-Doctoral scientists, and
9. Communicating results and conclusions to all audiences, including developing written reports, manuscripts, or presentations.

FWP Wildlife staff will not undertake these tasks independently on collaborative projects, and individual FWP Wildlife staff may choose to defer some of these tasks to collaborators in order to increase efficiency, or due to lack of time or interest. FWP Wildlife staff may agree that certain elements should be pursued independently by collaborators, with their role limited to commenting on or approving products from these elements of collaboration. However, the inclination needs to be that FWP Wildlife staff will be involved in each of these tasks on collaborative research projects, unless indication otherwise is given by the FWP Wildlife staff involved.

Each of the Wildlife Bureau programs has issues and questions that can be addressed to varying degrees with application of one of the three levels of research projects. Recognizing that each level of project requires a different level of resource commitment from FWP Wildlife and each of the distinct programs, there are escalating decision requirements for official commitment to each level of project. The processes are summarized in Figure 2, and more details are provided in the following steps, which must be completed before FWP Wildlife resources can be used for a research project.

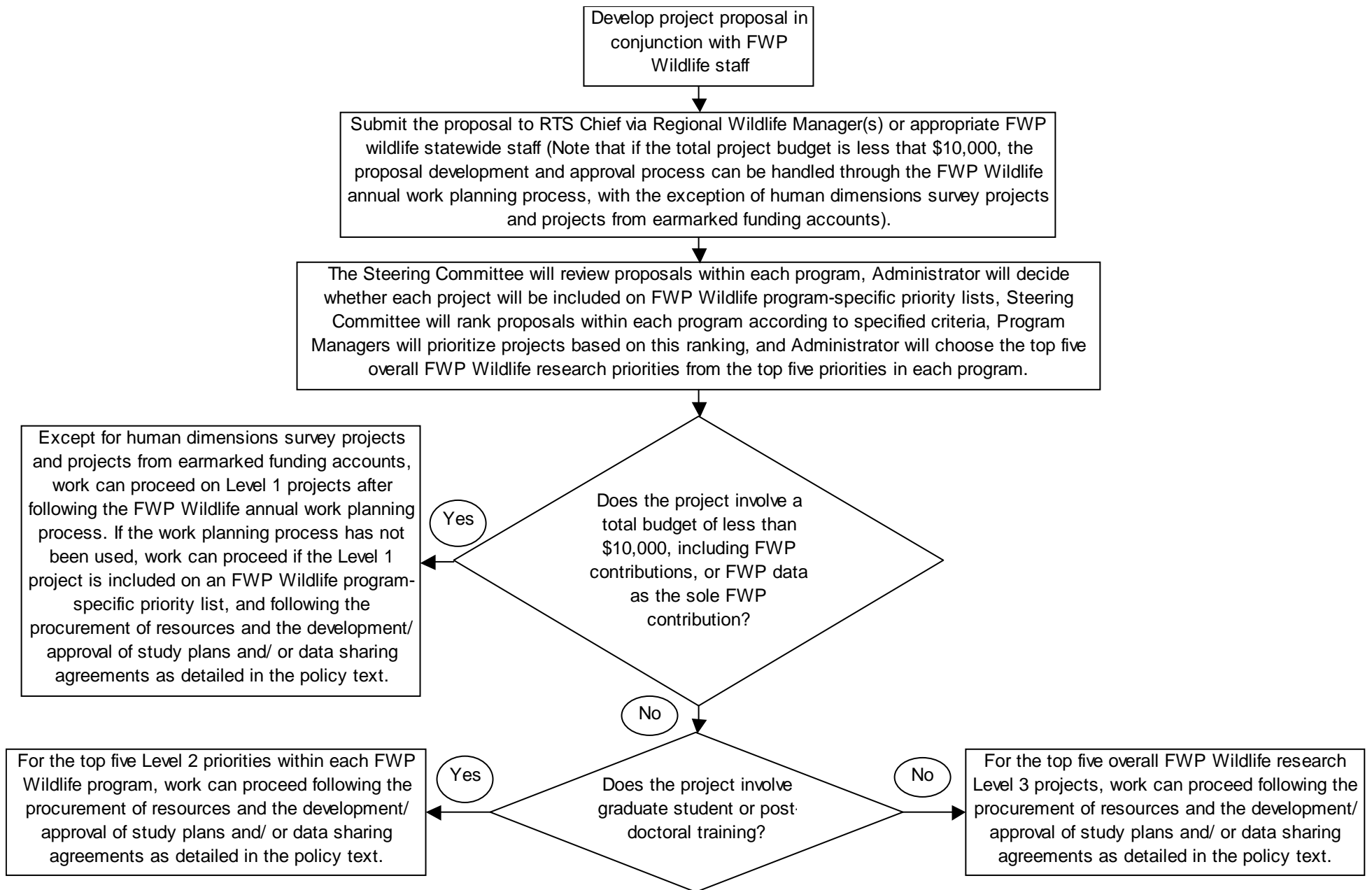


Figure 2. Process for approval and proceeding with work on internal FWP Wildlife research projects. More detail on each step is provided in the policy text.

Steps for approval and proceeding with work on internal FWP Wildlife research projects

1. Project staff must develop a written project proposal. Proposals can be drafted from anyone in FWP or from outside FWP. However, all proposals must have at least one FWP Wildlife staff member on the project staff.
2. The written project proposal must be submitted to the Research and Technical Services Chief (RTS Chief) in electronic format by the Regional Wildlife Program Manager(s) responsible for the FWP Wildlife Program where the work is to be conducted or the appropriate statewide contact from FWP Wildlife. However, for Level 1 projects, the proposal development and approval process can be handled through the FWP Wildlife annual work planning process, independent of this process, with the exception of human dimensions survey projects and projects funded with earmarked funding from endowments or court settlements. These types of projects must be approved and prioritized via this process.
3. The RTS Chief will distribute the proposal to the research Steering Committee. The Steering Committee will then have correspondence and/or face-to-face discussion about each proposal using the objectives and considerations described below to guide the interaction.
 - a. **Research Steering Committee.** The roles of the Steering Committee are to provide input and discussion on the usefulness of research projects for FWP Wildlife programs, to vote on whether or not specific projects should be pursued or not, and to score research projects that will be included on program-specific priority lists for the purpose of prioritization within each program. The Steering Committee consists of the FWP Assistant Wildlife Bureau Chief, the seven Regional Wildlife Program Managers, the Wildlife Habitat Section Chief, the Non-game/ Threatened and Endangered Species Section Chief, the Wildlife Management Section Chief, the Landowner-Sportsmen Relations Chief, and the RTS Chief. The Steering Committee may solicit input from Program Coordinators and/or subject matter experts within FWP when forming their opinions, scores, and comments regarding specific proposals.
4. The Steering Committee will vote on whether or not each proposed research project should be placed on a program-specific list of research projects that should be pursued, or not. This vote, along with the comments collected from the Steering Committee, will form the basis of the RTS Chief and individual Program Manager's recommendation to the FWP Wildlife Bureau Chief (Wildlife Chief) as to whether each project should be placed on a program specific list, or not. The Wildlife Chief will make the final decision as to whether each project should be included on a program-specific list, or not. If the approval of a Level 1 project is not being handled through the annual FWP Wildlife work planning process, once a project is included on a program-specific list, Level 1 projects can proceed by following the procedures for developing study plans and/ or data sharing agreements outlined below. A data sharing agreement must be drafted according to the criteria specified below,

and signed, prior to proceeding on any project that involves analysis of data collected by FWP Wildlife staff by a person that is not an FWP employee.

- a. **Individual Program Managers.** The Habitat Section Chief is considered the manager of the habitat management and conservation program for the purposes of this process. The Wildlife Management Section Chief is considered the manager of the big game, special big game, game bird, and furbearer/ carnivore management and conservation programs for the purposes of this process. The Non-game/ Threatened and Endangered Species Section Chief is considered the manager of the non-game and threatened/ endangered species management and conservation program for the purposes of this process. The FWP Wildlife Assistant Bureau Chief is considered the manager of the human dimensions of wildlife management and conservation program for the purposes of this process. Any individual Program Manager can consult or seek feedback relative to research proposals from Program Coordinators and/or subject matter experts when forming comments or prioritizing research projects, at their discretion.
5. The program-specific lists of research projects that should be pursued will be prioritized from most to least pressing research needs. Members of the Steering Committee will rank each project in each program, according to the scoring method and criteria specified below. Individual Program Managers will use the Steering Committee rankings in making the final prioritization of the approved research projects for their respective programs. If necessary, Program Managers can adjust the prioritization that is suggested by the Steering Committee ranks based on input they receive from the Wildlife Chief, the Director's Office, or their own knowledge that indicates slight changes in the Steering Committee rankings are appropriate. If a research project is ranked as one of the top five research needs within any of the seven programs, Level 2 can be pursued pending the availability of funding from the appropriate program, by following the procedures for developing study plans and/ or data sharing agreements outlined below. The RTS Chief also manages accounts that can be used for Level 2 projects, pending availability. If a project is not ranked one of the top five research needs in one of the seven programs, Level 2 or Level 3 projects cannot proceed with FWP Wildlife resources without written authorization by the Wildlife Chief. A data sharing agreement must be drafted according to the criteria specified below, and signed, prior to proceeding on any project that involves analysis of data collected by FWP Wildlife staff by a person that is not an FWP employee.
 6. From the top five priority research projects in each program, the Wildlife Chief will select a portfolio of five projects to represent the highest priority research needs for FWP Wildlife. The Wildlife Chief will collect input from the Steering Committee to select the portfolio, using the criteria outlined below, and the Wildlife Chief will rank these projects in terms of priority order for funding purposes. For projects included in this portfolio, Level 3 projects can be pursued pending adequate funding, by following the procedures for developing study plans and/ or data sharing agreements outlined below. A data sharing agreement must be drafted according to the criteria specified below, and

signed, prior to proceeding on any project that involves analysis of data collected by FWP Wildlife staff by a person that is not an FWP employee. In all cases, these top FWP Wildlife priorities will be considered the highest priority research projects for receiving funding from FWP funding sources that are not tied to a specific program or species, including Level 2 accounts managed by the RTS Chief, as well as for funding from sources tied to a specific program or species if they are applicable to the project. If a lower priority project is to be pursued with FWP funding in lieu of one of the top priority projects, a justification must be provided to the Wildlife Chief and RTS Chief, and written approval for this action must be received from the Wildlife Chief before the project is started.

7. Before any research project that involves the use of FWP resources can proceed, the RTS Chief must receive a detailed study plan, and the study plan must be approved by following the steps indicated below.

Timelines

Research project ideas will move through the prioritization process in approximately December and June, at which time projects will be re-prioritized within each program and for the FWP Wildlife program as a whole. Proposals that are received by the RTS Chief between May 1 and November 1 will be reviewed in December, and proposals that are received between November 1 and May 1 will be reviewed in June. The time lag in reviewing proposals is to ensure that proposals can be distributed to and read by the Steering Committee prior to discussion about each project. In special cases, unique circumstances or budgetary opportunities may require that the process is revisited in months other than December or June, and these will be considered on a case-by-case basis.

Research project priority lists and documentation

The RTS Chief will keep the most current, up-to-date copy of the lists of research projects that have been proposed, reviewed/not reviewed, approved/denied, and prioritized. The RTS Chief will also keep the most up-to-date copies of the documentation associated with research projects, and will remain up-to-date on the status of the projects until they have been completed. The RTS Chief will pursue the development of a database that will allow all FWP Wildlife staff to access the list and documentation easily.

Data sharing agreements

For any project that involves analysis of data collected by FWP Wildlife staff by a person that is not an FWP employee, a data sharing agreement must be drafted and signed by the Wildlife Chief prior to transferring data to the external party. The data sharing agreement may take different formats, but all formats must contain the following elements.

1. Project title
2. Project staff and affiliations
 - a. Including a description of third parties the data may be transferred to

- b. Including designated official liaisons between organizations
- 3. Description of project need, purpose, and objectives
- 4. An exact description of the data to be used for the project
- 5. An exact description of the analyses that are planned for the data
- 6. A plan for transferring the data back to FWP upon completion of the analyses
- 7. An exact description of products that will be delivered to FWP and/ or other parties
- 8. A description of ownership of tangible and intellectual property products that will result from the analyses of FWP data
- 9. A description of how authorship on written and oral products will be determined
- 10. Project timelines

Project proposal format for projects that involve FWP Wildlife budget, personnel, or equipment resources

In order for an FWP Wildlife research project to be considered and prioritized, a project proposal must be drafted and submitted to the RTS Chief via the Regional Wildlife Program Manager(s) responsible for the FWP Wildlife Program where the work is to be conducted, or the appropriate statewide contact from FWP Wildlife. The proposal should contain the following elements.

- 1. Project title
- 2. Project staff
 - a. Including at least one primary contact for the project from FWP Wildlife
- 3. Description of project need, purpose, and objectives
 - a. The length of this section is limited to 2 pages maximum.
 - b. This section should reference a single FWP Wildlife program that the research project would support. The project staff makes this decision, though the RTS Chief can assist in this decision as needed. In particular, this section should reference the wildlife management/conservation decision(s) or issue(s) that the research project will address, and how anticipated products from the research project will affect those decision(s) or issue(s). How will the project benefit the FWP Wildlife program?
 - c. This section should include itemized objectives for the project. If applicable, this section should also include the questions that the research project will answer.
- 4. Brief description of study design
 - a. The length of this section is limited to 2 pages maximum.
 - b. This section should briefly describe both field and data analysis methods.
 - c. If handling of animals is involved in the research project, this section should also reference if permits and IACUC review have been

- obtained. Issuance and expiration dates of currently held permits should be listed here if they have been obtained.
5. Brief description of required project resources
 - a. This section should include project personnel and roles, required time commitments from FWP Wildlife project personnel, and the estimated total project operation budget.
 6. Description of project timelines and proposed products

Research project approval and prioritization criteria

For Level 1, Level 2, and Level 3 research projects, different criteria will be used to select projects for the appropriate list that determines whether a research project of a specific level can proceed. These criteria are stated in terms of FWP Wildlife objectives for the decision that needs to be made to place a research project on the appropriate list.

For Level 1 projects, the Wildlife Chief needs to decide whether or not a research project will be placed on a program-specific list of research needs, or not. The decision will be informed by recommendations from the RTS Chief and the Individual Program Manager and by a vote and input from the Steering Committee. The decision, the recommendations, and the votes will be based on the following objectives for FWP Wildlife research projects.

1. Focus research effort on identified resource issues and concerns for FWP Wildlife programs.
2. Focus research effort on current FWP Wildlife obligations that are identified in species management/conservation plans, the FWP Wildlife Programmatic EIS (available from regional offices or FWP headquarters), the Comprehensive Fish and Wildlife Conservation Strategy, other management directives, federal T&E recovery plans, and statutory responsibilities.
3. Focus research on projects with immediate or long-term applicability of results to FWP Wildlife programs.
4. Focus research on FWP Wildlife issues or concerns for which there are allocation or conservation consequences to the uncertainties faced by wildlife officials.
5. Focus research on resource issues that represent immediate and significant threats to FWP Wildlife programs, including threats to community types, perturbations to individual species or suites of species, or threats to habitats.
6. Focus research on issues that affect multiple species, a community of species, or a broad eco-type.
7. Focus research on identifying significant limiting factors for key species or eco-types.
8. Focus research on resource issues that involve concerns of large and/ or vocal constituency groups in Montana, the United States, or internationally that are likely to have significant impacts on FWP Wildlife programs.
9. Focus research on issues that involve the potential for significant economic gain/loss to local economies or the state economy.
10. Maximize the probability that research efforts will be successful at delivering products with the resources that are available.

11. Maximize the geographic scale at which research results can be applied, including as many of the FWP Administrative regions as possible.
12. Maximize funding and collaborative partnerships to leverage resources.
13. Develop collaborative projects with individuals and organizations that have demonstrated adequate communication and cooperation with FWP staff, when given the opportunity in a previous collaborative project.
14. Develop collaborative projects with individuals and organizations that have demonstrated adequate timeliness and focus on quality in the delivery of products from research, when given the opportunity in a previous collaborative project.

For Level 2 projects to proceed, individual Program Managers need to prioritize research projects that have been approved by the Wildlife Chief, and a project needs to be identified as one of the top five research needs within an FWP Wildlife Program. To determine the priority ranking for research projects within each program, the Steering Committee will score each project that has been approved by the Wildlife Chief, relative to each of the above objectives for the FWP Wildlife research program. Possible scores for each project are 1 (limited or no chance of helping to meet an objective), 5 (intermediate possibility of helping to meet an objective), or 10 (high likelihood of helping to meet an objective). Because this ranking will be the basis of initiating Level 2 projects, the Steering Committee will also score each project relative to the following additional objectives using the same scoring scale.

15. Maximize contributions to existing research projects and to research in existing study areas.
16. Maximize cross-training and cross-program learning capacity for graduate students and/or staff on existing research projects, in order to promote holistic learning and thinking.
17. Focus research on core FWP Wildlife issues and programs such that exposure to these issues and programs becomes part of the graduate student training program.
18. Focus research on topics for which current FWP Wildlife staff and/ or University collaborators have expertise, so that adequate graduate student mentoring is facilitated.

For each project that has been approved by the Wildlife Chief, the Steering Committee will sum their scores for each objective. Total project scores from each Steering Committee member will be summed within each program, such that the higher priority projects will have the highest sums. These sums will be provided to the Program Managers as an input to the final prioritization and ranking of research projects within the program they manage. Example score sheets for use by the Steering Committee in scoring individual projects, as well as for use by Program Managers in summing ranks to prioritize projects within an FWP Wildlife program are included as [Appendix 2](#) of this document. If necessary, Program Managers can adjust the prioritization that is suggested by the Steering Committee scores based on input they receive from the Wildlife Chief, the Director's Office, or their own knowledge that indicates slight changes in the Steering Committee rankings are appropriate.

For Level 3 projects to proceed, the Wildlife Chief needs to identify a research project as one of the top five FWP Wildlife research priorities. These top FWP Wildlife priorities will be selected from the top five priorities within each program. In order to identify the top five FWP

Wildlife research priorities, the Wildlife Chief will collect input from the headquarters and Regional Program Managers as to which projects they would like to see as FWP Wildlife priorities. The Wildlife Chief will also collect input from the RTS Chief as to which of the top program priorities should be included in the portfolio of FWP Wildlife top priorities. The input from the headquarters and Regional Program Managers and the RTS Chief will serve to reduce the large set of possible combinations of research projects to include in the list of FWP Wildlife priorities to a manageable number for the Wildlife Chief to make a decision. Because these top five priorities represent a portfolio of statewide program priorities, the headquarters staff, Regional Program Managers, and the RTS Chief, in making their recommendations, and by the Wildlife Chief, in making the final decision, will use the following statewide FWP Wildlife research objectives.

1. Address the research needs of multiple FWP Wildlife programs.
2. Address research needs across a broad geographical area, and across a variety of eco-regions and habitat types, including as many FWP Administrative Regions as possible.
3. Focus on research projects that are well defined and have a high likelihood of successful completion.
4. Focus on research needs for which outcomes have clear and immediate applicability to FWP Wildlife programs, and on projects with outcomes that will significantly contribute to or advance FWP Wildlife programs.
5. Minimize redundancy in research projects occurring within the boundaries of Montana.
6. Maximize coordination and collaboration between FWP Wildlife programs and between FWP Wildlife staff that are stationed in different areas.

Moving forward on research projects that involve FWP contributions/resources

Before work can be started on any approved research project that involves the use of FWP Wildlife resources, a study plan needs to be received by the RTS Chief. The study plan must address the following elements.

1. Project title, principle investigators, and cooperators
2. Introduction and background, including a review of relevant research and literature
3. Proposed research summary, including:
 - a. Research questions
 - b. Research objectives
 - c. Hypotheses and predictions
4. Study area description
5. Methods, including:
 - a. Field methods
 - b. Data analysis methods
 - c. Sample size/ power calculations, if applicable
 - d. Project personnel, budget, products, and timeline

- e. Plans for delivery of data collected for project to FWP for archival and future use
6. Literature cited

Depending on the level of research project being pursued, the study plan length will vary, and different written approvals will be required before the actual work can proceed. For all FWP Wildlife research projects of any size, the investigators must demonstrate that adequate funding and personnel are in place to begin the project. The FWP Wildlife Operations Section Chief will review all study plans to make sure resources are in place, will help in the process of determining the resources that will be required, and will communicate a recommendation to the Wildlife Chief. The Wildlife Chief must provide written approval that adequate resources are in place to begin the project. Potential funding sources for FWP Wildlife research include FWP base budgets and FTE, standard or recurring federal grants to FWP, funding obtained through the Montana legislative process, research partner/ collaborator contributions, and external grants. Additionally, The RTS Chief and the Regional Wildlife Program Manager(s) where the work is being conducted must approve Level 1 project study plans. Official graduate committee approval from the university where the student is matriculating will suffice for graduate projects, but the study plan must be delivered to the RTS Chief once it is finalized and approved by the committee. However, for graduate projects involving work by post-Doctoral researchers, the RTS Chief, the Wildlife Biometrician, and the Regional Wildlife Program Manager(s) where the work is being conducted must also approve the study plan. For all Level 2 projects (including post-Doctoral research projects), delivery and/or approval of the study plan document to the RTS Chief will be included as wording in the contract between FWP Wildlife and the university that is conducting the research. For Level 3 projects, the RTS Chief, the Wildlife Biometrician, at least one Regional Wildlife Biologist, at least one Research Wildlife Biologist, and the Regional Wildlife Program Manager(s) where the work is being conducted must approve the study plan in writing. The RTS Chief will coordinate the collection of comments and required approvals for research projects, once study plans are delivered to the RTS Chief. All official approvals should be included with the name and title of the approver, and the date of approval, on the first page of the study plan. A suggested format for these approvals is included as Appendix 3 of this document.

Appendix 1. FWP Supplemental bird banding questionnaire

APPENDIX 1: FWP SUPPLEMENTAL BIRD BANDING QUESTIONNAIRE



Montana Fish, Wildlife & Parks

SUPPLEMENTAL QUESTIONS FOR BIRD BANDING PERMIT APPLICATIONS (2009)

These questions are designed to judge the merit of invasive study methods (e.g. capture and handling) over non-invasive methods (e.g. observation only). Please answer concisely and thoroughly and with this goal in mind.

Text copied from study design or proposal documents may be appropriate.

Please do not answer questions with 'see study proposal'.

These questions are in addition to those on the permit application.

Will your banding efforts document changes in abundance, productivity and/or distribution of the proposed study species and how will it do so?

How will your banding efforts contribute reliable data on long-term population trend information?

Will your banding efforts measure detectable changes in productivity, survival or distribution of birds in response to management activities, environmental change or legal harvest seasons? If yes, how will your efforts measure changes?

Will your projected sample size be large enough for statistical analyses?

Will your findings have implications on a broader scale than just the study area, i.e. will your findings as well as any management recommendations that result from your work be applicable to the species across the state of Montana or range of the species?

If you plan to band nestlings or capture nesting adults: Is the handling of nestlings and/or nesting adults the only way to mark target individuals? Could you capture and handle target individuals during the fledgling or post nesting stage?

Will your banding efforts identify critical habitats used by migrants, or breeding and wintering areas that could not be identified through non-invasive observational study?

Do your capture and handling methods follow standardized protocols used by other studies? Please list references. Could your protocols be replicated by others in follow up studies?

Appendix 1. FWP Supplemental bird banding questionnaire

If tissue or blood is to be collected: What analyses are to be conducted with this material and has a funding source and laboratory been identified to conduct the analyses?

Please list here publications that have resulted from your banding efforts in previous studies and/or publications that could result from work to be permitted.

Please describe at least one management recommendation that could be derived directly from your banding work that could not be derived from non-invasive observational study.

Management recommendations are typically general in nature but could be site specific.

How will your findings be distributed to agencies and other researchers including the Montana Natural Heritage Program?

**APPENDIX 2: EXAMPLE SCORING SHEETS FOR STEERING COMMITTEE AND
PROGRAM MANAGERS**

Appendix 2. FWP Scoring sheets for Steering Committee and Program Managers
FORM FOR REVIEW OF PROJECTS BY STEERING COMMITTEE

Project Name:
Reviewer Name:

	Criteria	Score (1, 5, or 10)
1	Focus research effort on identified resource issues and concerns for FWP Wildlife programs	
2	Focus research effort on current FWP Wildlife obligations that are identified in species management/conservation plans, the FWP Wildlife Programmatic EIS (available from regional offices or FWP headquarters), the Comprehensive Fish and Wildlife Conservation Strategy, other management directives, federal T&E recovery plans, and statutory responsibilities	
3	Focus research on projects with immediate or long-term applicability of results to FWP Wildlife programs	
4	Focus research on FWP Wildlife issues or concerns for which there are allocation or conservation consequences to the uncertainties faced by wildlife officials	
5	Focus research on resource issues that represent immediate and significant threats to FWP Wildlife programs, including threats to community types, perturbations to individual species or suites of species, or threats to habitats	
6	Focus research on issues that affect multiple species, a community of species, or a broad eco-type	
7	Focus research on identifying significant limiting factors for key species or eco-types	
8	Focus research on resource issues that involve concerns of large and/ or vocal constituency groups in Montana, the United States, or internationally that are likely to have significant impacts on FWP Wildlife programs	
9	Focus research on issues that involve the potential for significant economic gain/loss to local economies or the state economy	
10	Maximize the probability that research efforts will be successful at delivering products with the resources that are available	
11	Maximize the geographic scale at which research results can be applied, including as many of the FWP Administrative regions as possible	
12	Maximize funding and collaborative partnerships to leverage resources.	
13	Develop collaborative projects with individuals and organizations that have demonstrated adequate communication and cooperation with FWP staff, when given the opportunity in a previous collaborative project.	
14	Develop collaborative projects with individuals and organizations that have demonstrated adequate timeliness and focus on quality in the delivery of products from research, when given the opportunity in a previous collaborative project.	
15	Maximize contributions to existing research projects and to research in existing study areas	
16	Maximize cross-training and cross-program learning capacity for graduate students and/or staff on existing research projects	
17	Focus research on core FWP Wildlife issues and programs such that exposure to these issues and programs becomes part of the graduate student training program	
18	Focus research on topics for which current FWP Wildlife staff and/ or University collaborators have expertise, so that adequate graduate student mentoring is facilitated	
	TOTAL	

Appendix 3. Suggested study plan approval format

APPENDIX 3: SUGGESTED STUDY PLAN APPROVAL FORMAT

Appendix 3. Suggested study plan approval format

For research projects that involve the use of FWP Wildlife personnel or operational resources, it is recommended that the date of study plan submission and approval be documented by including signatory lines and dates on the title page of the study plan, as below.

Submitted by:

_____	_____	_____
Name	Title	Date

Approved by:

_____	_____	_____
Name	Title	Date

The above lines can be repeated as necessary.