

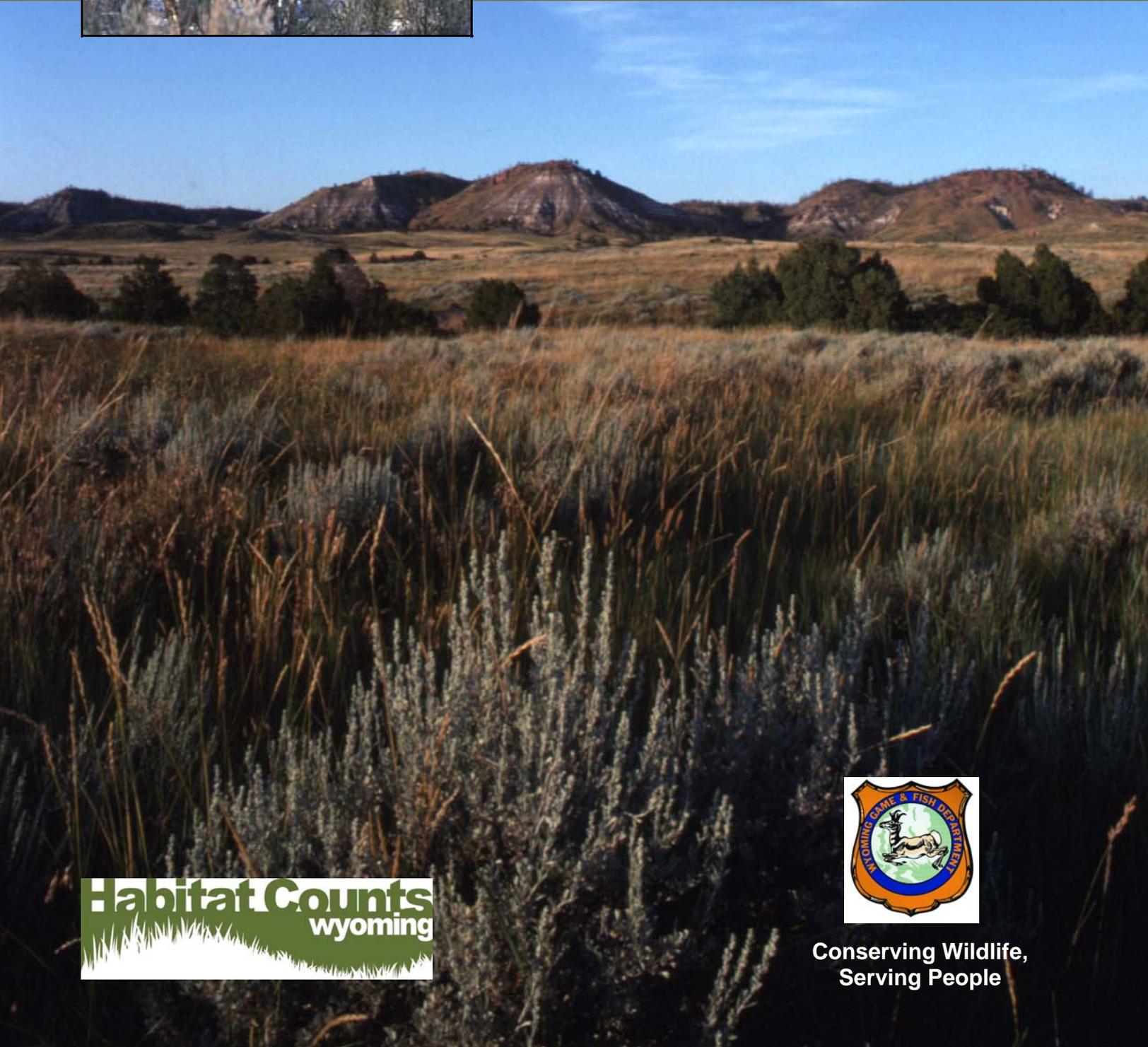


# WYOMING

Game And Fish Department

## STRATEGIC HABITAT PLAN

January 2009



Conserving Wildlife,  
Serving People

## **Introduction**

The Wyoming Game and Fish Department's (WGFD) first Strategic Habitat Plan (SHP) was completed and approved by the Wyoming Game and Fish Commission (WGFC) in 2001. The plan recognized the important role habitat issues would play in the future of Wyoming's wildlife. Now, just a few years later, the WGFD is updating and revising that SHP as the potential impacts and major issues facing wildlife and their habitats grow ever greater. The previous SHP recognized that coal bed methane and natural gas development were increasing along with other forms and consequences of energy development. However, the total scale and dominating role of energy development on the landscape were grossly underestimated as intense national energy demand has fueled increased exploration and development along with attendant roads, pipelines, transmission facilities, traffic and other ancillary facilities. Energy sources like wind, uranium, geothermal and oil shale are now being actively pursued. It is commonly recognized today that we are not in the midst of just another energy boom but rather have entered an unprecedented, sustained energy development campaign that will continue into the foreseeable future. This will significantly change the face of the landscape and the habitats and wildlife that occupy it.

The purpose of Title 23, the legislation that established the Wyoming Game and Fish Commission, is to "provide an adequate and flexible system for control, propagation, management, protection, and regulation of all Wyoming wildlife" (23-1-103). Except for ownership and management of WGFC held lands there is no statutory authority for the WGFC and WGFD to protect, restore or enhance wildlife habitat. The management of wildlife is inseparable from the habitat that sustains it and our ability to sustain quality wildlife habitat is contingent upon working in partnership with private landowners and public land managers, conservation organizations, local, state, and federal governmental agencies and the public. These partnerships are key to implementing the SHP and maintaining abundant wildlife now and into the future.

Since 2001, climate change and its overriding role in the future of wildlife management in Wyoming have become starkly apparent to scientists and wildlife managers. According to predictions summarized in 2007 by the Intergovernmental Panel on Climate Change, average air temperatures in North America are predicted to increase 1-3°C between 2010 and 2039. Effects, seemingly linked, are being seen today in the occurrence, distribution and form of plant communities and associated animal assemblages. Some scientists are predicting new plant and animal associations will replace the ecosystems we know today. It will require an adaptive approach to address these new associations and their management needs.

Bark beetles, budworms and other insects, coupled with drought stress, have killed vast and growing areas of coniferous forests in Wyoming in recent years, resulting in significant and large-scale habitat changes that will persist for a century or more. Such large-scale, landscape change is unprecedented in the careers of current wildlife professionals and will challenge our ability to proactively and wisely manage this dramatically altered landscape.

Invasive species are a chronic and growing problem within the state. A number of exotic plants have been long standing problems, including leafy spurge, toadflax and the knapweeds.

Plants causing problems in riparian systems include Russian olive and tamarisk. Some exotic plants, such as cheatgrass, have been present for some time but are beginning to spread at an alarming rate. Invasive plants benefit from disturbances to native plant communities such as roads, well pads, pipeline corridors, tilling, and other actions that remove native vegetation and disturb the soil. They also spread to over-grazed areas. Drought exacerbates these weed problems by weakening native plants and plant communities giving exotics a competitive advantage.

Over 10 years of drought combined with continued human development in the West have heightened water demands and sharpened conflicts over its use. The drought's impact on terrestrial and aquatic habitats are significant and pervasive and remind us of the fundamental role water serves in structuring Wyoming's habitats. While the timing, rate, form and quantity of water delivery to Wyoming's landscapes may change with changes in climate, habitat prescriptions and management alternatives must be adopted to ensure the water that is available sustains natural habitat processes.

In 2001, we identified several habitats or vegetation communities that were considered important to maintain or enhance. These types were aspen, mixed mountain shrub, sagebrush, grassland, riparian and wetland habitats, prairie stream systems and cutthroat trout streams. The types identified are still considered a high priority as 50% or more of the states aspen and riparian/wetland communities have been lost and there is a loss of quality mixed mountain shrub due to ungulate herbivory and loss of periodic fire. Declines in water flows, water quality, loss of water flow to diversions, and loss of native fish to entrainment are significant factors in prairies stream systems and effect cutthroat trout habitat along with competition from non-native trout species. Within sagebrush and grasslands, habitat fragmentation, invasive weeds, altered fire regimes and herbivory were identified as factors affecting these habitats and potentially impacting sage grouse, pygmy rabbit, and a host of other sagebrush and grassland obligate species.

In the face of these unprecedented impacts and land use changes, habitat and wildlife management will clearly require an adaptive, imaginative approach to meet the WGFD mission of "Conserving Wildlife, Serving People". Maintaining habitat values and addressing key habitat issues will require careful consideration, collaboration and planning followed by bold action. The WGFD and its conservation partners must confront these challenges with limited resources. This SHP sets forth strategies to meet these challenges.

## **Habitat Vision**

*The Wyoming Game and Fish Department is the steward of all Wyoming's wildlife, dedicated to the conservation of sustainable, functional ecosystems capable of supporting wildlife populations at least as healthy, abundant and diverse as they were at the dawn of the 21<sup>st</sup> century. The WGFD will promote a holistic approach to habitat management, integrating management and various land uses through collaborative efforts with the general public, conservation partners, private landowners and land management agencies. The WGFD will increase public awareness of the need for managing for quality wildlife habitat today to help ensure healthy and abundant wildlife populations in the future. Wyoming Game and Fish Commission lands will be managed to emphasize and maintain wildlife habitat and public access values for which they were obtained.*

## **Mission**

*Promote and maintain the availability of high quality habitat to sustain and enhance wildlife populations in the future.*

## **Goals**

*Goal 1. Conserve and manage wildlife habitats that are crucial for maintaining terrestrial and aquatic wildlife populations for the present and future.*

*Goal 2. Enhance, improve and manage priority wildlife habitats that have been degraded.*

*Goal 3. Increase wildlife-based recreation through habitat enhancements that maintain or increase productivity of wildlife.*

*Goal 4. Increase public awareness of wildlife habitat issues and the critical connection between healthy habitat and abundant wildlife populations.*

*Goal 5. Promote collaborative habitat management efforts with the general public, conservation partners, private landowners and land management agencies.*

## **WGFD Habitat Functions and Organization**

While all WGFD divisions are involved in habitat efforts, the WGFD Habitat Program consists of the Aquatic Habitat Section in Fish Division, the Terrestrial Habitat Section in Wildlife Division and the Habitat and Access Maintenance Section in Services Division. The primary function of the WGFD Habitat Program is to pursue the habitat mission and goals laid

out in the Strategic Habitat Plan. The Office of the Director provides policy-level support by implementing the policies and decisions of the WGFC regarding wildlife and wildlife habitat management, including scientific data collection, research, and habitat conservation. The Habitat Protection Section, under the Director's Office, coordinates WGFD review and evaluation of land use plans, projects, policies, and activities that affect fish, wildlife, and their habitats, and make recommendations consistent with Department and Commission policies, position statements, and strategies. In addition, the Director's Office administers and directs the Wyoming Landscape Conservation Initiative (WLCI) Coordinator and the Jonah Interagency Office (JIO) reclamation biologist.

The Services Division houses two additional sections that support or work directly on habitat related issues. The Lands Administration Section administers and monitors property rights for WGFC-owned and administered lands and acquires property rights to restore and conserve habitat to enhance and sustain wildlife populations. The Information and Education Section disseminates information to promote public understanding and support for wildlife, wildlife habitat, and wildlife conservation.

The Fiscal Division oversees all financial operations of the WGFD, including budget development, financial reporting, accounts payable, purchasing, asset management, federal funds (grant) management, contract management, revenue collection and licensing.

Habitat is fundamental to management efforts at all levels within Fish Division and Wildlife Division. Fish Division fishery managers, water management biologists and aquatic habitat biologists all have a stake in meeting the challenge of conserving and enhancing all aquatic wildlife, reptiles, amphibians and their habitats for current and future generations. Likewise, Wildlife Division programs or sections are responsible for conserving and enhancing terrestrial wildlife and their habitats and include: Terrestrial Habitat Section, law enforcement, Private Lands/Public Wildlife Program, Nongame Section, Sage Grouse Coordinator, Waterfowl and Trophy Game Sections, Pinedale Oil and Gas Coordinator, and the Landowner Incentive Coordinator.

## **Background and Planning Process**

The 2001 SHP guided WGFD efforts in implementing habitat projects and provided a framework for developing meaningful cooperation both within and outside the WGFD and across political and legal boundaries. Accomplishment highlights are compiled annually in a summary report (e.g., *2007 Annual Report Strategic Habitat Plan Accomplishments*). For example, in 2007 WGFD personnel completed nearly 25,000 acres of prescribed burns, 142 miles of stream /watershed assessments, acquisition of 10 conservation easements, monitoring of 233 upland habitat sites among many other accomplishments.

Due to increasing importance, complexity and far-reaching scope of habitat issues the WGFD is facing, two WGFD committees were formed in 2006. The Habitat Policy Group (HPG) consists of WGFD Deputy Directors and Assistant Division Chiefs and provides oversight to the Habitat and Technical Advisory Group (HTG), consisting of program managers. In early 2008, the HPG and HTG, with input and assistance from Regional WGFD personnel,

began revising and updating the SHP to provide oversight and direction for all habitat issues within the WGFD.

This revision seeks to improve the previous SHP by clarifying why and how “priority areas” are selected, clarifying what they do (and do not) represent, improving linkages between the written SHP and priority areas, clarifying how proposed habitat projects will be ranked relative to priority areas and opportunities, incorporating species of greatest conservation need (SGCN) in the planning process and clarifying the relationship between the SHP and various WGFD plans (see “Strategic Habitat Plan and Other WGFD Plans” later in this document).

An important component of this SHP is the recognition of wildlife habitats that are “crucial” for wildlife and those habitats that have been degraded and have potential for “enhancement”. The distinction between crucial and enhancement areas is captured in Goals 1 and 2 below while Goal 3 recognizes the important role the WGFD has in directly serving the public.

This SHP explicitly recognizes key wildlife habitat areas by delineating them as crucial under Goal 1 to better communicate their value to WGFD partners and public constituents. Likewise, by identifying enhancement areas under Goal 2, the WGFD is signaling its intent to focus resources on issues where the highest likelihood of success and most meaningful effect on habitats in the next several years is believed possible. The definition of Goal 1 and Goal 2 areas and the distinctions between them are vital for understanding the structure of this SHP and require additional discussion below.

Priority habitats delineated under Goal 1 are designated as crucial to conserving and maintaining populations of terrestrial and aquatic wildlife for the present and future. Successful holistic habitat management within these areas will require a strong conservation component and partnership with private landowners, land management agencies, land users and conservation organizations. Crucial Habitat Areas are based on significant biological and ecological values including habitats that support important life stages needed for maintaining game species, sensitive native non-game species, unique species assemblages and ecologically important species or communities. These include habitats that need to be maintained as well as habitats that have deteriorated and should be enhanced or restored. Crucial habitats have the highest biological values, which should be protected and managed to maintain healthy, viable populations of terrestrial and aquatic wildlife. The key consideration in selecting these areas was the identification and use of “Habitat Values”. Some values used to identify crucial habitats include: big game crucial winter range, sage grouse core habitats, SGCN diversity and uniqueness, quality and condition of vegetative communities, movement corridors, quality of watershed hydrologic function, quantity of stream flow, quality and condition of riparian vegetative communities, lateral and longitudinal hydrologic connectivity and physical access by fish populations to all habitats necessary to persist.

Goal 2 habitat enhancement priorities are important wildlife areas that can or should be actively enhanced or improved by WGFD and partners over the next few years if opportunities exist. The key consideration in selecting these areas was “Habitat Issues”. Habitat issues considered were loss of aspen communities, vegetative succession, habitat fragmentation, energy development, loss of connectivity, water quality and quantity limitations, conifer beetle kill,

invasive species, lack of fish passage, loss of fish to diversions (entrainment), degraded habitat, incompatible grazing management practices and excessive stream channel instability (degradation, aggradation, lateral migration). Another important factor is the ability or opportunity for successful work in such areas. These habitat enhancement areas were selected because there is realistic potential to address wildlife habitat issues in them and to improve, enhance or restore wildlife. They are areas where natural or man-caused habitat degradation is occurring or has occurred and where the WGFD can work with partners to improve habitat condition. The status of the wildlife species present, habitat abundance, habitat conditions, habitat connectivity, activities resulting in habitat loss, potential improvements and opportunity for partnering were all considered when delineating these enhancement areas. The WGFD will concentrate habitat work on these areas for the 5-year time frame of this SHP. Habitat enhancement areas may or may not overlap the crucial habitat areas. Delineation of these areas will be valuable when prioritizing manpower and resources and when communicating with partners interested in implementing habitat enhancement work. The relationship between Goal 1 and Goal 2 areas is shown in Figure 1.

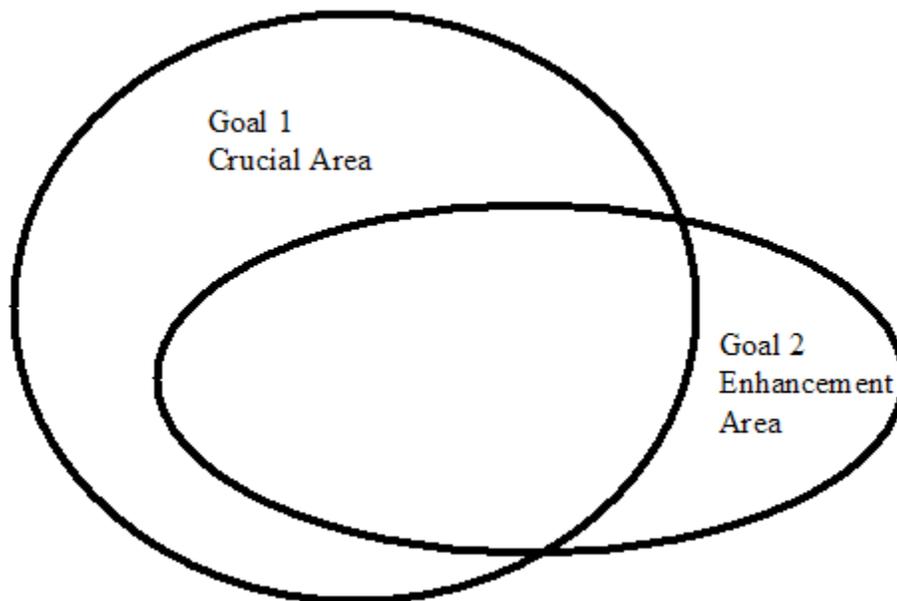


Figure 1. Schematic example showing goal 1 “crucial areas” and goal 2 “enhancement areas”. The areas commonly overlap as shown or may be distinct. Maintenance conservation approaches would be pursued throughout crucial areas recognizing that enhancement work will also be needed (represented by the overlap region) in portions of crucial areas. Some enhancement projects will also be needed to address issues outside the crucial areas.

In early 2008, WGFD regional personnel were asked to identify habitat values under Goal 1 and habitat issues under Goal 2. Values and issues then guided identification of regional crucial and enhancement areas. Narratives describing the location, boundaries, values, issues, species, and solutions/actions were then prepared. These narratives and associated maps were developed in conjunction with the revision of the SHP. The habitat priority areas were approved by the Chiefs of the Fish and Wildlife Divisions and are available under separate cover or by visiting the web

site <http://gf.state.wy.us/habitat>. The boundaries of priority areas were delineated in several ways, including Hydrologic Unit Code (HUC) basins, overlapping crucial ranges, stream corridors, and riparian corridors. The WGFC's Wildlife Habitat Management Areas that were not included within a Crucial Habitat Area were included as Habitat Enhancement Areas. Priority areas were not identified in Yellowstone National Park and the Wind River Indian Reservation because the WGFD does not have wildlife management authority there. The only exception is the inclusion of sage grouse core areas described by Governor Dave Freudenthal's Executive Order 2008-2 within the Wind River Indian Reservation. Habitat Project Selection

The WGFD has developed a Trust Fund with approximately one million dollars available annually. Habitat funding is available from a variety of external sources, and the WGFD is consulted regularly regarding partnering with other entities on habitat projects and asked for advice on prioritizing habitat work other entities are considering. To wisely allocate these funds to projects that will result in significant and long-term habitat conservation and management, a project ranking system will be employed. A systematic project ranking approach ensures that project proponents are aware of how proposals will be evaluated and helps provide consistency and objectivity in the selection process. The approach below (Table 1) will be used to assign ranks to proposed habitat projects (e.g., WGFD Trust Fund, Wildlife and Natural Resource Trust Account and other habitat funding sources as appropriate).

Project development, submittal and evaluation will proceed as in the past where each of the WGFD's regions, through the Regional Coordination Teams, will annually provide ranked or prioritized project proposals. Aquatic and Terrestrial Habitat Section Managers will lead the HTG in reviewing all regional and statewide project proposals and supplement regional rankings with the prioritization scheme to provide a statewide prioritization and funding recommendations to the HPG. To the extent possible, all proposals will be reviewed at the same time each year.

As described in the *Background and Planning Process* section above, Crucial Habitat Areas (Goal 1) were selected based on habitat values, and Habitat Enhancement Areas (Goal 2) were selected based on habitat issues within those areas. A narrative was written for each of the priority habitat areas (see the companion document to this plan or the WGFD web site <http://gf.state.wy.us/habitat> for narratives and associated maps). Projects proposed within these areas will be evaluated based on whether they address the values or issues described in the narratives. Projects that are proposed outside the Crucial Habitat Areas and Habitat Enhancement Areas (collectively called priority habitat areas) will be considered based on their merits as described in the project proposal with emphasis on whether or not they contain the important habitats identified earlier (i.e., aspen, mixed mountain shrub, sagebrush, grassland, riparian and wetland habitats, prairie stream systems and cutthroat trout streams).

Table 1. Considerations for prioritizing habitat projects. When evaluating a project start at step 1 and proceed down the table to select the project location. Ranking is assigned based on the values and issues described in the project proposal.

| Project location |  | V/I* | Ranking      |
|------------------|--|------|--------------|
| 1                | Within a Crucial Habitat Area and a Habitat Enhancement Area   | Yes  | Highest      |
|                  |  | No   | Merits based |
| 2                | Within a Crucial Habitat Area  | Yes  | High         |
|                  |  | No   | Merits based |
| 3                | Within a Habitat Enhancement Area  | Yes  | High         |
|                  |  | No   | Merits based |
| 4                | Goal 3 project (Increase wildlife-based recreation through habitat enhancements that maintain or increase productivity of wildlife) regardless of whether it is in or outside of a habitat priority area (proximity to population centers and partner involvement more important for these projects) |      | Merits based |
| 5                | Not within a Crucial Habitat Area, Habitat Enhancement Area, and does not address Goal 3. However, it does address an important habitat type, ie. aspen, mixed mountain shrub, sagebrush, grassland, riparian or wetland habitats, prairie stream systems and cutthroat trout streams.               |      | Merits based |
| 6                | Not within a Crucial Habitat Area, Habitat Enhancement Area, nor an important habitat type and does not address Goal 3   |      | Merits based |

\*V/I = Does the project address Values (Goal 1, Crucial Habitat Areas) or Issues (Goal 2, Habitat Enhancement Areas) provided in the priority habitat area narrative project narratives?

Experience has shown that there should be latitude to do a certain amount of habitat enhancement work in locations that have not been identified as a priority habitat area. The project prioritization system described above allows for some funding and habitat work on projects outside of Habitat Priority Areas, based on support from regional teams staff, partners, the merits of the project, potential benefits and whether or not it includes important habitat types. Each project will be evaluated on its merits (i.e., how well it provides overall wildlife benefits compared to ongoing priorities). Projects that offer potential for long-term and significant wildlife habitat conservation advances will not be categorically ignored simply because they are outside a predefined area. At the same time, the current prioritization system is meaningful only if we act on it as a representation of our understanding of where wildlife values are most critical and where issues are most pressing. In this manner, benefits from both a strategic and tactical approach to habitat management can be pursued as opportunities exist.

## **Strategic Habitat Plan and Other WGFD Plans**

An important role of this revised SHP is clarifying how this planning effort relates to the array of other WGFD plans, efforts and reports. To serve this role, several other plans are explicitly identified in italics under the various strategies listed in the Goals and Objectives section. The intent is to integrate WGFD efforts under various plans to a reasonable level, ensure plans are mutually supportive while maintaining the original intent of each plan. Following is further explanation of plan relationships.

### **DIRECTOR'S OFFICE**

*Comprehensive Wildlife Conservation Strategy* - The Comprehensive Wildlife Conservation Strategy (CWCS) for Wyoming is an action plan developed by WGFD in cooperation with a number of conservation partners and other interested parties, including agencies, academia, conservation organizations and the general public. It is a plan intended to direct the state's effort to conserve SGCN and to allow the state to maintain eligibility for U.S. Fish and Wildlife Service administered State Wildlife Grant funding. In addition to identifying SGCN, the CWCS also identifies important habitats for those species; and most of those habitats are included as crucial and enhancement priority habitat areas in the SHP. The priority areas identified in this revision to the SHP were based on the needs of all wildlife. The narratives associated with each priority area include a list of the primary and secondary species impacted by the habitat conditions in that priority area. In some cases this will meet the conservation needs of one or more SGCN while in other cases some important habitats for SGCN may not be incorporated into a priority habitat area. The CWCS assesses the needs of species assemblages and individual species and account for those that are not covered by a priority habitat area.

*Habitat Protection Program* - This program coordinates WGFD input into planning and implementation of energy development, federal land use plans (Forest Plans and BLM Resource Management Plans), and individual local habitat and land management projects throughout the state. These plans and projects, in total, determine to a large extent the amount, type, and intensity of land use changes that occur in Wyoming. The SHP serves as a basis for WGFD recommendations and negotiations to achieve the most benefit, through identification of the most crucial habitats, the areas where habitat enhancements would be most useful, and as central guidance for other associated WGFD and interagency habitat programs and efforts.

*Wyoming Landscape Conservation Initiative* - The WLCI is an interagency working group of partners collaborating on a long-term, science-based effort to enhance wildlife habitats at a landscape scale in southwest Wyoming, while facilitating responsible development. The role of the SHP in this process is identification of key habitat values and areas for enhancement, and as support for the WLCI collaboration process, for the purpose of maintaining and improving the most beneficial habitat values and function in areas of southwest Wyoming that are not being impacted by energy development.

*Jonah Interagency Office* - The JIO is an entity that was established to deal specifically with monitoring and mitigation activities for the Jonah gas field in Sublette County. The Jonah Record of Decision requires mitigation of the gas field disturbance on a 3:1 acreage basis (3 acres of mitigation or equivalent function per acre of disturbance), which in turn requires a huge

acreage of off-site mitigation to occur. The role of the SHP in this process is basic guidance for locating and advising that mitigation, to achieve the best benefit for impacted wildlife.

*Mitigation Policy* - The mitigation policy was established by the WGFC in recognition that growth, development, and land use changes will continue to occur in Wyoming, and when adverse impacts to wildlife or their habitat is unavoidable, it directs the WGFD to develop and promote further mitigation that best protects wildlife. It also outlines mitigation approaches and provides mitigation categories for species and/or their habitats, including species of greatest conservation need (SGCN) identified in the CWCS for Wyoming.

## FISH DIVISION

Fish Division produces an annual work plan, an annual progress report and basin management plans. These are linked by a common set of basin or water-specific goals and objectives. Annual work plans include both aquatic habitat and population efforts. The annual progress report describes activities for the year and progress towards meeting these objectives and is necessary to meet federal aid reporting requirements. The SHP is at the base of this scheme by defining the habitat goals, objectives, strategies and priority areas that may be incorporated into annual work plans or basin management plans. The SHP provides the overall direction for aquatic habitat efforts, and this direction should be reflected in the three other documents. Aquatic habitat biologists annually report highlights of major accomplishments in a Strategic Habitat Plan Report. The basin management plans provide a general description of habitat conditions and issues in basins where they have been completed – further details on issues and values are provided in the SHP Priority Area Narratives for parts of some basins.

Additional Fish Division plans relate to the SHP. Water Management has a 5-Year plan describing goals and objectives for pursuing instream flow water rights and other water management activities. This plan is due for revision in 2010. Efforts described in that plan are largely consistent with the priorities and efforts developed in this revised SHP and consistency can be further increased during future revisions. Also, a fish passage program proposal is currently being developed and contains further detailed goals and objectives that fall under the more broadly stated goals of this SHP. There are also numerous fish species conservation plans and agreements that contain habitat maintenance or improvement provisions. Examples include Conservation agreements for Colorado River Cutthroat and Bonneville Cutthroat trout. Administrative reports are produced periodically and provide detailed aquatic wildlife and habitat assessments. Often, habitat recommendations developed in these reports provide the basis for future efforts. A myriad of other Fish Division plans and collaborative efforts include significant habitat components. Examples include the National Fish Habitat Action Plan and the Western Native Trout Initiative.

## WILDLIFE DIVISION

Wildlife biologist and game warden management recommendations rely on habitat production and utilization surveys, as well as other population and habitat studies and descriptions of habitat treatments. In addition to the various forms of data collection for big game and game birds, surveys are conducted for migratory game birds, nongame birds and nongame mammals. These species categories have management objectives, and in some cases,

especially for waterfowl, there is habitat monitoring (e.g., pond counts and vegetation assessments).

The Terrestrial Habitat Section develops personnel goals to meet habitat goals and, like the Aquatic Habitat Section, produces an annual work schedule to address the issues prioritized in the SHP. Progress toward meeting these annual goals and priorities is reported in an annual SHP Report.

The following are some of the primary terrestrial wildlife planning documents that are directly/immediately related to the Strategic Habitat Plan:

- Big and trophy game management objectives in annual Job Completion Reports
- South Wind River Mule Deer Herd Habitat Management Plan
- Wyoming Greater Sage-grouse Conservation Plan
- Eight Wyoming regional (local working group) Greater Sage-grouse conservation plans
- Wyoming Bird Conservation Plan
- A Plan for Bird and Mammal Species of Greatest Conservation Need in Eastern Wyoming Grasslands
- Wyoming Green River Basin Trumpeter Swan Habitat
- Nongame Bird and Mammal Plan

There is a large number of other plans ( $\geq 40$ ), specific to individual species or groups of species, at the state, region, national, and international levels, that are in some way relevant to the SHP. Examples include: *A Conservation Plan for Bats in Wyoming*, *Conservation Assessment and Conservation Strategy for the Swift Fox in the United States*, *Partners In Flight North American Landbird Conservation Plan*, and *The Northern Great Plains Joint Venture Implementation Plan*. Other planning and implementation efforts tied to the SHP mission include the Landowner Incentive Program, the Habitat Extension Service Program and the Wyoming Mule Deer Initiative.

On August 1, 2008, Wyoming Governor Dave Freudenthal issued Executive Order 2008-2 that, among other things, acknowledges and adopts the "Core Area Population Strategy" developed by his Sage Grouse Implementation Team. The Core Area Population Strategy specifies a sage grouse core area management concept incorporating a set of stipulations and processes that are biologically and legally supportable. Executive Order 2008-2 directs state agencies to focus on maintenance and enhancement of habitats within Core Population Areas. These core population areas are included in the crucial and enhancement areas for this SHP.

## SERVICES DIVISION

Services Division coordinates management of WGFC owned and administered lands according to WGFC regulations (Chapter 23), WGFC policy, Fish and Wildlife Service Federal Aid regulations and guidelines per Managed Land and Access Summaries (MLAS). The MLAS include the specific goals, objectives and strategies for each WHMA. In addition to the MLAS, there are five-year development and management plans for invasive plants, wetlands and irrigated meadows. The strategies of the MLAS and management plans are incorporated into annual work plans as actions. Included within the annual work plans are the past years

completion, Fish and Wildlife Service Federal Aid Assistance and other required management reports. Services Division also oversees the WGFD's Information and Education Programs. The Information and Education Section produces annual work plans based on established statewide and regional priorities, which include a variety of habitat-related activities. One of the major overall goals of the Information and Education Section is to raise awareness among key audiences about the value of healthy wildlife habitats for Wyoming's wildlife and people.

## **Implementation**

Strategic plans help identify future opportunities and obstacles in accomplishing the WGFD's mission and enables efficient resource allocation. The planning process articulates WGFD's priorities, fosters input and buy-in from all administrative levels, organizes activities, and streamlines actions. As such, the creation, implementation and evaluation of strategic plans like the SHP are a WGFD-wide responsibility.

The HPG and HTG will provide oversight on the policy and technical aspects of implementing the SHP. They will review progress implementing the SHP annually. Additionally, they will ensure that the appropriate actions are included in the work schedules of the programs they oversee. The SHP and its project prioritization process are the bases for selection and funding of activities to conserve and enhance habitats in areas of the state identified as having important habitat values and/or issues.

The SHP will be reviewed and updated at regular intervals. The success and progress in implementing actions will be reported in annual SHP reports. This report will be published on the WGFD web site and presented to the WGFC. Annual work planning efforts within the terrestrial and aquatic habitat programs will be consistent with and drawn from the SHP. Many other programs will draw heavily on the SHP as they develop annual work planning (e.g., Habitat Access, Property Rights, and Habitat Protection).

## **Goals, Objectives, Strategies and Actions**

The following outline highlights the goals, objectives and strategies that will be pursued to address the habitat values and the habitat issues facing Wyoming's wildlife. There is an important section of "common objectives" following Goals 1-3. These objectives relate to all of the goals. Rather than repeating them under each goal, they were listed separately for brevity.

The objectives under Goal 2 were intentionally ordered to reflect a proven formula for successful habitat projects: 1) inventory and assessment of habitat conditions, 2) implementation of projects to address identified habitat limitations, 3) monitoring to evaluate success of the project and approach, and 4) review of approach and adapting management prescriptions.

### **Goal 1. Conserve and manage wildlife habitats that are crucial for maintaining terrestrial and aquatic wildlife populations for the present and future.**

Objective A) Maintain existing habitat values within crucial habitat areas.

Strategy I) Pursue conservation easements and other land stewardship agreements to conserve migration corridors, functioning diverse ecosystems, open spaces and other crucial habitats.

Action a) Maintain, use and improve, an objective system for evaluating property right options (e.g., Habitat and Access Evaluation Process or HAEP) to ensure the conservation of the highest value properties.

Action b) Use GIS technology and the priority overlapping habitat scoring system developed by Wyoming GIS Center (WyGISC) and WGFD to help WGFD field personnel evaluate and score potential properties.

Action c) Share priorities, and collaborate with land trusts, conservation groups, landowners, land management agencies and other partners to identify conservation opportunities.

Action d) Enlarge and diversify funding sources by maintaining an updated list of traditional and non-traditional funding sources.

Action e) Enlarge and diversify funding sources by pursuing and using non-traditional funding sources to augment traditional funding sources.

Action f) Develop an adequate WGFD cost-share funding base to acquire property rights and management agreements

Action g) Improve WGFD field personnel knowledge of the responsibilities, processes, and protocols for entering into conservation easements and land stewardship agreements to increase landowner and land management agencies awareness about conservation options and enhance Land Protection staff outreach capabilities.

Action h) Monitor and manage easements and agreements.

Strategy II) Provide professional habitat input into land management permitting, planning and review processes (e.g., Resource Management Plans, Forest Plans, Environmental Impact Statements, Allotment Management Plans, Wildlife Environmental Reviews).

Action a) Provide updated wildlife and wildlife habitat GIS data to the Governor's Office, State and Federal land management agencies, and other partners to foster better management decisions and develop template plans that take into consideration the major wildlife and wildlife habitat issues that need to be addressed in planning documents.

Action b) Assign WGFD leads for land management and water planning, permitting and review processes and provide sufficient time for them to participate meaningfully in land management planning and review processes.

Action c) Continue to update, maintain, expand, and streamline the Decision Support System to facilitate project review, project planning and commenting. Provide funding for WyGISC to do the work.

Strategy III) Protect important fishery resources with instream flow water rights.

Action a) Use the WGFD five-year Water Management Plan and annual work plans to focus and promote in-stream flow priorities.

Action b) Work with partners and legislators to find and implement water management solutions like short or long-term leases or voluntary conversions of water rights to instream flows.

Strategy IV) Protect and maintain big game migration routes and other important wildlife movement corridors.

Action a) Maintain the wildlife migration corridor and barrier GIS layer and distribute to all partners.

Action b) Identify important wildlife movement corridors that are threatened.

Action c) Develop strategies and funding sources and prioritize and implement easements or management actions to maintain important wildlife movements.

Action d) Remain involved in and support the Western Governor's Association (WGA) Wildlife Corridors Initiative, developed to implement WGA Policy Resolution 07-01 (*Protecting Wildlife Migration Corridors and Crucial Wildlife Habitat in the West*).

Strategy V) Attempt to minimize impacts of energy and other human impacts on aquatic and wildlife habitats.

Action a) Provide input and actively participate in land management and project planning, process review, environmental commenting efforts and decision records as directed by the WGFC Mitigation Policy.

Action b) Work with the State Cooperator's Group and the Governor's Office to actively integrate sustainable aquatic and wildlife habitat components into land management planning documents.

Action c) Continuously update and use the WGFD's Decision Support System to facilitate project review and commenting.

Action d) Maintain up-to-date standardized comments and recommendations (e.g., fencing specifications, mitigation requirements for oil and gas development, pipeline stream crossing recommendations); provide them to land management agencies, other decision makers and project proponents; and use them in WGFD reviews of projects, where applicable.

Strategy VI) Assess progress toward achieving Goal 1 and adapt management accordingly.

Action a) Review crucial habitat values and crucial habitat areas in each region every 5 years, and revise as necessary to focus habitat conservation and restoration efforts.

Action b) Review progress on implementing strategies and actions identified in this plan.

## **Goal 2. Enhance, improve and manage priority wildlife habitats that have been degraded.**

Objective A) Inventory and assess wildlife habitat using an integrated watershed or landscape approach to identify issues, limiting factors and habitat management needs and opportunities.

Strategy I) Assess habitat identified within this plan as needing enhancement or conservation at basin and landscape scales using remote sensing and GIS technology.

Action a) Collaborate with other agencies, organizations, the private sector, universities, etc. to facilitate sharing of data and costs for remote sensing.

Action b) Implement the WGFD 5-year GIS plan to provide the tools and resources needed by agency personnel.

Strategy II) Inventory and evaluate wildlife habitat using standardized inventory techniques (e.g., *Wyoming Habitat Assessment Methodology*, *Ecological Site Inventory*, *Cooperative Sage-Grouse Habitat Assessments*, *WGFD Moose and Mule Deer Habitat Assessment Techniques*, etc.).

Action a) Use the enhancement areas and crucial areas that have remote sensing applications to help focus annual inventories.

Action b) Secure funding to conduct inventories, habitat assessments and prepare management recommendations thereon.

Action c) Use habitat biologists, contractors and other resources to inventory, assess and prepare management recommendations within targeted areas.

Action d) Collect reference reach information from Wyoming stream types for determining departure from stable stream form and for designing stream channel restorations.

Action e) Collect long-term data sets on WGFC owned lands where practical (e.g., flow, water temperature, vegetation trends).

Objective B) Implement projects to address and reduce habitat issues and enhance wildlife habitat.

Strategy I) Maintain agency commitment and processes to capitalize on available funding sources within the capabilities of our existing personnel to effectively manage projects.

Action a) Use the habitat ranking process to rank and fund project proposals that address WGFD priorities.

Strategy II) Develop coalitions, partnerships, and other relationships to acquire funding and support for projects.

Action a) Continue liaisons and coordination with conservation organizations and the Wyoming Natural Resource Trust, and foster new relationships with groups that promote wildlife habitat enhancements and sustainable natural resource management.

Action b) Continue and expand the habitat extension program as opportunities arise to strengthen partnerships with the agricultural community and federal agencies and to make the best use of funding sources such as the Farm Bill.

Strategy III) Emphasize implementation of watershed/landscape scale habitat projects.

Action a) Use watershed/landscape level habitat inventories that provide the information needed to support larger scale habitat enhancements.

Action b) Emphasize landscape scale habitat enhancements when developing work schedules and prioritizing projects.

Action c) Work with WLCI and JIO among others to identify and capitalize upon opportunities to work at a landscape scale within the WLCI and JIO geographical boundaries.

Strategy IV) Maintain or enhance populations of big game, neo-tropical birds, fish and other wildlife by increasing natural movement opportunities.

Action a) Prioritize big game migration corridors regionally and statewide, develop an action plan, make that action plan compatible with the WGA Wildlife Corridors Initiative, and identify and secure funding to prevent, remove or modify migration barriers.

Action b) Use proven programs such as Farm Bill CCRP, EQUIP, WHIP, and CRP among others for sustainable grazing management to enhance riparian corridors that provide habitat connectivity.

Action c) Use easements and land use agreements that maintain or improve habitat connectivity and prevent fragmentation.

Action d) Maintain or enhance populations of fish and other aquatic organisms by increasing movement opportunities and reducing loss to irrigation diversions (see WGFD Fish Passage Plan).

Strategy V) Promote sound riparian habitat with functioning riparian communities.

Action a) Work with land managers and landowners to transplant and restore beaver to historical and suitable unoccupied habitat.

Action b) Work with land managers and landowners to resolve sediment and other water quality issues related to riparian management.

Action c) Work with land managers and landowners to resolve ungulate over-use issues.

Action d) Work with land managers and others to promote wise human development of riparian areas including roads, structures, agriculture and other activities.

Strategy VI) Promote functioning stream channels that maintain natural processes and aquatic habitat.

Action a) Work with land managers and private land owners to enhance or restore stream channels.

Action b) Work with city government, conservation groups and others to enhance or restore stream channels and habitat within and around Wyoming Communities.

Strategy VII) Educate private landowners about habitat and wildlife issues associated with pond development.

Action a) Work with landowners, land managers and conservation organizations to locate and design ponds that reduce the cumulative landscape and ecosystem impacts of illegally introduced species, aquatic nuisance species and thermal and nutrient issues..

Action b) Inform landowners, land managers, and conservation organizations about relationships between pond development introduced species and water quality impacts.

Action c) Provide information to pond developers to incorporate natural and sustainable designs that benefit the broad community of native species.

Strategy VIII) Mimic natural disturbance regimes using fire to provide an ecological balance and vegetative landscape mosaic to enhance fire dependent vegetation and wildlife such as aspen and bighorn sheep. Where the use of fire is inappropriate or impractical use mechanical, biological and chemical disturbances or treatments to mimic periodic natural disturbance to enhance early succession vegetation communities

Action a) Coordinate and plan with federal and state agencies to promote natural fire (“let burn”) management that promotes and enhances natural processes and habitat.

Action b) Use prescribed fire, mechanical, biological or chemical as tools to enhance wildlife habitat and natural processes.

Action c) Continue to inform and educate land managers, landowners and the public about the benefits of fire for managing certain vegetation communities.

Strategy IX) Work with landowners, land managers and conservation organizations on grazing management programs that enhance sustainability of rangelands and wildlife habitat.

Action a) Develop and use partnership funding sources and long-term agreements that provide infrastructure and incentives to facilitate grazing management that sustains wildlife habitat.

Action b) Continue to pursue and develop forage reserves and grassbank opportunities that provide needed rest and rotation for livestock grazing strategies.

Action c) Use livestock grazing expertise and science to provide workshops and technical support that promotes sustainability of rangelands and wildlife habitat.

Strategy X) Promote habitat management that enhances cottonwood and willow galleries, aspen stands, woody draw complexes and healthy shrub communities that benefit wildlife.

Action a) Use proven habitat manipulation techniques to manage invasive plants such as salt cedar and Russian olive and to restore native cottonwood and willow complexes.

Action b) Develop and promote programs that protect, preserve and enhance woody draw complexes to support species such as chokecherry, plum, serviceberry, hawthorn, etc.

Action c) Work with landowners, land managers, partners and the public to manage wildlife and livestock numbers that maintain vigorous, healthy and sustainable shrub communities.

Action d) Inventory aspen stands/communities, determine their management needs and prioritize those that would benefit from treatment.

Strategy XI) Promote wildlife habitat and livestock management that emphasizes native perennial plants and plant community diversity and sustainability to reduce the threat, proliferation and colonization of invasive non-native plant species.

Action a) Actively seek partnerships and relationships to maintain WGFD awareness of the incidence and status of invasive species and options for their control.

Action b) Manage wildlife populations commensurate with the sustainability of the habitat.

Action c) Work with landowners, land managers and partners to manage livestock numbers on the basis of, frequency, intensity and opportunity for plant re-growth and recovery commensurate with the sustainability of habitat.

Action d) In areas where cheatgrass or other non-natives exist, use management actions and tools to correct the imbalance and maintain conditions less conducive to these undesirable species.

Action e) Use proven techniques, land stewardship practices, research and partnerships to reduce the proliferation of invasive plant species.

Strategy XII) Mitigate impacts of energy and other human impacts on habitat.

Action a) Research, develop and implement successful active/post development reclamation techniques.

Action b) Stress the need and requirement for mitigation as specified under the appropriate state and federal laws in environmental commenting.

Action c) Advocate and incorporate mitigation of impacts during participation in land management and project planning, process review and environmental commenting.

Action d) Work with the Wyoming Landscape Conservation Initiative, JIO and others to identify and capitalize upon opportunities to conserve landscapes and open space in SW Wyoming

Action e) Evaluate required monitoring data of mitigation efforts to improve upon mitigation standards and stipulations.

Objective C) Monitor effectiveness of habitat projects in reducing habitat issues and enhancing wildlife habitat.

Strategy I) Collaborate with land managers, landowners and other partners to monitor the effectiveness of habitat enhancements.

Action a) Use repeatable before and after photos to record and illustrate effectiveness of habitat enhancements over time.

Action b) Use WGFD and other agency permanent reference sites and monitoring stations located within or near habitat enhancements for comparison and monitoring.

Action c) When monitoring is not practical, use proven habitat enhancement techniques that provide consistent and reliable results and that have a demonstrated record of enhancing wildlife habitat.

Strategy II) Assess progress toward achieving Goal 2, and adapt management accordingly.

Action a) Review habitat issues and enhancement priority areas every 5 years, and revise to focus habitat conservation and restoration efforts accordingly.

Action b) Review progress on implementing strategies and actions identified in this plan.

**Goal 3. Increase wildlife-based recreation through habitat enhancements that maintain or increase productivity of wildlife.**

Objective A) Implement wildlife habitat enhancements directed at specialized needs

Strategy I) Focus habitat enhancements on smaller scale areas to target specific species or assemblages of wildlife or to target life stages or seasonal needs of wildlife.

Action a) Implement habitat enhancements that increase wildlife-based recreation as appropriate and that are complementary to other goals and objectives.

Action b) Work with landowners and public and state land management agencies to implement habitat enhancements that demonstrate the effectiveness of partnerships and wildlife stewardship.

Objective B) Monitor effectiveness of enhancements.

Strategy I) Establish measurable recreation-based goals for each project

Action a) Assess whether projects have met the goals.

**Goal 4. Increase public awareness of wildlife habitat issues and the critical connection between healthy habitat and abundant wildlife populations.**

Objective A) Raise awareness among key audiences about the value of healthy wildlife habitats for Wyoming's wildlife and people.

Strategy I) In coordination with the Habitat and Technical Advisory Committee, develop an annual comprehensive outreach plan promoting the value of healthy habitat in Wyoming, using a variety of outreach tools, including internal and external publications. Outreach plan should identify key messages and could include, but will not be limited to, actions listed below.

Action a) Pursue human dimensions information regarding the public's perception and knowledge of habitat conditions in Wyoming and how habitat relates to wildlife population and hunting opportunity.

Action b) Provide an annual report to constituents highlighting the major habitat accomplishments initiated or completed by WGFD. Provide report to media and post on WGFD Web site.

Action c) Promote at least three habitat improvement projects in each region through internal and external publications, including news releases and e-newsletter.

Action d) Continue "Feeding the Wild" and "On the Ground" column in *Wyoming Wildlife* magazine.

Action e) Investigate opportunity and tools to promote the connection between healthy habitat and hunting and fishing opportunity, including continuing the habitat condition video at season setting meetings.

Objective B) Foster understanding of components of healthy habitat through educational programs and activities.

Action a) Continue habitat related educational activities incorporated into the Wyoming Hunting and Fishing Heritage Expo. Promote activities as part of annual Expo advertising,

Action b) Compile habitat related resources, information and lesson plans available through the Wyoming Game and Fish Department. Distribute compiled list to educators to encourage them to incorporate habitat components into teaching material.

Action c) Produce and distribute Wyoming specific guide to improving wildlife habitat on private land.

Action d) Explore possible partnership opportunities with conservation education partners such as Wyoming Ag in the Classroom, The Nature Conservancy, etc. to promote habitat knowledge and awareness.

**Goal 5. Promote collaborative habitat management efforts with the general public, conservation partners, private landowners and land management agencies.**

Objective A) Develop and maintain effective relationships with partners that have the ability to influence wildlife habitat.

Strategy I) Work with private landowners, other agencies and conservation groups to understand issues and communicate habitat goals.

Action a) Participate in the Farm Bill program local working groups to promote wildlife habitat values, issues and priorities identified in this SHP.

Action b) Meet at least annually to coordinate habitat management with federal partners.

Action c) Provide this Strategic Habitat Plan and WGFD habitat priorities to the Governor's Office, State and Federal agencies, private landowners, conservation districts and groups, energy companies, and the public.

Strategy II) Work with legislators to achieve laws that benefit both people and wildlife habitat.

Action a) Respond to information requests promptly and completely regarding the influence of proposed legislation on wildlife habitat.

Action b) Encourage water management legislation that improves aquatic resources and serves the public interest.

**Common Objectives**

Objective A) Administer WGFC Wildlife Habitat Management Areas (WHMA) according to WGFC regulation and policy, Fish and Wildlife Service Federal Aid guidelines, purpose of acquisition and other legal requirements. Manage the habitat and other natural

resources in an appropriate ecological manner to meet wildlife objectives while allowing for compatible wildlife-oriented recreation.

Strategy I) Manage the WHMAs according to the Managed Land and Access Summary (MLAS) developed for each WHMA.

Action a) Use the regional and administrative teams to assist with the administration and management of the WHMAs.

Action b) Refine and update the MLAS for each WHMA and provide for input from regional and administrative teams.

Action c) Develop a means for the public to provide input into the MLAS.

Action d) Educate WGFD personnel and the public on guidelines, policies and legal restraints of WHMAs.

Strategy II) Meet objectives for ecological conditions, wildlife habitat and wildlife as outlined within the MLAS.

Action a) Monitor habitat on WHMAs with vegetation transects, riparian greenlines, photo points, stream temperature, etc.

Action b) Improve or develop wildlife habitat as required to meet the objectives of the MLAS.

Action c) Monitor and control invasive species on WHMAs with a proactive, integrated and coordinated approach.

Action d) Use MLAs to teach and educate the public about good habitat stewardship and wildlife-oriented land management practices.

Action e) Use WHMAs where appropriate as forage reserves when livestock grazing will benefit or improve wildlife habitat on the WHMA providing it is consistent with the MLAS, regulations, policies and guidelines and does not impact wildlife-oriented recreation.

Action f) Conduct wildlife habitat research consistent with the MLAS, regulations, policies and guidelines while avoiding impacts to recreation.

Strategy III) Meet objectives for wildlife-oriented recreation and education as outlined within the MLAS.

Action a) Improve or develop traditional (hunting & fishing) and non-traditional (wildlife watching, nature trails, etc.) wildlife-oriented recreational opportunities on the WHMAs.

Action b) Maintain a balance between habitat conservation and wildlife-oriented recreation on WHMAs.

Objective B) Maintain the appropriate resources to effectively and efficiently implement the strategic habitat plan (SHP).

Strategy I) Maintain the appropriate workforce, equipment and funding to effectively and efficiently address and meet the goals and objectives of the SHP.

Action a) Work to continually evaluate staffing, equipment needs and funding and work with WGFD administrators to address these needs relative to the complexity of habitat issues and challenges addressed in the SHP.

Action b) Investigate alternative funding sources to help pay for personnel and equipment to address the SHP.

Action c) Seek to incorporate technological solutions that increase efficiency.

Strategy II) Maintain a highly trained, effective and professional workforce by offering and supporting relevant training.

Action a) Utilize all the available resources within the SHP work units to cross train and educate other personnel within these work units.

Action b) Determine and provide for the necessary training that is required for personnel within the SHP work units to effectively complete their job.

Strategy III) As appropriate or needed develop or review guidelines for land managers for restoring, enhancing and managing wildlife habitat.

Action a) Review all habitat technical bulletins produced by the WGFD for current relevancy and purpose.

Action b) Develop new habitat technical bulletins that will benefit land managers.

Strategy IV) Integrate work schedules of appropriate work units within the WGFD.

Action a) Work with WGFD administrators to have population biologists and habitat biologists integrate work schedules.