COLORADO DIVISION OF PARKS & WILDLIFE

BIOLOGISTS AND SCIENTISTS WORK GROUP REPORT

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October 11, 2011

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EXECUTIVE SUMMARY

WORK GROUP ASSIGNMENT

The Biologists and Scientists Work Group was assigned by the Transition Team (TT) of Colorado Parks and Wildlife (CPW) to evaluate alternatives for merging job functions of biologists and scientists within the former State Parks and Division of Wildlife (DOW) agencies. The intent of these alternatives is to identify ways to reduce duplication, create efficiencies or enhance functions through the merging of these agencies. Numerous employees in CPW are biologists by training. However, given existence of other work groups (e.g., Field Operations), our Work Group was assigned to focus exclusively on biologists/scientists within Resource Stewardship (RS) in State Parks and within Wildlife Programs (WP) in DOW.

JOB FUNCTIONS AND KEY BACKGROUND INFORMATION

The State Parks' Statutory Declaration (33-10-101 C.R.S.) states that 'the natural, scenic, scientific, and outdoor recreation areas of this state are to be protected, preserved, enhanced, and managed'. A State Park is an area 'having outstanding scenic and natural qualities… so as to make imperative the preservation of the area by the division'. The Natural Areas Act (33-33-104 C.R.S.) establishes a program that "shall identify and protect certain natural areas" which provide various benefits to Colorado. Therefore, Parks RS and CNAP biologists' main functions are to meet statutory obligations and to assure that the natural resources on our State Parks and the most significant Natural Areas in Colorado are protected or enhanced for current and future generations.

It is the policy of the state of Colorado that the wildlife and their environment are to be protected, preserved, enhanced, and managed for the use, benefit, and enjoyment of the people of this state and its visitors. It is further declared to be the policy of this state that there shall be provided a comprehensive program designed to offer the greatest possible variety of wildlife-related recreational opportunity to the people of this state and its visitors and that, to carry out such program and policy, there shall be a continuous operation of planning, acquisition, and development of wildlife habitats and facilities for wildlife-related opportunities. (33-1-101 (1) C.R.S.). Biological staff in WP perform a host of job functions that are fundamentally necessary to accomplish this statute.

Overall, job functions are fundamentally different between RS and WP biologists, as is the spatial scale at which work is performed. A majority of RS biologists are responsible for resource stewardship on State Park properties, including inventory and monitoring of natural and cultural resources, stewardship planning, weed mapping and prioritization, forest management, GIS, and other duties related to enhancing and protecting the natural resources on State Parks. In contrast, WP biologists are responsible for population and habitat management of all fish and wildlife species in Colorado, which includes harvest management of game species, conservation of sensitive species, and fish hatchery operations. RS biologists focus almost exclusively on State Park properties, whereas WP biologists conduct work at a statewide scale irrespective of land ownership. The one exception is the Colorado Natural Areas Program (CNAP) in State Parks, which has a statewide focus on conservation of significant natural features that spans property boundaries.

There are 5 biologists in RS, whereas there are greater than 200 employees focused on biological functions in WP. Given the overall differences in job function and number of employees, we recognized

that most job functions conducted by WP biologists are not shared by RS (e.g., population management, hatchery fish production). Therefore, we focused on those areas of job overlap between RS and WP biologists where efficiencies and enhancements could be obtained: resource stewardship, including vegetation management and wildlife surveys on state properties, wildlife habitat management, and plant/animal conservation related to CNAP's functions.

Two historical considerations are particularly germane to our Work Group:

- DOW recently completed an internal merger within WP to redirect FTE and expand job function. This internal reorganization had the same general objectives as the Parks-DOW merger in terms of identifying efficiencies, enhancements, and cost savings. Briefly, in 2005, DOW eliminated its Habitat Section and created a Wildlife Conservation Section within WP to place a greater emphasis on conservation of sensitive species. Given the importance of habitat management for all wildlife species in Colorado, DOW recognized the need to restore an emphasis on habitat conservation without undoing the accomplishments that had been made in species conservation. During 2010-11, prior to the merger with State Parks, DOW merged the Wildlife Conservation Section into the existing Terrestrial and Aquatic Sections of WP and created a new Habitat Conservation Program, without adding FTE. The new Habitat Conservation Program was created by eliminating supervisory FTE and redistributing job functions. Thus, WP completed an internal reorganization process involving >100 biologists that eliminated redundancy, achieved cost savings, redirected FTE, and expanded job functionality immediately prior to the Parks-DOW merger. The reorganization wasn't fully completed until July 2011.
- In 1977, the Colorado Natural Areas Act (CRS 33-33-101 et seq., Appendix F) was passed by the State Legislature requiring the establishment and maintenance of a registry of qualified natural areas representing diverse plant communities, paleontological features, geological features, habitats for rare plants and animals, and areas of scenic and aesthetic beauty. In 1986, after first operating out of the Executive Director's Office of the Department of Natural Resources, CNAP was placed under State Parks. CNAP's presence in Parks eventually led to the development of the Resource Stewardship Program starting in 1999, which works with field staff to protect or enhance natural resources on State Parks. Recent market assessments confirm the importance of high quality natural resources in State Parks, and the Resource Stewardship team now includes a small number of diversified FTE focused on stewardship planning, noxious weeds, forest management, CNAP and aquatic nuisance species. Budget cuts in 2011 essentially eliminated project funding for CNAP just before the Parks-DOW merger occurred.

To assess potential for efficiencies and enhancements that could be gained through this merger, we evaluated commonalities and synergies among RS and WP biologists. Both groups of biologists are involved in science-based management of natural resources. In carrying out these job functions, RS and WP biologists are responsible for management planning and collecting data to support decisions. We recognized that RS biologists specialize in comprehensive resource stewardship planning on State Park properties and could offer their time and expertise to enhance resource stewardship on State Wildlife Areas. We recognized that many WP biologists specialize in monitoring fish/wildlife populations and could offer their time and expertise to enhance monitoring on State Parks. Also, certain job functions of RS biologists are closely tied to those of WP habitat coordinators and considerable potential exists for efficiencies and enhancements through collaboration. This initial evaluation provided the framework for our intensive assessment of alternatives and associated efficiencies and enhancements.

Efficiencies and enhancements discussed in this report generally do not include aquatic functions because there was little overlap in these functions between WP and RS biologists, and considerable

synergy already exists between Parks and DOW relative to fisheries management. Hatchery and aquatic staff in WP produce all fish stocked into State Parks waters. All biological management, inventory and research for fish species in State Parks waters are conducted by WP biologists and research scientists. State Parks provides and promotes fishing opportunities, healthy waters, and sells fishing licenses. Some water bodies existing on State Parks are used by DOW as feral egg sources for hatchery production. Sixty percent of warm water fish, 12% of fingerling cold water fish, and 34% of catchable cold water fish reared in DOW hatcheries are stocked into State Parks waters. Hatchery facilities also exist at Chatfield and Lake Pueblo State Parks.

SCOPE OF WORK

Considering the above information, our scope of work is to offer alternatives for consideration that integrate functions of Resource Stewardship (RS) biologists with the functions of Wildlife Programs (WP) biologists. The overall intent is to maintain or improve the core work functions of RS and WP biologists and to allow these staff to provide the same or better levels of products and services to the public and the agency. Understanding differences in scale regarding the scope of influence among RS biologists (i.e., 44 state parks) and WP biologists (i.e., statewide responsibility for the management of fish and wildlife resources) is a key aspect to these considerations. RS biologists bring strengths to the table in terms of their respective skill sets in biological (especially plants), paleontological and cultural resource inventory and in their resource planning and natural resource recommendations for State Parks. WP biologists bring expertise in research, monitoring, management, inventory, and population augmentation of fish and wildlife resources on public and private lands statewide. The Natural Areas Program, currently found within the Resource Stewardship Program, is unique within Parks as it performs statewide conservation functions that are not restricted by property ownership. Within the context described, we developed alternatives that: 1) eliminate unnecessary duplication, 2) identify the means to achieve the greatest possible efficiencies in accomplishing job functions, and 3) identify strategies to enhance the effectiveness of our programs and operations while fulfilling the new joint mission.

Our Work Group had limited capacity to achieve significant FTE reductions or cost savings for several reasons:

- During 2010-11, as noted above, DOW reorganized the Wildlife Programs Branch by eliminating the Wildlife Conservation Section and merging wildlife conservation biologists into the Terrestrial and Aquatic Sections. This reorganization eliminated 5 supervisory FTE and created a new Habitat Conservation Program. Since this just occurred, our Work Group lacked any justification to recommend further reorganization of WP within DOW.

- CNAP functions are performed by only 1 FTE and rare plant project funding has recently been eliminated. Thus, there are presently no options to further reduce FTE or identify cost savings within CNAP. In fact, efficiencies and enhancements identified in our report will likely be necessary to maintain effectiveness of the program.

- There are only 4 biologists in RS responsible for biological support of all State Parks. These biologists also provide statewide GIS support and coordination of the Aquatic Nuisance Species Program. Any reductions in FTE or additional cost savings would significantly impair

natural or cultural resource conservation on State Parks. As in the above examples, this required our Work Group to focus on efficiencies and enhancements rather than FTE reductions and cost savings.

ALTERNATIVES AND EFFICIENCIES/ENHANCEMENTS/SAVINGS

We identified a set of efficiencies or enhancements that can be gained through the merger of Resource Stewardship (RS) and Wildlife Programs (WP) biologists, regardless of which specific alternative is preferred. These include recommendations for the following functions or topics: 1) Aquatic Nuisance Species, 2) Biological Contractors, 3) Biological Training for CPW Staff, 4) Fishing on State Parks, 5) Indirect Rates with Higher Education, 6) Land Protection, 7) Land Use Comment Coordination, 8) Natural Areas Species Conservation, 9) Sharing Internal Expertise, 10) Significant Property Monitoring and Stewardship, and 11) Terrestrial Weed Coordination.

We identified 4 alternatives ranging from minimum to maximum integration, which are summarized below. In each alternative, we recommend moving the aquatic nuisance species (ANS) function of RS to the Aquatic Section of WP. This would eliminate the ANS component from the Resource Stewardship Manager's duties, which would increase their capacity to work on stewardship planning and support for both Parks and State Wildlife Areas. We also recommend maintaining a terrestrial weed function in association with RS. Also, in each alternative, we recommend filling the Habitat Conservation Supervisor in the Terrestrial Section of WP, which is currently vacant. The scope of this supervisory position varies depending on alternative.

Alternative 1: Minimal Integration

Alternative 1 aims to accomplish all currently recognized and necessary biological functions under Resource Stewardship (RS) and Wildlife Programs (WP) by maintaining these functions as they currently are, with the exception of ANS. The rationale for advancing Alternative 1 is based on two premises: 1) there is relatively minimal overlap in job responsibilities between RS and WP biologists, and 2) employees in these groups have achieved significant efficiencies and cost savings during the past two years through reorganization, elimination of supervisory FTE, expanded job functions, and budget reductions. Further efforts to achieve cost savings and efficiencies could compromise the ability of biological staff in RS and WP to conduct their job functions. Thus, Alternative 1 is deemed viable in the context of the merger only because it is the safest approach to ensure that the current level of resource stewardship, species conservation, and population management continues to be provided.

Efficiencies/Enhancements/Advantages/Disadvantages: Alternative 1 would allow biologists and scientists to continue to perform essential job functions at the same level as present, assuming current funding levels remain. Recent efficiencies enacted by DOW, including the creation of a Habitat Conservation Program, would be allowed to develop fully without additional reorganization. **Advantages** of Alternative 1 include: 1) it is easily implemented (although it may be unrealistic to assume that separate Parks and Wildlife structures will be retained in CPW), 2) it virtually guarantees that biologists will continue to effectively accomplish essential job functions, and 3) there is no risk of compromising efficiencies enacted immediately prior to the Parks-DOW merger. **Disadvantages** of this alternative include: 1) there are no additional efficiencies beyond those that are common to all alternatives, 2) there is minimal potential for RS biologists to support biological needs on SWAs, and for WP biologists to assist with species monitoring needs on State Parks, and 3) the isolation of RS and WP biologists may result in missed opportunities to collaborate and reach common goals, thereby creating a combined agency that is not reaching its highest potential.

Alternative 2: Partial Integration #1

Alternative 2, similar to Alternative 1, generally keeps the biological functions for Resource Stewardship (RS) and Wildlife Programs (WP) separate, but would place Parks RS as a stand-alone Program under the Resource Support Section of WP. By moving Parks RS functions into Resource Support, Parks RS biologists would be more integrated with other functions (e.g. GIS, real estate, water) that also provide support for agency needs. There would be extensive opportunities for greater collaboration between the GIS activities of the RS Program and the GIS Program, which would be located within the same Section. Under this Alternative, Resource Stewardship would still focus exclusively on State Parks, not expand function to include SWAs. The rationale for keeping Parks RS as a stand-alone Program under the Resource Support Section in WP is that Parks RS biologists perform a unique set of functions that are not easily integrated with other existing functions or duties in Resource Support. An additional feature of this alternative would be to move the statewide functions performed by the Colorado Natural Areas Program (CNAP) under the Habitat Conservation Program of the Terrestrial Section of Wildlife Programs. This is recommended because of the similarities in the functions of the Habitat Program and CNAP. Aside from the addition of CNAP, this alternative retains the Aquatic and Terrestrial Sections in WP in their existing forms.

Efficiencies/Enhancements: Under Alternative 2, Parks RS may improve their level of support for protecting Parks' natural resources through synergies with other support services (e.g. GIS, water). At the least, RS would continue to meet the resource inventory, monitoring and stewardship needs of State Parks at the current level. Common leadership under WP could help improve potential synergies of RS and WP biologists which would enhance their functions (e.g. wildlife species surveys on state parks). This alternative would also facilitate greater sharing of resources and knowledge between RS and WP biologists. The CNAP statewide conservation function would be enhanced through collaboration with Habitat biologists, and CNAP's presence in Terrestrial may result in greater collaboration on rare plant issues and wildlife issues on Natural Areas. Similar to Alternative 1, recent efficiencies enacted by DOW would not be complicated with additional structural changes, and WP biologists would continue to effectively manage fish and wildlife populations and habitat with little redirection from their current job focus.

Advantages of Alternative 2 include: 1) RS will be able to maintain or enhance their level of support for protecting Parks' natural resources through synergies with Resource Support in WP; 2) maintains a cohesive, dedicated Program focused on Resource Stewardship functions to assure this work continues in the new agency; 3) RS and forestry work of Parks RS biologists is focused only on State Parks (as opposed to Alternatives 3 and 4 where a broader scope of work for RS biologists may reduce the focus on Parks in lieu of more support for DOW properties); 4) CNAP found in a branch with similar approach to statewide conservation resulting in closer collaboration with Habitat Coordinators, Wetlands and Private Land Coordinators, and greater collaboration on rare plants with Terrestrial biologists; 5) GIS functions of both agencies are aligned under the Resource Support Section Manager, ensuring a higher level of collaboration; and 6) there is a relatively low potential for Federal Aid diversion, when compared to Alternatives 3 and 4.

Disadvantages of Alternative 2 include: 1) limited increase in biological efficiencies beyond those that are common to all alternatives; 2) no potential for RS staff to support stewardship needs (e.g. stewardship planning, weed management, revegetation) on SWAs;, 3) forest management is handled by two disparate systems, depending on land designation; 4) staff would have less opportunity to collaborate with a diverse set of biologists in the Terrestrial Section and reach common goals than in Alternatives 3 and 4; 5) functions of RS biologists are generally different from most functions carried out

by the Resource Support Section, resulting in challenges in the integration of these groups; and 6) coordinated environmental/cultural review of development projects is not implemented agency wide, maintaining two disparate approaches to comply with environmental and cultural laws.

Alternative 3: Partial Integration #2

Alternative 3 aims to integrate Parks Resource Stewardship (RS) and the Colorado Natural Areas Program (CNAP) functions with the existing biological functions performed in the Terrestrial Section of Wildlife Programs (WP). This brings biologists whose functions may have some peripheral intersection (although very little direct overlap) into the same Section so as to seek additional synergies and collaboration. This is a step further towards integration than described in Alternative 2. While the RS biological functions (stewardship, noxious weeds, forestry, etc.) would be integrated with WP biologists, the focus of RS biologists would remain on State Parks properties first and foremost, and secondarily support SWA stewardship needs as opportunities arise. Under this alternative, Resource Stewardship remains as a stand-alone Program within the Terrestrial Section. CNAP would preferably perform statewide conservation functions under the most functionally similar group in the new agency, the Habitat Conservation Program in the Terrestrial Section. Alternatively, CNAP could remain in the RS Program of Terrestrial to maintain close stewardship and monitoring collaboration. The GIS function of Parks would be retained within the RS Program to provide the same level of support for mapping needs on Parks. This alternative retains most of the Aquatic and Terrestrial Sections in WP in their existing forms (with the exception of the potential addition of CNAP to Habitat).

Efficiencies/Enhancements: Under Alternative 3, Terrestrial biological needs are all addressed in one section and common leadership would help ensure that RS and WP biologists are taking advantage of potential synergies which would enhance their functions. It promotes sharing of resources, knowledge, and to a limited extent, job functions, between RS and WP biologists. At the same time, WP biologists would continue to focus primarily on managing fish and wildlife populations and their habitats at a landscape scale. The CNAP statewide conservation function would be enhanced through collaboration with Habitat biologists, and CNAP's presence in Terrestrial may result in greater collaboration for DOW rare plant issues and wildlife issues on Natural Areas. The resource stewardship of State Parks would not decline significantly and some stewardship support for DOW properties would be provided as opportunities arise. This would begin a process leading to more consistent and widespread protection of natural resources on Parks and SWAs. The alternative could result in cost savings related to bringing in additional grant funding for forestry projects due to the inclusion of DOW properties in the forestry function (e.g. grant funding for fuel mitigation on DOW properties). It could also have cost savings due to the direct coordination of native seed and plant functions between WP and RS.

Advantages of Alternative 3 include: 1) maintains a cohesive, dedicated Program focused on RS functions to assure this work continues in the new agency; 2) DOW properties would be provided limited assistance with stewardship planning, noxious weed support, inventory and monitoring, as opportunities arise – this would begin to address natural resource stewardship needs on CPW properties in a more comprehensive fashion; 3) Terrestrial biological needs are all addressed in one Section, and Parks RS biologists would work directly with other biologists in the agency; 4) greater collaboration between RS and CNAP biologists and Terrestrial biologists (e.g. wildlife surveys); and 5) CNAP found in a branch with similar approach to statewide conservation, resulting in closer collaboration with Habitat Coordinators, Wetlands and Private Land Coordinators and greater collaboration on rare plants with all Terrestrial biologists.

Disadvantages of Alternative 3 include: 1) without increasing the capacity of the RS Program, expanding Parks stewardship role to include more DOW properties may lessen attention to Parks needs; 2) the RS Program would be significantly smaller than the other 10 programmatic groups in Terrestrial; 3) depending on the resulting makeup of the RS Program, the RS manager may supervise less than 3 FTE, requiring the creation of a Work Unit, which likely wouldn't be viable directly under the Terrestrial supervisor; and 4) RS biologists expanding to limited work on SWAs could face challenges tracking time and budgets to avoid Federal Aid diversion.

Alternative 4: Maximum Integration

The primary overlap in biological functions of Parks Resource Stewardship (RS) and DOW Wildlife Programs (WP) occurs between RS in Parks and the Habitat Conservation Program in WP. Alternative 4 recognizes the similarities in these programs by recommending that Parks RS be integrated with the Habitat Conservation Program within the Terrestrial Section of WP. These groups both work towards natural resource maintenance and enhancement by promoting appropriate land management activities. This alternative recommends that the Habitat Conservation Supervisor position be filled to provide leadership to the new 'Habitat Conservation and Resource Stewardship Program within the Terrestrial Section, thereby broadening the scope of this position. Within the Habitat /Stewardship Program, RS could be kept as a 'Work Unit' with the current RS Manager as the unit leader. This would help ensure consistency in RS functions as the group was integrated with an already existing program.

Alternatively, we recognize the possibility that the RS Manager could potentially qualify for and either test into the Habitat Conservation Supervisor position or be transferred into this position if the PDQ was revised to allow a GPV to move into a position that is currently a WMV. Were this to occur, we recommend that the RS Manager position be retained with a RS-focused function to maintain resource stewardship on state properties. It may be justifiable to re-classify the position as a GPIV instead of a GPV to realize some cost savings and eliminate supervisory responsibilities. These supervisory responsibilities could then be shifted to meet additional RS needs on state properties. This outcome would meet a need expressed in DNR for more property stewardship in the CPW. Under this outcome, RS biologists would then directly report to the newly hired Habitat Conservation and Resource Stewardship Supervisor. This would be viable if the Supervisor had a clear and equal charge to implement both habitat conservation and resource stewardship. Under Alternative 4, we recommend that RS staff support property stewardship and work with Habitat Coordinators to implement multiple objectives for forest management on the highest priorities in the new agency, irrespective of property type (i.e. Park or SWA).

One RS biologist currently coordinates Parks GIS, forestry and T&E/Cultural Compliance. We recommend in this alternative that the majority of the Parks GIS functions associated with this FTE be transferred over to the GIS Program found under the Resource Support Section of WP. This FTE would be retained in the Habitat Conservation/Resource Stewardship Program to create more capacity to expand the forest management function in CPW to include both Parks and DOW properties. Under this scenario, the FTE would continue to coordinate all forest management on State Parks, and also plan and/or implement vegetation management projects to meet public safety, fuel mitigation, aesthetic and wildlife habitat improvement objectives under the guidance of the Habitat Coordinators on DOW properties as well. Alternative 4 also recommends the movement of statewide functions performed by the Colorado Natural Areas Program (CNAP) into the Habitat Conservation Program within the Terrestrial Section of WP. A process for the completion of T&E and cultural compliance reviews for capital development projects in the new agency is also discussed.

Efficiencies/Enhancements: This alternative would result in greater integration of complementary biological functions performed by RS and WP biologists. A 'Habitat Conservation/Resource Stewardship' Program under the Terrestrial Section would better address the agency's needs for both wildlife habitat conservation and support for property inventory, monitoring and stewardship. It would result in more consistent management of CPW lands (State Parks and SWAs) while reducing duplication of some job responsibilities. It would also facilitate a more streamlined process for T&E and cultural reviews of development projects, assuring compliance with state and federal regulations. CNAP's statewide conservation function would be enhanced through greater and direct collaboration with Habitat Coordinators and other Terrestrial biologists (similar to Alternative 3). Cost savings would be realized in terms of additional grant funding opportunities, native seed and plant coordination, more comprehensive approach to stewardship on CPW properties, and potentially the reduction of a GP V position to a GP IV (depending on personnel issues). Although some redistribution of job responsibilities occur, this alternative should preserve a strong emphasis on managing fish and wildlife populations and their habitats at a landscape scale.

Advantages of Alternative 4 include: 1) places all RS, CNAP, and Habitat Coordinator biologists under a single Habitat Conservation and Resource Stewardship Supervisor, thereby maximizing potential for direct collaboration; 2) broader stewardship planning, noxious weed support, inventory and monitoring on both Parks and SWAs, which would meet a need expressed in DNR for more property stewardship; 3) enhanced opportunities to meet multiple objectives through vegetation management and forestry work on CPW properties; 4) a more streamlined process to assure agency compliance with State and Federal cultural and T&E regulations; 5) CNAP found in a section with similar approach to statewide conservation, allowing closer collaboration with Habitat Coordinators and Terrestrial biologists to achieve CNAP's mission; and 6) most potential for cost savings.

Disadvantages of Alternative 4 include: 1) expanding Parks stewardship and forestry roles to include more support for DOW properties would lessen attention to Parks needs (depending on prioritization) – the lower priority needs on Parks would not be addressed as thoroughly as they are in the current system, which could lead to the perception of decreased stewardship and forest management support for Parks; 2) biologists working in the same Program with responsibilities for both Parks and SWAs (e.g. Forestry, Resource Stewardship, Habitat management) could face significant challenges tracking time and budgets to avoid Federal Aid diversion; 3) some re-prioritization of job duties by both RS and WP biologists (as well as some of the DOW GIS Program staff) may compromise their ability to accomplish all desired outcomes; and 4) RS would not retain its status as a 'distinct Program in the new agency, thereby potentially marginalizing the importance of this function.

BACKGROUND OF THE CORE WORK AREA

The Biologists and Scientists Work Group was assigned by the Transition Team (TT) of Colorado Parks and Wildlife (CPW) to evaluate alternatives for merging job functions of biologists and scientists within the former State Parks and Division of Wildlife (DOW) agencies. Numerous employees in CPW are biologists by training. However, given existence of other work groups (e.g., Field Operations), our work group was assigned to focus exclusively on biologists/scientists within Resource Stewardship in State Parks and within Wildlife Programs in DOW.

The State Parks' Statutory Declaration (33-10-101(1) C.R.S.) states that '*the natural, scenic, scientific, and outdoor recreation areas of this state are to be protected, preserved, enhanced, and managed*'. The Natural Areas Act (33-33-104 C.R.S.) establishes a program that "*shall identify and protect certain natural areas*" which provide various benefits to Colorado. Parks Resource Stewardship (RS) and CNAP biologist's main functions are to assure that the natural resources on our State Parks and the most significant Natural Areas in Colorado are protected or enhanced for current and future generations. This is accomplished through a variety of functions including: natural and cultural resource inventory and monitoring, stewardship planning, weed mapping and management assistance, GIS, forest management, Natural Area monitoring and stewardship and extensive work with Parks staff and volunteers. RS biologists assure that our State Parks remain an attractive place to recreate, and the Natural Areas biologist works with landowners to make sure the 'best places' are given adequate attention.

It is the policy of the state of Colorado that the wildlife and their environment are to be protected, preserved, enhanced, and managed for the use, benefit, and enjoyment of the people of this state and its visitors. It is further declared to be the policy of this state that there shall be provided a comprehensive program designed to offer the greatest possible variety of wildlife-related recreational opportunity to the people of this state and its visitors and that, to carry out such program and policy, there shall be a continuous operation of planning, acquisition, and development of wildlife habitats and facilities for wildlife-related opportunities. (33-1-101 (1) C.R.S.).

Biological staff in Wildlife Programs (WP) performs job functions that are fundamentally necessary to accomplish this statute. For both aquatic and terrestrial wildlife, WP biologists/scientists are charged with monitoring population status, developing and implementing population management plans, developing harvest recommendations, managing and protecting critical habitat, identifying and understanding factors that cause populations to decline, recommending management actions to address these factors, and developing new management and inventory techniques. Additionally, WP hatchery and aquatic staff are responsible for producing and rearing game and non-game fish species for stocking in waters throughout Colorado to support fishing and aquatic conservation. As part of accomplishing these functions, WP biologists conduct statewide-coordinated data collection on a host of species, capture and translocate wildlife as necessary to maintain populations, implement novel research programs that advance Colorado's ability to confront the most pressing management challenges, and implement studies that directly support routine management decisions.

The purpose of our work group was to preserve these core functions supporting the management of parks, natural areas, fish, and wildlife in Colorado while identifying efficiencies, cost savings, and opportunities to enhance our present function through the merging of biologists in RS and WP.

DESCRIPTION OF SHARED WORK FUNCTION(S)

The following work functions are those that are performed and/or coordinated by biologists and scientists in both DOW Wildlife Programs (WP) and Parks Resource Stewardship (RS). While these work functions may be similar on the surface, the details for each agency below will better explain the differences in how these functions are carried out between the two groups of biologists.

- Wildlife surveys and inventories
- Statewide species conservation
- Vegetation/Habitat Management Coordination and Prioritization
- Pursuit of funding and match for projects
- Provide biological support for Field Operations
- Collection and utilization of GIS data
- Manage budgets to achieve biological goals and objectives
- Supervise and train temporary staff and coordinate volunteers
- Outreach
- Develop and Maintain Partnerships
- Provide comments on federal land use planning and projects

Colorado Division of Wildlife Shared Biological Functions

- Terrestrial Wildlife surveys and inventories
    - Terrestrial staff performs and prioritize aerial and ground surveys of wildlife species to support population management. These surveys are not restricted by property boundaries but are performed on a landscape or statewide scale consistent with species distributions. Survey data are collected using standardized procedures and are often input into population models, which in turn support management decisions.
- Statewide species conservation
    - Species conservation coordinators prioritize conservation efforts on threatened and endangered wildlife species and other wildlife species of special concern. These prioritizations are then used to direct WP biologists' time and budgets. Biologists design and implement population surveys and studies for species of greatest conservation need. They collect, analyze, and interpret data and subsequently recommend and implement conservation actions.
- Vegetation/Habitat Management Coordination and Prioritization
    - Habitat coordinators lead the planning, coordinating, conducting, and monitoring (at a landscape scale) of applied habitat management around the state to benefit all wildlife species.
- Pursuit of funding and match for projects
    - All sections in the Wildlife Programs Branch pursue external funding and match for projects to help support biological work.
- Provide biological support for Field Operations
    - WP biologists and scientists provide data, information, and training to Field Operations staff to assist them in performing their job functions that are related to wildlife management.
- Collection and utilization of GIS data

  - WP biologists and scientists routinely collect spatial data on wildlife species and use that data to support diverse management functions.
- Manage budgets to achieve biological goals and objectives
  - WP biologists and scientists manage and allocate budgets to accomplish the highest priority wildlife monitoring, management and research needs necessary to preserve, protect, and enhance fish and wildlife species in Colorado. Budgets support helicopter and fixed wing flights, fish and wildlife capture, equipment, transmitters, fish production, and habitat treatments to name a few. As part of this, biologists/scientists write grant applications and manage grant fund accounts, implement contracts with external vendors and provide first-level approval of expenditures, and write progress and completion reports.
- Supervise and train temporary staff and coordinate volunteers
  - WP biologists and scientists rely heavily on temporary employees and volunteers to help conduct field work.
- Outreach
  - Staff routinely convey information to stakeholders and solicit input on management decisions. Staff give educational presentations on fish and wildlife to diverse external entities, including hunters and anglers, NGOs, K-12 students, college students, professional peers, and anyone with an interest in wildlife management. Staff also help teach workshops to a diverse array of external publics, ranging from children to trained scientists.
- Develop and Maintain Partnerships
  - Partnerships with private landowners, sportsmen, conservationists, federal agencies, NGOs, universities, and private business are fundamentally important to supporting basinwide or landscape-level management of fish and wildlife. For example, biologists lead or participate in local working groups focused on conservation of sensitive species. As another example, biologists participate in or lead landscape management collaboratives such as the Uncompahgre Project.
- Provide comments on land use planning and projects
  - Staff provide expertise and comment when necessary for environmental impact statements, natural resource plans, energy development, and other decision documents proposed by government agencies and private companies. As outlined in directive, field operations has the lead in land use commenting with cooperation from the biologists.

Colorado State Parks Shared Biological Functions

- Wildlife surveys and inventories
  - Resource Stewardship (RS) biologists assure appropriate wildlife surveys and inventories are performed as part of the Stewardship planning process on State Parks properties. These may be performed by staff, through contracts or occasionally by volunteers.
- Statewide species conservation
  - Colorado Natural Areas Program (CNAP) works with partners toward statewide prioritization and implementation of conservation strategies for rare plants. This includes coordinating rare plant surveys, research, monitoring and protection projects. These tasks may be performed by staff, through contracts or occasionally by volunteers.
- Vegetation/Habitat Management Coordination and Prioritization

  - Parks has a centralized prioritization and planning function for forest management projects, noxious weed management, revegetation/restoration and general vegetation management on State Parks.
- Pursuit of funding and match for projects
  - Secure, administer, and report grant funding and match for statewide rare plant conservation and biological projects on State Parks (primarily forestry work, but including wetland protection, etc.).
- Provide biological support for Field Operations
  - While both WP and RS biologists provide biological support to Field Operations that involve recommendations and information for management of natural resources, the types of support provided and the scope of this support is very different. (See 'Unique Work Functions' section for more detail on biological support provided to Field Operations).
- Collection and utilization of GIS data
  - RS biologists coordinate the collection and management of all GIS data for State Parks. Oversee the collection of various types of GIS data including biological, geophysical, real estate, recreational facilities and infrastructure, etc.
- Manage budgets to achieve biological goals and objectives
  - Prioritize available stewardship, species conservation and vegetation management funding and make recommendations for other funds in support of biological and vegetation management projects on State Parks and Natural Area monitoring and stewardship. Assure that all financial and accounting rules are followed for the RS Section and CNAP.
- Supervise and train temporary staff and coordinate volunteers
  - RS and CNAP both have multiple temporary employees that accomplish section goals. RS and CNAP recruit, support and coordinate >150 volunteers who perform duties such as: raptor monitoring and wildlife surveys on State Parks, annual monitoring of Natural Areas, and rare plant surveys and monitoring at high priority sites.
- Outreach
  - Support interpretation of natural resources for Parks; serve as liaison to the public for biological issues on State Parks; providing educational presentations to Parks constituents as needed.
- Develop and Maintain Partnerships
  - Collaborate with partners to increase the agency's ability to perform core work functions. These partners may be federal, state or local government agencies, non –profits, private landowners or other entities whose activities may affect State Parks, Natural Areas or rare plant conservation.
- Provide comments on federal land use planning and projects
  - As able given time and staff constraints, CNAP biologists review federal plans and projects for potential impacts to Natural Areas and rare plants. State Parks field staff may also comment on federal plans or projects if they may potentially affect State Parks properties.

DESCRIPTION OF UNIQUE WORK FUNCTION(S)

The following core work functions are NOT shared by the two agencies but are unique to either Parks Resource Stewardship (RS) or DOW Wildlife Programs (WP) biologists. These work functions are highlighted because they are fundamentally important to accomplishing the agency missions. Shared functions listed above are not repeated below.

Colorado Division of Wildlife Unique Biological Functions

Below is a summary of unique work functions accomplished by WP Biologists and Scientists. A more detailed description of roles and responsibilities is presented in Appendix A.

- **Population Management:** Aquatic and Terrestrial staff are responsible for designing and implementing sample-based surveys, data collection, data analysis, data interpretation, and entering data into statewide databases. Biologists seek public input and develop population management plans. Biologists incorporate data into population models to support harvest and other management decisions, consistent with population management plans. Biologist draft issue papers regarding species specific bag, possession, method of take, and season restrictions. Biologists design and implement creel surveys to evaluate angler use, angler satisfaction, catch rates, and demographic use. Various statewide coordinators are responsible for overseeing statewide population management, ensuring standardized data collection and entry, maintaining statewide databases, and providing analytical support.

- **Species Conservation Planning:** Aquatic and Terrestrial staff formulate local conservation, restoration, and recovery plans for species of greatest conservation need. Statewide coordinators represent Colorado on various species conservation issues at state and national levels. Coordinators serve on interstate steering committees and conservation teams to develop statewide and rangewide conservation strategies, assessments, and conservation plans.

- **Habitat Conservation:** Aquatic and Terrestrial staff work collaboratively with other sections, agencies, local governments, and private landowners to implement habitat projects for both game species and declining, sensitive or endangered species. The purpose of habitat projects are to enhance, restore, or reclaim habitat for aquatic and terrestrial wildlife species. Habitat projects are often implemented collaboratively with other partners where the ultimate goal is to maintain or restore naturally-functioning ecosystems that will support a host of species. Various statewide coordinators are given responsibility for overseeing conservation of aquatic and riparian habitats, wetlands, grasslands, sagebrush steppe, pinyon-juniper, and forests. There is also a coordinator responsible for implementation of Farm Bill programs as part of a broader effort to work in partnership with private landowners.

- **Wildlife and Aquatic Health:** Aquatic and terrestrial animal health staff are responsible for comprehensive monitoring, research, and management of wildlife disease. Veterinarians, pathologists, and technicians provide a comprehensive array of veterinary diagnostic services, including bacteriology, DNA-testing, virology, parasitology, histopathology, whirling disease testing, chronic wasting disease testing, necropsy services, and water quality testing. Aquatic health staff are based at the Aquatic Animal Health Lab in Brush, and Terrestrial health staff are based at the Foothills Wildlife Research Facility (FWRF) in Fort Collins. FWRF also serves as a captive wildlife facility supporting management and research.

- **Research:** Aquatic and terrestrial researchers conduct scientific-based original research deemed valuable to DOW to enhance the management and conservation of wildlife species. Researchers address critical ecological concerns about species and/or develop new methods, techniques, or systems to assess, maintain, enhance, and monitor the status of Colorado's aquatic and terrestrial wildlife species. Researchers synthesize existing information, produce new information/knowledge, interpret information, and facilitate integrating information into agency programs and decisions that affect game, non-game, and threatened and endangered species. Researchers routinely publish

study results in peer-reviewed scientific journals and serve the agency as subject matter experts at state and national levels.

- **Management Studies:** To improve population management, aquatic and terrestrial biologists design and implement studies that address limiting factors of populations, inventory techniques, or harvest strategies. These studies typically require capturing and marking animals, monitoring of radio-marked animals, data analyses, and writing reports. These studies are sometimes published in peer-reviewed scientific journals.

- **Trap and Transplant:** Aquatic and Terrestrial staff establish or supplement fish and wildlife populations by capturing animals and transporting them to targeted release sites. This activity is fundamentally important for supporting harvestable populations of fish and wildlife across Colorado as well as conserving declining, sensitive, or endangered species. Staff are responsible for evaluating disease, habitat suitability, genetics, competition, availability of source animals, and cost to support trap and transplant decisions.

- **Hunting and Fishing Access:** Terrestrial staff implement programs such as small game walk-in access (WIA) and ranching for wildlife (RFW) to create additional hunting opportunity for the public. Aquatic staff collaborate with Field Operations on opening new waters for licensed anglers.

- **Spawning:** Aquatic staff plan, equip, and execute wild spawning operations for fish needed by the hatchery system to fulfill Colorado's stocking schedule and for arranged trades with other states. Domestic spawning operations provide over 15 million eggs/year and wild spawn operations provide over 100 million eggs/year.

- **Fish Production and Stocking:** Aquatic staff plan, coordinate, and implement production goals at 19 hatcheries to provide 3 million catchable trout, 16 million sub-catchable trout and salmon and over 70 million warm-water fish. This includes broodstock development, spawning operations, and production activities. Aquatic staff is responsible for stocking fish in waters throughout Colorado. Fish stocking requests are made by each aquatic biologist for waters in their geographic area. Each year, nearly 3500 stocking trips by truck, boat, airplane and pack put these fish in over 1200 different waters in Colorado.

- **Flying:** Wildlife pilots assist biological staff in monitoring radio-collared wildlife, conducting wildlife surveys, and stocking fish in high-mountain lakes. Pilots provide assistance to all sections of DOW to accomplish job functions that require aerial support. Pilots also oversee maintenance of fixed-wing aircraft.

- **Facility, Grounds, and Equipment Maintenance:** Hatchery staff oversee and implement maintenance plans for all water supplies, infrastructure, buildings, grounds and equipment on hatcheries. Hatchery work is reliant upon a large variety of buildings and equipment which require continual maintenance. Animal health staff maintain laboratory and captive wildlife facilities in Brush and Fort Collins.

Colorado State Parks Unique Biological Functions

Below is a summary of unique work functions accomplished by Resource Stewardship (RS) Biologists and Scientists in State Parks. A more detailed description of roles and responsibilities is presented in Appendix B.

- Identify, designate, monitor and provide stewardship for the most significant natural features in Colorado. This is performed by CNAP staff in collaboration with volunteers on federal, state, local and private lands throughout Colorado.

- Provide technical and specialized expertise for natural resource protection and management on State Parks:
    - Inventory, analyze, evaluate and prioritize natural resource issues on State Parks and recommend policies, strategies and solutions to conserve and enhance natural resources on Park lands. Resource information and recommendations are provided in detail through the coordination and production of resource management plans and comprehensive resource stewardship planning documents for each State Park.
    - Inventory, planning and implementation of forest management and prescribed fire projects for State Parks (mainly related to hazardous fuels mitigation, insect and disease, or ecological restoration). Coordinate a central budget to ensure that highest priority projects are funded statewide, seek federal and state match for project implementation, and act as main partnership liaison with Colorado State Forest Service. Act as agency's main point of contact for all forest related issues, both internally and externally.
    - Resource Stewardship coordinates weed mapping, monitoring, treatment priorities, and treatment strategies for each state park, as well as providing training on weed management, identification, and weed mapping for Park field staff. Prioritize and manage a vegetation management budget and allocate to Parks for weed management and other vegetation-related projects.
- Resource Stewardship and CNAP staff is charged with the coordination of stewardship planning and conservation that involves these unique topics: *rare plants, archaeological, geological* and *paleontological* aspects of State Parks and Natural Areas.
- CNAP and Resource Stewardship are responsible for the coordination of citizen science volunteer monitoring efforts on State Parks and state Natural Areas.
- Resource Stewardship is responsible for providing detailed native plant revegetation specifications, as specified in the native revegetation directive, for Parks development projects.
- Resource Stewardship is responsible for the coordination, planning, and execution of habitat restoration projects in State Parks.
- Review of all ground disturbing projects, typically related to development of recreation facilities/opportunities, for potential impacts to habitat of threatened and endangered species, to cultural resources, for compliance with federal and state regulations, and for compatibility with Stewardship Plan recommendations.
- Help guide project managers through formal clearance and mitigation processes to ensure compliance with federal natural resource laws where required.
- Serve as the State's sole driver for protection of rare plants. Provide expert guidance and recommendations for monitoring and protection on state lands. Assist the State Land Board, DOW and Parks on rare plant issues as available.
- Coordinate a 7-member Natural Areas Council that serves as an advisory council to the Parks and Wildlife Commission.

SUMMARY OF ANY SHARED POLICIES, DIRECTIVES, OR PROCEDURES

The following table provides a summary of the relevant policies and administrative directives that pertain to our core work areas.

BOARD/COMMISSION POLICIES AND ADMINISTRATIVE DIRECTIVES			
Policy or Directive	**Number**	**Title**	**Comments/Recommendations**
Colorado Division of Wildlife			
Directive	F-17	FEDERAL AID AND FISHING IS FUN ADMINISTRATION AND PROCEDURES	Outlines the process that must be followed when using Federal Aid dollars. Important directive for avoiding diversion. Will need to be updated to reflect new requirements placed on Parks employees for using federal aid dollars.
Directive	L-4	ISSUANCE OF SCIENTIFIC COLLECTING AND BIRD BANDING LICENSES	Currently, Parks employees must obtain scientific collection permits to collect wildlife. This seems obsolete with combined agency.
Directive	V-1	VEHICLES – OPERATION, MAINTENANCE, APPEARANCE, ACQUISITION, AND ASSIGNMENT PROCEDURES	Needs to be updated to reflect combined agency.
Directive	W-4	REGULATION DEVELOPMENT AND REVIEW PROCESS	Needs to be updated to reflect combined agency.
Directive	W-7	ESTABLISHMENT OF THE STATUS OF WILDLIFE SPECIES, INCLUDING ENDANGERED, THREATENED, SPECIAL CONCERN, AND UNDETERMINED STATUS	This could be updated to include rare plants, or require a separate directive for rare plants.
Directive	W-2	BLACK BEAR INCIDENTS	Should be retained with agency name updated.
Directive	W-5	INVESTIGATING AND REPORTING NATURAL RESOURCE INJURY DUE TO	Should be retained with agency name updated.

		KNOWN OR SUSPECTED POLLUTION OF WATER IN COLORADO	
Directive	W-6	FISH MANAGEMENT AND STOCKING	Could be updated to allow for synergy among staff. For example, Parks employees conducting creel surveys.
Directive	W-10	COLORADO RECORD FISH PROGRAM	Should be retained with agency name updated.
Directive	W-12	FISHING CLINICS AND SPECIAL FISHING EVENTS	Could be updated to allow for synergy among staff. For example, recruitment and retention of youth anglers with clinics and fishing events on State Parks.
Directive	W-14	GOLD MEDAL TROUT WATERS	Should be retained with agency name updated.
Directive	W-17	CAPTURE AND RELOCATION OF PRAIRIE DOGS	Should be retained with agency name updated.
Directive	W-20	HUMAN-MOUNTAIN LION INTERACTIONS	Should be retained with agency name updated.
Directive	W-21	YOUTH OUTREACH PROGRAM HUNTING LICENSES	Should be examined for the possibility to expand youth hunting on state parks where deemed acceptable. Also updated for new agency name.
Directive	W-22	DREAM HUNT HUNTING LICENSES	Should be retained with agency name updated.
Directive	W-23	ANIMAL CAPTURE AND MOVEMENT	Should be retained with agency name updated.
Policy		WILD AND GOLD MEDAL TROUT MANAGEMENT	Could be updated to cover how state parks can help to meet the management goals covered in this policy.
Policy		THE STOCKING AND USE OF FISH TESTED POSITIVE FOR OR EXPOSED TO THE WHIRLING DISEASE PARASITE MYXOBOLUS CEREBRALIS	Make sure that management of waters on State Parks is consistent with this policy.

Policy		MANAGEMENT OF WILDLIFE POPULATIONS	Should be retained with agency name updated.
Policy		ENERGY DEVELOPMENT ON STATE WILDLIFE AREAS	Parks does not have a similar policy, but possibility exists to include State Parks lands with this policy given likelihood of future energy development on Parks.
Policy		ENERGY DEVELOPMENT IN COLORADO	Should be retained with agency name updated.
Policy		USE OF STATE WILDLIFE AREAS	Needs to be retained to outline difference between SWA's, State Parks (and possibly state recreation areas).
Colorado Division of Parks and Outdoor Recreation			
Directive	B-275	WILDLIFE HUNTING AND MANAGEMENT IN STATE PARKS	Needs to be updated to reflect combined agency.
Directive	B-301	FOREST MANAGEMENT	Could be updated to reflect combined forest management objectives and approaches of the new agency.
Directive	B-302	NATIVE VEGETATION ON STATE PARKS	Could be updated to reflect combined agency.
Directive	B-304	ENVIRONMENTAL REVIEW REQUIRED FOR GROUND DISTURBING PROJECTS	Could be updated to reflect combined agency.
Directive	B-305	NOXIOUS WEEDS AND PESTS	Should be retained with agency name updated.
Directive	C-276	RARE PLANT STATUS REPORTING	Should be retained with agency name updated.

STATUTORY AND REGULATORY GUIDANCE

The following table provides a summary of any relevant statutory guidance that may apply to our core work areas.

STATUTORY OR REGULATORY GUIDANCE			
Statute or Regulation	**Number**	**Title**	**Comments**
Colorado Division of Wildlife			
Statute	33-1-104	General duties of commission	Needs to be updated to reflect the combined commission.
Statute	33-1-105	Powers of commission	Needs to be updated to reflect the combined commission.
Statute	33-1-106	Authority to regulate taking, possession, and use of wildlife - rules.	Needs to be updated to reflect the combined commission.
Statute	33-1-110	Duties of the director of the division	Duties of director should be updated to reflect joint agency
Statute	33-1-115	Migratory birds - possession of raptors - reciprocal agreements	Should be retained.
Statute	33-1-116	Powers of director of United States fish and wildlife service	Should be retained.
Statute	33-1-117	Assent of state to Pittman-Robertson act	Should be retained.
Statute	33-1-118	Assent to Dingell-Johnson act	Should be retained.
Statute	33-2-102	Legislative declaration	Should be retained.
Statute	33-2-104	Nongame species - regulations	Should be retained. Consider addition of rare plants to statute for comprehensive species protection.

Statute	33-2-105	Endangered or threatened species	Should be retained. Consider addition of rare plants to statute for comprehensive species protection.
Statute	33-2-105.5	Reintroduction of endangered species - legislative declaration	Should be retained.
Statute	33-2-105.6	Reintroduction of the bonytail fish and the black-footed ferret	Should be retained.
Statute	33-2-105.7	Reintroduction of species - legislative declaration - report	Should be retained.
Statute	33-2-106	Management programs	Should be retained.
Statute	33-3-105	Wildlife migration areas - division to keep records	Should be retained.
Statute	33-3-111	Annual report to the general assembly	Should be retained.
Statute	33-4-116	Big game hunting licenses - auction or raffle - use of proceeds - rules	Should be retained.
Statute	33-5.5-101	Fish health board - created	Should be retained.
Statute	33-5.5-102	Duties of the fish health board	Should be retained.
Statute	33-6-111	Inspection of license and wildlife - check stations - failure to tag - eluding an officer	Should be retained.
Statute	33-6-114.5	Native and nonnative fish - possession, transportation, importation, exportation, and release - penalties	Should be retained.

Colorado Division of Parks and Outdoor Recreation			
Statute	33-10-101-102	Creation of, and definition of, State Parks	Should be retained.
Statute	33-10-106 (1)	Duties of the Board	Needs to be updated to reflect the combined commission.
Statute	33-10-106 (2)	Powers of the Board	Needs to be updated to reflect the combined commission.
Statute	33-33-101-104	Natural Areas Act	Needs to be updated to reflect new Council structure and new agency.
External Statutes and Regulations			
Statute	35-5.5-101-119	Noxious Weed Act	Not part of Title 33 but addresses how state lands will be managed. No change required.
Statute	24-80-409	State History, Archives and Emblems (protections for cultural resources)	Not part of Title 33 but addresses how state lands will be managed. No change required.
Statute	24-33-111	Conservation of native species-fund created	Needs to be updated to reflect the combined agency and commission.
Statute	24-33-205 (1)	Management of the State's forested lands	Not part of Title 33 but addresses how state lands will be managed. No change required.
Statute	23-31-301 (2)	Forest Management, public policy	Not part of Title 33 but addresses how state lands will be managed. No change required.
Statute	33-10-108 (3)	Forest Management/Prescribed Fire on State Parks	Needs to be updated to reflect combined agency and how forest management will meet multiple objectives.
Federal Regulation	7 U.S.C. § 136, 16 U.S.C. § 1531	Endangered Species Act	Provides background on resource protection and management requirements.
Federal	42	National Environmental Policy	Provides background on resource

Regulation	U.S.C. § 4321	Act	protection and management requirements for projects that are federally funded or on federal lands.
Federal Regulation	16 U.S.C. §§ 703–712	Migratory Bird Treaty Act	Provides background on resource protection and management requirements.
Federal Regulation	42 U.S.C § 7401-7671	Clean Air Act	Provides background on resource protection and management requirements.
Federal Regulation	33 U.S.C. § 1251	Clean Water Act	Provides background on resource protection and management requirements.

RELEVANT STRATEGIC PLAN ELEMENTS

DOW and Parks both have relevant elements of their respective Strategic Plans that directly apply to the core work functions of biologists and scientists. Below is a summary of those Strategic Plan elements that are *directly* relevant to the primary work that biologists and scientists perform in the agencies. The primary relevant Strategic Plan goals for each agency are related to the conservation, enhancement and management of natural resources in Colorado. For Parks, the main resources include natural, cultural and scenic resources on Parks. For DOW, the main resources include fish and wildlife, both game and non-game.

The biologists and scientists in both agencies influence many other elements of the Strategic Plans (e.g. increasing recreation, strengthening outreach, etc.), but those elements of the Strategic Plans have been omitted for simplicity.

State Parks 2010 Strategic Plan:
Goal 2: Conserve, Enhance, Manage, and Interpret Natural, Cultural, and Scenic Resources
DESIRED OUTCOMES

- *Visitors to Colorado State Parks and citizens of Colorado have an increased appreciation for and understanding of the natural and cultural resources in their state parks.*
- *Sensitive wildlife habitat and native flora are conserved, maintained, and restored.*
- *Energy consumption is reduced.*
- *Trails are built to be sustainable, while protecting or avoiding sensitive resources.*

OBJECTIVES:

1. Inventory and monitor natural, cultural, and scenic resources to establish their identity, location, and condition, and to determine which resources require protection and which are suitable for interpretation.

2. Establish carrying capacity and zoning considerations for park resources and integrate those with park management and development decisions to minimize impacts and keep resources intact for future generations.
3. Seek to maximize sustainable design and energy efficiencies wherever possible.
4. Provide meaningful interpretive and environmental education opportunities that expand public awareness and appreciation of important park resources and issues.
5. Cooperate with other agencies and conservation organizations to collect, share, and disseminate natural resource information and to coordinate resource management.

Division of Wildlife 2010 Strategic Plan:
PROGRAM AREA: Fish, Wildlife and Habitat
DESIRED OUTCOMES

- *Quality fish and wildlife habitat is protected from loss.*
- *Fish and wildlife disease does not significantly impact fish and wildlife.*
- *Colorado citizens are satisfied with the diversity and health of the state's native fish and wildlife.*
- *Hunters, anglers and trappers are satisfied with the number and variety of fish and game available for harvest.*
- *The Division is regarded as a comprehensive source of objective, scientifically based information on fish and wildlife in Colorado.*
- *Colorado's fish and wildlife is managed such that the need for federal listings under the Endangered Species Act are minimized, and the state retains primary management authority.*

OBJECTIVES

- Protect, restore and enhance habitat for fish and wildlife.
- Manage proactively to prevent and control fish and wildlife diseases and introductions of invasive species to protect fish and wildlife populations.
- Ensure the long-term viability of native fish and wildlife and strive to maintain the broadest representation of the diversity of native wildlife in suitable habitats across the state.
- Maintain healthy and viable game and sport fish populations sufficient to meet the demand for hunting, fishing and trapping, while minimizing landowner conflicts.

ISSUES/CONSIDERATIONS

HISTORICAL CONSIDERATIONS

Game, Fish & Parks

In 1963, legislation was passed to merge the Parks & Recreation Department with the Game & Fish Department to create the Game, Fish & Parks Department. Chronic underfunding for the Parks and Recreation Department, the parallel missions of the two organizations, and opportunities for cost savings were cited as the primary drivers behind the legislation. After the merger, underfunding continued to be a serious problem. Game & Fish cash funding sources could not be tapped to underwrite most recreation related efforts and it was not until the passage of the federal "Land & Water Conservation Act" in 1964 that a dedicated source of funding could be secured for recreation projects. However, federal funds were contingent on a 50-50 state match and annual contributions from the

legislature remained sporadic. In spite of these hurdles, over 300 parks and outdoor recreation projects were implemented by GF&P by 1970. In 1971, Governor John Vanderhoof decided that legislative funding for parks and recreation projects would be more forthcoming if the program stood alone, outside the shadow of Game & Fish. So in 1972, SB 41 was passed by the legislature to separate the two entities into the Division of Wildlife and Division of Parks and Outdoor Recreation. Federal aid issues relating to the separation of the two agencies lingered for decades, some of which were not addressed to the full satisfaction of the US Fish & Wildlife Service until the late 1990's.

Relevant DOW-Specific History

1995 DOW Reorganization

In 1994 a "performance audit" was conducted on the Division of Wildlife by the consulting firm of Deloitte & Touche. A report detailing their findings was issued to the State Legislature in 1995. This report suggested changes to DOW Law Enforcement training/policy, game damage compensation programs, and fish hatcheries among others. Most importantly for biologists, it demanded the DOW adopt a "more efficient and effective organizational structure".

In response, the DOW centralized the chain of command for field biologists and most of the biological support staff (Real Estate, GIS, Engineering, etc.). This led to the creation of a "Field Operations Branch" that included Regional Managers, Area Wildlife Managers, District Wildlife Managers and Wildlife Technicians. Alongside this, a "Wildlife Programs Branch" was created and staffed by Biological Program Leads, Senior Supervisors, and Field Biologists. Instead of reporting to a Regional Manager, Senior Biologists began reporting directly to Program Leads in Denver or Fort Collins. These two branches now meet at the Director's Staff level. This structure has remained in place for the last 15 years.

Another recommendation made by Deloitte & Touche, and implemented by the DOW, was the merging of the SW and NW Regions into a "West Region"; the expansion of the SE Region into parts of the former SW Region; and the absorption of the "Central Region" into the NE Region. Regionally based biological programs were realigned to reflect this new structure. However, this configuration ultimately proved unworkable for a variety of reasons and the SW Region was put back in place by 2005.

Species Conservation Section

In the late 1990's the need for a dedicated group to handle conservation of threatened and endangered species and species of special concern was again recognized by DOW leadership. This followed the formation and subsequent disbanding of a "Non-Game" section that was tasked with this same function during the late 1970's and early 1980's. The new section was directed to "get ahead of the curve" on listing petitions by conducting inventory work and writing conservation plans that would forestall the need to formally list a species. The Species Conservation Coordinators that staffed this section spent the bulk of their time directing conservation planning for statewide species of concern in consultation with various stakeholders. This approach worked up to a point, but by the early 2000's, it was becoming clear that using consultants or contractors to implement plans would be prohibitively expensive, particularly since the expertise already existed within DOW. This problem led to yet more reorganization.

Wildlife Conservation Section

In order to implement the plans being produced, the Habitat and Species Conservation Sections were merged in 2005 to form the "Wildlife Conservation Section". Former field level Habitat Biologists became "Wildlife Conservation Biologists" and were tasked with implementing conservation plans and assisting in species of concern inventory. A number of the duties formerly performed by these biologists

were either shifted to other sections, the Field Operations Branch, or dropped entirely. The supervisor of the Species Conservation Section resigned and the remaining members of the group were reassigned to work under one of the newly established Senior Wildlife Conservation Supervisors. This closer integration of conservation coordinators and field biologists provided a field force to implement statewide species conservation programs within DOW.

Wildlife Conservation – Terrestrial - Aquatic Section Merger

In late 2010, the retirement of both the Wildlife Conservation Section and Terrestrial Section managers provided an opportunity to consolidate three sections within Wildlife Programs. This move was prompted by a desire to eliminate redundancy, streamline processes, cut costs and reestablish functional elements (primarily related to habitat improvement) that were lost in the creation of the Wildlife Conservation Section. These goals were accomplished by merging the various elements of the Wildlife Conservation Section into either the Terrestrial or Aquatic Sections. This consolidation led to the elimination of five supervisory positions. The remaining Regional Terrestrial or Aquatic Supervisors were then assigned up to four additional field level personnel. The Species Conservation Coordinators were reunited as a program and once again placed under a Program Lead in Fort Collins. Once the vacancies were created, the Terrestrial Section was tasked with using four of these downgraded positions to create a new program that would address habitat improvement issues at a statewide level. This process was begun shortly after the reorganization and concluded in July of 2011 with the hiring of four new Habitat Coordinators.

Job duties at the field level have remained largely the same, with former Wildlife Conservation Biologists and existing Terrestrial or Aquatic Biologists remaining (for the most part) in their former roles. Regional Supervisors are continuing the process of consolidating job duties among their enlarged field staff and seeking further efficiencies that can be exploited under the newly implemented structure.

Habitat Program

In July of 2011, the DOW inaugurated a new seven member Habitat Program by utilizing two existing FTE and four of the vacant FTE that resulted from the Terrestrial/Wildlife Conservation Section merger. A former Wildlife Conservation Supervisor was redirected to head the new program. Five members are located across the state and have statewide responsibility for the planning and oversight of habitat work in a particular biome or habitat type. A sixth member is charged with coordinating private lands issues and DOW oversight of the Private Lands Biologist Program. A number of program elements are still being formulated, as several key decisions affecting this group have been placed on hold pending the outcome of the merger.

Relevant Parks-Specific History

State Parks and State Recreation Areas

In the enacting State Parks legislation (CRS 33-10-102 (23) and (24)), there were two categories of properties that would be managed by the Division of Parks and Outdoor Recreation. These two categories and their descriptions are found below:

(23) "State park" means a relatively spacious fee title area having outstanding scenic and natural qualities and often containing significant archaeological, ecological, geological, and other scientific values so as to make imperative the preservation of the area by the division for the enjoyment,

education, and inspiration of residents and visitors.

(24) "State recreation area" means a relatively spacious and scenically attractive land and water area under the control of the division offering a broad range of outdoor recreational opportunities. A relatively spacious water body with limited land area under the control of the division may be classified as a state recreation area if it offers a full range of water-based recreational activities such as boating, water skiing, hunting, trapping, fishing, and swimming and has sufficient adjacent land acreage for the associated camping and picnicking. A relatively spacious land area without a significant water body may be classified as a state recreation area if it offers a full range of land-based recreational activities such as camping, picnicking, bicycling, hiking, horseback riding, environmental education, target shooting, hunting, trapping, and motorized recreation.

In 2009, the State Parks Board passed a policy (A-228) requiring that all State Parks and State Recreation Areas be referred to as 'State Parks'. The actual differences between these two types of 'State Parks' properties is not generally recognized by the general public and most people working in or with the agency.

However, while the distinction between these two types of areas may be slight, this difference is important for the biologists whose duty it is to support the Division's goal of protecting, preserving and enhancing the natural values of its properties. It is clear that those sites that are labeled 'State Parks' should be given particular attention so "*as to make imperative the preservation of the area*". Those sites originally designated as 'State recreation areas', while still receiving support from statewide biologists for natural resource management, would have recreational priorities that very clearly outweigh natural resource priorities.

Colorado Natural Areas Program

In 1977, the Colorado Natural Areas Act (CRS 33-33-101 et seq., Appendix F) was passed by the State Legislature requiring the establishment and maintenance of a registry of qualified natural areas representing diverse plant communities, paleontological features, geological features, habitats for rare plants and animals, and areas of scenic and aesthetic beauty. In 1978, the Colorado Natural Areas Program (CNAP) was set up under the Executive Director's Office of the Department of Natural Resources. A budget was established with funding from the Land and Water Conservation Fund via State Parks, the State General Fund, and some funding from the Nature Conservancy. In the mid 1980's, the program went through some difficult economic challenges and was moved under the State Parks division in 1986. The advent of the Great Outdoors Colorado (GOCO) fund in the early 1990's provided some support for CNAP's operations, and still does today. In the mid-1990's, the program functions were performed by five FTE dedicated to Natural Area monitoring and stewardship; there is currently one dedicated CNAP FTE.

Creation of the Resource Stewardship Section

CNAP's work on statewide conservation from within the Division of Parks and Outdoor Recreation eventually resulted in the creation of a biological planning program that directly served the biological needs on State Parks. Since 1999, the Parks Resource Stewardship Section has grown to perform a variety of biological functions specific to State Parks, while CNAP has been folded into that section. The Parks Resource Stewardship Section now addresses stewardship planning, GIS, noxious weeds, forest management and reviews for Threatened & Endangered Species compliance. In addition, since 2007,

the Resource Stewardship Section has been the primary coordinator for State Parks Aquatic Nuisance Species Program.

Market Survey Assessment

In 2002 and again in 2008, State Parks contracted for 'market assessment studies' performed by Price Waterhouse and Corona Insights to learn more about public perceptions and attitudes about Colorado State Parks. Of the extensive results from these studies, those that are most relevant to the Biologists and Scientists Work Group include the following:

- The public has a strong preference for a more natural setting on State Parks. Thus, visitors want parks to look natural, and believe that amenities/facilities should fit within the "natural setting".
    - For example, 63% of the public felt Parks should invest "A Lot More Money" in "*Ensuring the parks natural resources are preserved*". This was by far the most support the public had for investments in State Parks
- Parks visitors describe the purpose of State Parks as primarily "preservation" and "recreation".
- The most preferred activities among non-visitors are nature/wildlife observation and hiking. This may provide opportunities to attract more visitors with a good natural setting on Parks.
- A majority of all surveyed feel State Parks are doing a good job protecting natural resources in the parks.
- 88% of the public (general public) agreed that park visitors should "play a role in helping to maintain natural resources in the parks" voluntarily. Another 9% "somewhat agreed" with that statement.
- Wildfire and pine beetle were considered the most important issues facing State Parks Managers.
- Cleanliness and scenery are the most important features related to visitors' overall quality of experience.
- Additional wildlife viewing areas was a desired future feature by parks visitors.

State Parks Audit, Financial Plan and Budget Reductions

In 2007, the state legislature and Great Outdoors Colorado requested that Colorado State Parks undergo an audit through the Office of the State Auditor. This Report of the State Auditor was completed and released in July 2008. Over the next two years, all State Parks employees were required to implement various measures to address concerns raised by the audit. The following are examples of measures that affected biologists (along with most staff) within State Parks:

- New detailed controls and procedures for making payments, entering into contracts, reviewing deliverables, etc.
- Additional Individual Performance Objectives (IPOs) related to purchasing and contract management were incorporated into performance plans of all affected employees. A new standard "Core Competency" was incorporated in all individual performance plans for FY 08-09. Performance Plans developed for 2009-10 and beyond require this IPO and Core competency.
- Additional processes for working with temporary employees.

As a component of the audit implementation activities, in 2010 State Parks produced a 5-Year Financial Plan for FY10-11 through FY14-15. This Five-Year Financial Plan was intended to help ensure a financially sustainable park system over the next five years by quantifying the financial challenges facing the agency and identifying strategies that could be pursued to meet those challenges. As recently as FY 08-09, State Parks received $6.7 million in General Funds. By FY 10-11, General Fund support had declined to $2.6 million. To account for State Parks budget shortfalls from loss of General Fund, some Severance Tax (STAX) funding was reallocated to State Parks in FY10-11. However, as part of Governor Ritter's FY10-11 budget-balancing plan, STAX funding to State Parks was reduced by about $3.3 million beginning July 1, 2011. To account for this budget reduction, Parks implemented several actions across the agency. A component of this reduction was the elimination of Species Conservation Trust Funding for the Colorado Natural Areas Program ($400,000), which effectively eliminated the Program's ability to perform statewide rare plant conservation work.

COMMONALITIES/SYNERGIES BETWEEN AGENCIES

For this section, we emphasize the differences in the scale that guides the work of the two groups of biologists in this area of operations. While much of the DOW Wildlife Programs (WP) biologists work occurs at a statewide/landscape scale, the majority of the work of State Parks Resource Stewardship (RS) biologists occurs on an individual parcel by parcel basis. State Parks does not have Research Scientists or Hatchery personnel, so the commonalities in this section are largely related to job descriptions of other biologists in WP.

For our purposes, it is important to define the terms "commonality" and "synergy". "Commonalities" are work functions being performed by both groups of biologists, but not necessarily accomplished in collaboration. "Synergies" are work functions that have been shared or collaborated on by the two groups of biologists in the past.

Commonalities

Both groups of biologists performed (and continue to perform) the following functions for their former divisions prior to the merger. However, these functions may not occur collaboratively between Parks and DOW staff.

1. Advise and give recommendations to field staff in the areas of:
    a. Terrestrial, avian, and aquatic species management and conservation.
    b. Conservation and management of rare and endangered species.
    c. Habitat recommendations on weed management, forest management, revegetation and/or restoration.
    d. Management of nuisance wildlife species.
    e. Management of user-group impacts to natural resources.
2. Perform, in some capacity, resource management planning.
3. Management of volunteer citizen science programs.
4. Use and collection of data, using GPS and other technologies, which is input into GIS for use in conservation biology.
5. Collection of data on visitors and users of state owned and/or managed lands.

6. Perform outreach to the public to inform and educate on natural resource issues of the division.
7. Advise, write, review information and materials created for interpretation programs.
8. Inventory natural resources for monitoring and evaluation.
9. Work with multiple partners – federal, state, local agencies; non-governmental organizations; municipalities; and private land owners.
10. Contribute to comments on Land-use planning and projects.

Synergies

Staff in the two agencies (biologists and field staff) has worked in collaboration on a number of biological projects and issues in the past. These include:

1. Fishing –DOW produces all fish stocked into State Parks waters. All biological management, inventory and research for fish species in State Parks waters are conducted by WP biologists and research scientists. State Parks provides and promotes fishing opportunities, healthy waters, and sells fishing licenses. Some water bodies existing on State Parks are used by DOW as feral egg sources for hatchery production.
    a. 60% of warm water fish reared in DOW hatcheries are stocked into State Parks waters.
    b. 12% of fingerling and 34% of catchable cold water fish reared in DOW hatcheries are stocked into State Parks.
    c. Hatchery facilities exist on parks (i.e.: Chatfield, Pueblo).
2. Habitat management for game species on parks. Examples include:
    a. Elk calving habitat closures at Mueller and Staunton.
3. Sensitive or Rare species management on properties. Examples include:
    a. Sensitive species habitat closures (e.g. terns and plover habitat closures at John Martin, raptor closures, etc.).
    b. Rare fish management/ fish net and dredging project (e.g. Highline Lake)
    c. CNAP provides rare plant conservation recommendations and assistance on SWAs (e.g. weed management on Piceance SWA)
    d. Raptor Monitoring – biologists working together to create parks program and to share data/protocols.
    e. Development of comprehensive wildlife and rare plant Best Management Practices for wind turbines on a Natural Area in northern Weld County.
4. Statewide conservation efforts (e.g. White Nose Syndrome work group formed to discuss possible strategies for managing white nose syndrome in bats on state lands).
5. Shared volunteer efforts – e.g. parks volunteers providing data on Pueblo SWA raptor nesting.
6. ANS – collaboration between agencies on protocols and water protection.
7. GIS data sharing.
8. Natural Areas Program – three state wildlife areas are “natural areas” and two SWAs are proposed natural areas for unique natural resource features. Natural Areas Program provides monitoring, funding, and guidance on conservation of unique resources on these properties. Collaboration on other Natural Areas Projects including wildlife monitoring, etc.

9. Collaboration on Stewardship Planning for State Parks as needed (e.g. collaboration with DOW managers and biologists on Stagecoach State Park wildlife recommendations for sharp-tailed grouse).

POTENTIAL SHARED ASSETS

Common assets across Parks and DOW related to biological functions include hatcheries, equipment, and services. There is potential to share some of these assets, but in all cases, we must be mindful of Federal Aid requirements and other grant fund stipulations to avoid any diversion of funds.

DOW uses hatcheries to produce fish, which are in turn released into State Park waters. A couple of these hatcheries are located within State Parks. Parks/DOW hatcheries already result in efficiencies irrespective of the merge; however, there may be opportunities in the future for additional sharing of property/facilities and personnel.

Employees in Parks and DOW rely on some of the same equipment to conduct their jobs. There may be opportunities for efficiency by sharing equipment rather than maintaining separate inventories. Equipment used by both Parks and DOW staff include:

- Vehicles: ATVs, Snowmobiles, Boats, Trucks
- Field Equipment: Examples include spotting scopes, GPS Units, binoculars, waders, telemetry equipment
- Wildlife Traps
- GIS Software

The potential for sharing equipment, and thus efficiency, depends on the availability of existing equipment for other uses. There is little opportunity to share trucks because both Parks and DOW employees are presently unable to meet current demands. DOW employees have begun leasing vehicles in recent years given the shortage of trucks. In contrast, there may be opportunities to share ATVs and snowmobiles across groups, thereby reducing the number of new machines purchased in future years. There should also be opportunities to share field equipment, as is commonly practiced already within each agency. DOW employees maintain adequate inventories of various wildlife traps and could most likely meet the needs of Parks staff when they have need to capture animals. For example, Parks employees sometimes capture small mammals as part of wildlife inventories.

Additional efficiencies may be obtained by allowing Parks employees access to DOW's existing equipment and services that were previously not available to them. DOW's planes are a good example. Aircraft can significantly reduce personnel time necessary to accomplish a task. DOW employees are accustomed to utilizing planes efficiently through multitasking. For example, while monitoring radio-collared wildlife in a given area, pilots are able to check on other things in that area at the same time. This might offer Parks an opportunity to monitor a landscape event from the air, which would not have been feasible previously. Similarly, DOW employees contract annually with various helicopter companies to facilitate animal capture and monitoring. Parks employees may be able to benefit by obtaining periodic access to helicopters that they otherwise would not be able to justify through separate contracting processes. DOW's library is yet another example. Parks employees presently do not have easy access to technical literature, yet at no additional cost, they will now be able to gain full access to DOW's library website, which facilitates comprehensive searching and retrieval of natural resource literature.

Parks and DOW properties with temporary housing or sewer/power/water hookups for camp trailers offer another potential for sharing assets. Temporary technicians conduct considerable field work each year across the state, often in relatively remote locations. Housing for temporary employees can be problematic to find. The merge should create additional housing opportunities for temporary crews, which could significantly reduce housing costs for a number of projects.

Our work group also recognizes that shared assets extend beyond facilities, equipment, and services. For example, both Parks and DOW rely on volunteers extensively. There may be opportunities to better leverage the time and talents of these volunteers when combined into one agency (and one volunteer group). Another example is expertise. By capitalizing on each other's expertise, there may be fewer needs to pursue external contracts for services (see '*Sharing of Internal Expertise*' in the Alternatives Section). DOW biologists and scientists are capable of providing a wealth of knowledge on wildlife species to Parks employees, whereas Parks biologists are capable of providing considerable knowledge on rare plants, plant ecosystems, and archeological and cultural resources to DOW employees. Finally, there are times when a large number of people are needed for a short time period (e.g., 2-3 days) to complete a project. The ability to draw on both Parks and DOW staff in a local area for these types of projects is an asset that should result in greater efficiency and reduced travel costs because fewer staff would have to come from outside the area.

FUNCTIONAL DIFFERENCES

The predominant functional difference between Parks Resource Stewardship (RS) and DOW Wildlife Programs (WP) biologists and scientists is the spatial scale at which work is accomplished. RS biologists focus their work almost exclusively on State Park properties, with the exception of the Colorado Natural Areas Program (CNAP), which has a statewide focus on conservation issues that spans property boundaries. In contrast to RS Biologists, WP biologists conduct their work at a statewide scale. This difference in scale relates to the differences in job functions. RS biologists have more diverse job functions and are broadly responsible for inventory and monitoring of natural and cultural resources, stewardship planning, weed mapping and prioritization, forest management, GIS, and other duties related to enhancing and protecting the natural resources on State Parks. These diverse job functions are only possible because of the relatively limited spatial extent encompassed by State Parks. WP biologists have more specialized job functions, focusing on population and habitat management of fish and wildlife species. This specialization is necessary to allow responsible species management at a statewide scale. Responsibility for other aspects of natural resource stewardship across public and private lands in Colorado lies with a number of other agencies, organizations, and landowners. Thus, another functional difference is that WP biologists must routinely interact with private landowners to accomplish their jobs effectively, whereas RS biologists generally do not, with the exception of CNAP. To summarize, RS biologists are focused on managing all aspects of natural resources on specific parcels of land whereas WP biologists are focused on managing specific fish and wildlife species across all lands irrespective of ownership.

Another major functional difference between RS and WP is staff size, which likely relates to scale as well. Parks RS has only 5 dedicated biologists/scientists to oversee resource stewardship on Park lands and Natural Areas, whereas WP has about 180 biologists/scientists to manage populations and habitats of fish and wildlife, and about 90 hatchery employees to produce and rear fish for stocking. As a consequence of staffing differences, RS is often forced to use external contracts to accomplish biological work, whereas WP accomplishes most biological work internally. Also, Parks relies on WP for producing and managing fish populations in State Parks.

As alluded to above, there is a functional difference between the Natural Areas Program (CNAP) and the rest of State Parks. The Natural Areas Program has a statewide focus and conducts work on any lands containing significant natural features, regardless of land ownership. This Program is also uniquely different from DOW because it emphasizes conservation of rare plants, plant communities, geology and paleontology.

The remaining functional differences between RS and WP biologists relate to budget, job classifications, and promotional opportunities. A significant portion of the WP biologists' budget is supported by cash revenues from selling licenses to hunters and anglers, whereas a portion of RS biologists' budget is supported by Parks users. Additionally, WP biologists rely heavily on Pittman-Robertson and Dingell-Johnson funds (i.e., Federal Aid) that are not available to Parks RS employees. In contrast, Parks receives a segment of lottery funds that are not available to DOW, a portion of which supports RS programs. Both RS and WP utilize GOCO funding to support biological programs. In terms of job classes, RS biologists with statewide responsibilities are GP III's (or GP V for the Section Manager); whereas WP biologists with statewide responsibilities are GP/WM IV's or V's (see '*Additional Areas for Future Consideration'* at the end of the document for more information). RS biologists have virtually no promotional opportunities, whereas WP biologists have occasional opportunities to promote into supervisory or statewide coordinator positions.

SWOT Analysis of Merging Core Functions

Table 1. SWOT Analysis of <u>Merging</u> Core Work Functions

	Positives	*Negatives*
Internal and often Associated with existing or past conditions	**Strengths**	**Weaknesses**
	• Comprehensive science-based resource management and planning • Ability to access shared resources and expertise • Stronger and broader partnerships (NGO's, Academic, Agencies) • Passionate dedicated mission-driven employees • Various scales of natural resource management perspective • Issues affecting both Parks and DOW no longer need to go to DNR-level	• Agency-wide bureaucracy slows down the ability to accomplish core biological work functions • Lack of biological training programs & professional opportunities • Lack of standardized compliance with T&E and cultural rules/regs on agency properties • Declining budgets and expanding responsibilities to fulfill our mission • Merger has immediately followed a recent restructuring within Wildlife Programs Branch

	OPPORTUNITIES • Recruit and retain outdoor recreationalists, hunters and anglers to address long term funding • Re-evaluate work priorities to make sure staff is accomplishing the highest work priorities • Coordinate Federal Land Use and other natural resource planning comments • Better sharing of info, data and expertise • Assure standardized compliance with Federal and State T&E and cultural regulations across the agency • Provide additional cross-training for biologists and more formal biological training opportunities for field staff • Provide improved level of support to field staff through centralized, consistent and prioritized resource planning and management on state properties • Serve as a leader in stewardship, monitoring and volunteer coordination for the best lands managed by DNR (breaking down silos) • Play lead role on statewide conservation of sensitive plant and animal species in Colorado • Internal and external collaboration on vegetation management (e.g., forestry, revegetation, etc.) and habitat improvements for landscapes and properties	**THREATS** • Increased size and scope of agency may result in greater challenges with decision making and public involvement, thereby limiting biological staff efficiency. • Increased bureaucracy may limit staff efficiency. • Self-funding emphasis would supersede natural resource management. • Increase work load/job duties (e.g. GIS) because we are at capacity (perceived efficiency may trump functionality). • Insufficient vehicles and equipment to accomplish biological work. • Short term and long term funding limitations. • Lack of coordination on federal land use and planning comments may lead to contradictions within the DNR/CPW. • Requirement for broader constituency support may result in lack of buy-in. • Continued inefficiencies in communication between merged agency staff.

WORK GROUP SCOPE OF WORK

The scope of work for the Biology and Scientist Work Group is to offer alternatives for consideration that integrate functions of the Resource Stewardship (RS) Section from State Parks with the functions of the DOW Wildlife Programs (WP) Branch. The overall intent is to maintain or improve the core work functions of RS and WP biologists and scientists and to allow these staff to provide the same or better levels of products and services to the public and the agency.

The scope of work is limited to positions and units that are directly considered through these alternatives. Within State Parks, positions under the Resource Stewardship Section (i.e., Section Supervisor, Stewardship, Natural Areas, and Forestry/GIS/T&E and Cultural Compliance) are considered. Within DOW, Terrestrial and Aquatic sections in their entirety are considered, including aquatic and

terrestrial game and species of concern management (including hatcheries) and mammal, avian, wildlife health, and aquatic research. The discussion was framed by the primary assumption that the existing functions provided by the above positions/sections are needed and important to meeting the goals and missions of the merged agencies. Terrestrial noxious weeds, which are a core function of Parks RS, and GIS, which is a core function of both RS and WP biologists, are being primarily considered in other Work Groups. However, the Biologists and Scientists Work Group will provide recommendations on how best to integrate terrestrial weeds and GIS function, given the significant role of these functions to agency biologists.

Understanding differences in scale regarding the scope of influence among Parks RS biologists (i.e., 44 state parks) and WP biologists (i.e., statewide responsibility for the management of fish and wildlife resources) is a key aspect to these considerations. The Parks Resource Stewardship Section brings strengths to the table in terms of their respective skill sets in biological (especially plants), paleontological and cultural resource inventory and in their resource planning and natural resource recommendations for State Parks. The DOW Wildlife Programs Branch brings the expertise in research, monitoring, management, inventory, and population augmentation of fish and wildlife resources on public and private lands statewide. The Natural Areas Program, currently found within the Resource Stewardship Section, is unique within Parks as it performs statewide functions that are not restricted by property ownership.

We developed alternatives that: 1) eliminate unnecessary duplication, 2) identify the means to achieve the greatest possible efficiencies in accomplishing job functions, and 3) identify strategies to enhance the effectiveness of our programs and operations while fulfilling the new joint mission.

WORK GROUP ALTERNATIVES

The following alternatives represent our best effort to incorporate maximum efficiencies, enhancements and cost savings within the new agency. In order to accomplish this task, the Work Group overcame a number of inherent obstacles.

There is a great numerical disparity between the two agencies on the biological side. Parks has five dedicated biologists in Resource Stewardship (RS), while there are greater than 200 employees focused on biological functions in the Wildlife Programs (WP) Branch. Core functions differ in both focus and scale, so duplication between the two entities is minimal. However, there are a number of efficiencies and cost savings that have been identified. Many of these span all four of the proposed alternatives.

Achieving these efficiencies and savings required that we focus on the integration of the Parks Resource Stewardship Program into the DOW organizational structure. In order to do this, the Work Group assumed the basic organizational structure of the DOW would remain in place. Any large scale changes to the current structure within WP would likely have a direct impact on the viability of the alternatives presented here.

After undergoing years of budget reductions, there are simply no further cuts to be found within the Parks Resource Stewardship Program. Parks employees are already performing multiple jobs in an effort to preserve core functions. **Any further cost saving measures or loss of FTE currently assigned to these programs, would almost certainly require eliminating core functions**. The Work Group believes that enacting such measures would run counter to the goals set forth by the Legislature and DNR for the merger.

On the DOW side, a major restructuring completed in July of 2011 by the WP Branch resulted in the abolishment of an entire section (Wildlife Conservation) and five supervisor positions. **This resulted in a number of cost savings and efficiencies that are only now being realized.** It is our belief that some time should be given to evaluate the results of this effort before introducing further change to the basic organizational structure now in place.

Our approach has focused on merging the core functions of the two agencies, while preserving the key elements that have made our biological programs nationally recognized leaders in resource management, conservation and research. The rigor of science used to support management decisions in Colorado far exceeds that of most other states. It is critical that we maintain this position as we transition into the new Division of Parks and Wildlife.

EFFICIENCIES OR ENHANCEMENTS THAT SPAN ALL ALTERNATIVES

Our Work Group's alternatives do not specifically address work functions that are entirely unique to either DOW Wildlife Programs (WP) or Parks Resource Stewardship (RS) (e.g. hatchery operations, wildlife research), except as alterations in carrying out these unique functions may result in enhancements, cost-savings or efficiencies for the agency. For all alternatives, these unique job functions will continue to be performed at a high level of competency and efficiency; however, in some cases these job functions could be enhanced by some of our following recommendations. Additionally, there may be opportunities that span all alternatives for either maintaining functions that could be somewhat marginalized during this merger or enhancing functions that could be done more effectively and with greater benefit to the agency. We did not separately reference these recommendations in each alternative, but rather list them below for simplicity.

Aquatic Nuisance Species

The Biologists and Scientists Work Group recognize that the Invasives Work Group is developing alternatives to meet the ANS functions of the new agency. However, given the biological nature of that function, the biologists and scientists make the recommendation that **the Aquatic Nuisance Species function be aligned with the Aquatics section of the Wildlife Programs branch**. Implementation of ANS duties is primarily performed by staff located at Parks, SWAs or other water bodies throughout the state. However, every component of the ANS *coordination* position involves dealing with Aquatics personnel on a daily basis. A thorough understanding of aquatic species, the relationship of aquatic invasive species to the ecosystems that are at risk, and the potential consequences of those invasions are needed by the person coordinating these activities. Coordination of those efforts involves not only the Area aquatic biologists for site inspections, but with the Hatchery Section and the Aquatic Animal Health Lab to ensure disinfection protocols are followed on a Statewide basis for fish rearing facilities, for stocking activities, fish movement from one body of water to another, and a variety of other situations where direct dialog with the Aquatic Senior Staff and Aquatic Animal Health Lab are needed. This also applies to coordination of ANS sampling and research efforts, such as distribution of species and evaluation of new disinfection techniques in Aquatic Research. Because the Aquatic Nuisance Species function in DOW currently exists in the Aquatic Section, assuring that Parks ANS needs are also met in the Aquatic Section would enhance communication and coordination of duties across waters managed by both agencies. This would lead to efficiencies by streamlining decision-making and prioritization of ANS efforts on a Statewide basis.

Biological Contractors

Biologists often use contracts, Inter-agency Agreements (IAAs) and purchase orders for work with contractors to gather habitat management data for state lands. This work includes, but is not limited to, contracts for weed mapping and weed management plans, wildlife surveys, weed treatments, habitat restoration, and fuels mitigation and reduction work. This work is contracted to vendors to produce deliverables and materials that would not otherwise be available to the agency. Cost savings and efficiencies can be realized in this area in a number of ways.

Savings in this area can be realized through:

- Reductions in the management of contractors – A reduction in the number of agency personnel managing the contract/P.O. approval and deliverables processes will occur through having single contracts/purchase orders for projects that span boundaries between the state wildlife areas and State Parks. One Purchase Order, IAA or Contract; one point of contact; one contractor/vendor; one set of deliverables; but for two parcels.
- Reductions in project costs – It is cheaper to do one larger project, that covers multiple properties, through one vendor than it is to do multiple smaller projects with different vendors. Agency personnel and project management time and costs are lowered and contractor/vendor personnel, travel, and equipment costs are reduced. Greater amounts of resource information for individual parcels improve the capacity of the agency to make effective management decisions for individual parcels.
- Weed Management and Restoration – Effective management practices combine weed management and restoration efforts into single projects by treating weeds and following treatments with native revegetation efforts. This process eliminates or reduces future needs for weed management. On many of these projects, contractors are brought in to perform this

work. Reduction of this type of work over time equates to efficiencies and cost savings in vegetation management, as well as providing an environment for recreational experiences that is expected by visitors to state lands.

- Lowering revegetation costs through collaboration with the agency's Native Seed Program – Through the utilization of existing Parks Stewardship volunteers, coordinated with the DOW Native Seed Coordinator, seed collection can be performed for specific revegetation species. These species can then be propagated for seed and, because the agency is providing seeds for revegetation internally, revegetation costs are reduced (wholesale instead of retail costs).

Efforts have already begun to gain efficiencies in this area. State Parks Stewardship biologists have worked and are working with DOW staff at Pueblo State Wildlife Area and Lake Pueblo State Park and at Charlie Meyer State Wildlife Area and Eleven Mile and Spinney Mountain State Parks to span weed mapping and management planning across boundaries of neighboring parcels. This approach is especially effective and important when state listed weeds that are mandated for treatment and weeds that are extremely noxious are targeted and treated.

Biological Training for CPW Staff

Proper biological training is central to the success of any natural resource management agency. Currently, there is a large demonstrated need for standardization and training for several disciplines, including weed identification and inventory, weed management, native plant revegetation, population management, limiting factors of wildlife, habitat management and protection, monitoring, recreation impacts mitigation, wildlife/public interactions, wildlife capture, rare plant and animal identification, aquatic and wildlife disease, and forest insect/disease identification. RS and WP biologists collectively hold a wealth of knowledge about many of these issues that should be formally shared with employees in crucial positions through internal training programs. This training is especially important for field staff throughout Field Operations, who play key roles in protecting the ecological health of CPW managed lands and managing fish and wildlife.

Parks Resource Stewardship Program has developed an extremely thorough and effective protocol for aquatic nuisance species training over the past few years that could be used as a guide for further development of biological training programs. Also, law enforcement has a well developed training program that could be looked at as a model when crafting the type of biological training program that is needed. WP biologists recently provided biological trainings for DOW field staff and plan to continue providing these regional trainings in the future. WP biologists also provide biological training to the District Wildlife Manager Trainee class each year and could do the same for Park Manager trainees. These trainings could be expanded so that both WP and RS biologists provide a more comprehensive level of biological training spanning plant and animal ecology and management.

Specialized, external biological training is also necessary for biologists on occasion to maintain competency in meeting required job functions. Ensuring that all employees tasked with biological functions are provided with funding to attend appropriate biological training ensures that the agency is both effectively protecting the resource and putting forward the best possible product to our customers and the citizens of Colorado.

We recommend the development of a biological training committee to provide guidance to the Director on the establishment and implementation of a formalized biological training program and standardization of work functions.

Fishing On State Parks

The merging of Parks and DOW represents many opportunities for efficiencies in the amount and kinds of visitor information collected on State Parks if standard procedures are established for all State Parks and DOW Properties. State Parks with fishable waters do collect fishing information through law enforcement and public relations contacts. The DOW already collects much of the same information on waters that they manage as well as on Parks, using a creel census survey form. Currently, DOW and Park staffs interact when addressing fishing issues concerning Title 33 regulations, however there is not the same interaction for general fishing information and surveys. In most of these situations, Park Staff could consult with DOW Staff and work together to standardize this information to eliminate duplication of work. Park staff may be able to modify their contacts to easily incorporate creel survey information that would be usable for Aquatic Biologists and Researchers. This information could be posted for public access on a common website.

Parks and DOW staffs do work together providing educational programs to the public regarding fishing issues on and off parks, as both agencies currently provide interpretive programs. These also could be more formally standardized. DWMs sometimes present interpretive fishing programs in Parks such as the "Fishing is Fun Clinics" and the Hatcheries program provides stocking reports for both state wide and parks specific waters.

We recommend establishing standardized contacts, surveys, and improving communications between Parks and DOW staff that will eliminate duplication of work and create usable data, to better serve anglers and visitors.

Indirect Rates with Higher Education

The overhead rates paid to institutions of higher education on contracts for work conducted through those institutions are not consistent between Parks and DOW, and in some instances are exorbitant. Much of this is driven by higher education Sponsored Programs offices, rather than the individuals we work with on the projects at these institutions. The Colorado Cooperative Fish and Wildlife Research Unit (COOP) at Colorado State University, as part of our Cooperative agreement with them, charges 0% on projects that are specifically COOP Unit projects. This, of course, is s a long-standing agreement as part of our participation in the COOP. Non-COOP Unit projects with the Department of Fish, Wildlife and Conservation Biology are typically charged 10%. Other projects, especially with other Departments and Colleges can be very high (up to 40.8%) although negotiations typically reduce that percentage. Parks routinely pays 26 to 33% overhead on these sorts of contracts.

Experiences we have had with some other institutes of higher education have been that they will ask for a statement of the overhead rate we agree to pay. In other words, the responsibility is on our agency to set the rate. These institutions will then generally abide by that rate, if reasonable and specifically spelled-out as a standard rate paid by the agency. A statement in an administrative directive that caps the overhead rate that CPW is willing to pay to these institutions (e.g. 10-15%) may be useful to standardize contracts, reduce hassles with negotiating overhead, and save substantial amounts of money on those contracts that are not associated with the COOP Unit or the Department of Fish, Wildlife and Conservation Biology. We believe that a Directive of this sort should be adopted as part of the merger process, irrespective of the merger structure alternatives.

Land Protection

The DOW has an active land protection and access program that is based primarily on an annual "Request For Proposals" (RFP) that is issued each spring. Under the RFP, land owners throughout the

state are provided an opportunity to offer (for sale or donation) conservation easements, or fee title transfer of their property. These rights can be held by the DOW or a qualified third party such as a land trust or conservation organization. The proposals undergo a lengthy evaluation that includes scoring on degree of protection for a particular wildlife habitat (i.e. deer winter range, sage grouse leks, migration corridors, etc.) and the relative value of any hunting or fishing access that is being offered.

As part of this process, it is our suggestion that CPW add a component to the ranking process that will address the protection of rare plant communities and other significant natural features. Although it is not possible to utilize DOW dollars to purchase protection of a property based solely on these "other" natural values, these values can be incorporated into the overall evaluation and ranking process. If two properties represent roughly the same value to wildlife, the presence of a rare plant community on one should in some manner influence the final decision.

In order to incorporate rare plant or other significant natural values into the evaluation process, we would like to make the following recommendations:

- Instruct the CNAP Coordinator to work with the Real Estate Unit's Land Protection Specialist in order to devise a set of criteria that can be inserted into one of the ranking worksheets. The amount of weight and scoring values given to these criteria would be discussed and negotiated. It is our belief these values should only influence, not determine the outcome of the ranking process, when wildlife dollars are used.
- If CNAP has identified a funding source that is dedicated to rare plant conservation (e.g. USFWS Preventing Extinction grants), devise a way for the funding source to drive the conservation values that are considered in ranking acquisition priority so that properties with high rare plant conservation value are identified and ranked accordingly.
- If a selected property contains rare plant or other significant natural values, instruct CPW to consider these values when negotiating the terms of the conservation easement. Depending on the type and extent, protection of these values could come at minimal or no cost. Properties purchased fee title by CPW should incorporate full protection of these values as part of future management.

In addition, the DOW is currently negotiating "Candidate Conservation Agreements with Assurances" (CCAA's) with various landowners in Southwestern Colorado. This program is being administered in conjunction with the U.S. Fish & Wildlife Service in order to protect Gunnison sage-grouse habitat. Part of this process involves performing a baseline inventory of the property in question. It is our belief that some component can be added to this process that would incorporate a wider "natural features" review of the candidate property. Land owners that volunteer to enter a CCAA agreement are conservation minded in general, and may be amenable (through a separate process), to inclusion into the CNAP Program.

- We recommend the Natural Areas Coordinator be contacted during the CCAA baseline inventory process. If significant natural features occur on the property, an introduction to CNAP could be facilitated as part of the overall process and additional protection measures gained for the natural values that may be of statewide significance.

Land Use Comment Coordination

DOW and Parks currently have very different and isolated processes for commenting on land use plans and/or projects that may affect wildlife, Parks or Natural Areas throughout the state. In DOW, local land use issues (gravel pits, PUD's, zoning change requests, etc.) are handled by the District Wildlife Manager

with input from the local terrestrial and aquatic biologists. Comments go out under the signature of the Area Wildlife Manager.

According to the current DOW land use directive, in instances where multiple Areas may be affected by a proposal, a local Area Biologist or DWM is assigned to take the lead and solicit/collate comments from affected field staff (DWM's and Biologists). These comment letters go out under the signature of the Regional Manager.

On the Western Slope, issues that affect multiple Areas or that may be controversial in nature (Forest Plans, RMP Updates, Uranium Mills, etc.) are handled by the Land Use Planners with input from the affected AWM's, DWM's and biologists. Comment letters in these instances go out under the signature of the Regional Manager. At all levels, discretion is used by the response lead in determining the level of review and signatory authority that may be necessary to respond.

Parks currently comments on land use plans and/or projects in two ways. If a land use plan or project may affect a particular State Park, field staff (primarily Park Managers) may comment directly working with Parks Regional Managers and/or the Resource Stewardship biologists. Alternatively, if a plan or project may affect a Colorado Natural Area, the Natural Areas Coordinator may submit comments that are first channeled through the DNR Executive Director's Office.

If these current processes for providing land use comments are maintained in the newly merged agency, these comments would not be coordinated and may result in more challenges for the Division. Under the current system, there is great likelihood that comments submitted are not only submitted in isolation, but may be contradictory. This lack of coordination could misrepresent the messages sent by our agency or dilute the importance of the Division's combined comments. This, in turn may reduce our ability to effectively convey a message that leads to greater natural resource protection on behalf of all Coloradans. By coordinating comments more effectively, the Division could enhance our ability to comment on land use plans or projects in ways that lead to broader resource protection.

In order to reduce the contradictions and improve the effectiveness of CPW's comments on land use plans and projects, we make the following recommendations:

- Formalize the process through which DOW Staff will notify and coordinate comments with State Park Managers who's Parks may be affected by issues that include larger geographic areas or that may be controversial in nature (e.g. Forest Plans, RMP Updates, etc.). This should also be coordinated with the Natural Area Coordinator to assure that Natural Area and rare plant issues are addressed.
- Develop a 'check-off' list for Land Use Planners (or Region Managers) to pass around to appropriate entities to assure all potentially affected parties have had an opportunity to provide comments.
- When comments from various parties within the agency may have contradictory recommendations, define a clear process to resolve the issues in a way that maximizes any mutually-beneficial recommendations.

The team acknowledges that time constraints and comment deadlines will limit our ability to coordinate. Particularly on localized issues that may require comments within weeks, not months. Comment leads should be granted discretion regarding the necessity for soliciting widespread input. This could be addressed in large measure on the DOW side by instructing Comment Leads to consider possible impacts on local State Parks and rare plant communities as part of their initial analysis of a proposal.

Natural Areas Species Conservation

The Natural Areas Act (33-33 C.R.S.) dictates that the Natural Areas Program "*shall identify and protect*" areas that have habitat for rare or endangered plant species in Colorado. The Colorado Natural Areas Program (CNAP) is therefore the only state program whose founding legislation includes rare plant habitat protection. This founding legislation also includes protection of "*habitat for rare or endangered animal*" species. While CNAP performs a variety of other functions as stated in its founding legislation (including protection of areas of natural beauty, examples of native conditions, etc.), the rare plant and rare animal conservation components of the CNAP mission provide the greatest opportunities for enhancements and efficiencies as part of the Parks-DOW merger. Through the merging of Parks and DOW, there is an opportunity for greater collaboration between CNAP and Wildlife Programs (WP) biologists to bolster CNAP's mission to protect significant rare species habitat, while also adding value to the species conservation work that WP biologists are performing statewide.

Wildlife: CNAP cooperatively identifies, monitors and protects Natural Areas that include significant habitat for rare animal species statewide. Through work with voluntary landowners (federal, state, local and private), CNAP adds an additional layer of monitoring and protection for certain properties that house significant rare animal habitats (e.g. Mexican free-tailed bats at Orient Mine, lesser prairie chickens on the Comanche Grasslands, etc.). Thus, CNAP's efforts, while only a fraction of the species conservation work being performed by WP biologists, are complementary to that work and may provide added value. However, the extent to which CNAP has actively played a part in rare animal protection on State Natural Areas has been minimal, and there are lots of opportunities for enhancements in the newly merged agency. Any efforts that result in better communication and collaboration between DOW staff and CNAP staff or volunteers doing wildlife work would enhance CPW's ability to meet its diversified mission. Through greater collaboration, CNAP staff and volunteers can provide much needed wildlife monitoring information that can assist wildlife staff in the conservation work they are pursuing. Conversely, DOW conservation biologists or DWMs that are already engaged in wildlife conservation activities on State Natural Areas could assist CNAP in fulfilling its mission by sharing information with CNAP staff. These 'win-win' solutions would enhance our agencies efforts for rare animal conservation statewide.

Rare Plants: Given that CNAP is the only state program working on rare plant conservation, the newly merged agency will now have both wildlife conservation and rare plant conservation functions under the same umbrella. Wildlife conservation functions performed by WP staff will retain paramount priority in this merged agency given its statutory and programmatic support. We recommend that rare plant conservation performed by CNAP be enhanced through additional collaboration in the new agency to address statewide conservation priorities and any rare plant needs on CPW properties or for DOW projects. Through better collaboration of CNAP and DOW staff, CPW could assure greater species protections as staff perform their required functions (e.g. rare plant surveys could reduce impacts from aerial spraying herbicide in rare plant habitat on State Wildlife Areas). Greater rare plant collaboration could also potentially result in a reduction of costs associated with rare plant surveys (e.g. such surveys could assure there are no unnecessary costs from delays of planned projects). Additionally, joint projects between CNAP and DOW (whether rare plant or rare animal projects) could result in more diversified funding opportunities for the agency, the ability to do more work or multiple conservation benefits. An example would be the Gunnison sage grouse and skiff milkvetch, which may both benefit from common conservation activities and may therefore strengthen certain funding proposals.

Another opportunity that exists is to better integrate rare plant conservation into the species conservation structures that already exist within WP. Through such actions, CPW could provide more

comprehensive species conservation for the state of Colorado. Rare plants make up 75% of the state's rarest species, but cover only a small portion of the state land area (estimates of less than 60,000 acres of G1 and G2 plant habitat in Colorado). And Colorado is ranked 8th in the country for percentage of our plants at risk. Relatively minor steps to formally increase awareness of rare plant conservation may have extraordinarily beneficial outcomes for rare plant protection, and therefore help keep rare plants off of federal lists.

Recommendations

For the reasons outlines above, we would like to recommend the following:

- Bring CNAP under the same Section as wildlife biologists to encourage greater communication and consistent messages from common supervisors (see Alternatives 2, 3 and 4).
- Encourage greater collaboration between CNAP staff and WP staff to provide greater rare plant conservation on DOW projects and greater wildlife conservation on Natural Areas.
- Integrate rare plants into the State Wildlife Action Plan (SWAP) during the next revision. A more comprehensive look at statewide rare plant habitat priorities and how these align with wildlife priorities would help CNAP to meet its function of identifying and protecting rare plant habitat (as laid out in C.R.S. 33-33). To date, six other states have integrated plants in their SWAPs, and three others are working to do so. CNAP has already been working with partners to organize and summarize rare plant data in a format that is compatible with the existing SWAP organizational structure under the guidance of some DOW staff. Much of the information gathering, organization and analyses required for the integration of rare plants into the SWAP has already been paid for and completed. One great benefit of such action would be the greater potential for the joint agency to leverage additional funding for rare plant conservation that may not currently be available without inclusion of rare plants in the SWAP.
- At a minimum, continue to support the rare plant conservation function within the Colorado Natural Areas Program. The maintenance of not only staffing but also a budget for rare plant projects would assure that CNAP could maintain the same level of conservation for rare plants in Colorado. To enhance the Division's capacity to conserve rare plants and keep them off of federal lists, the agency could support a monitoring and stewardship position jointly funded by CPW and the State Land Board (see 'Significant Property Stewardship and Monitoring'). The investment of $40,000 annually into this joint position would result in greater monitoring and stewardship of the most significant DNR properties; this, in turn, would increase CNAP's capacity to focus on a broader and more comprehensive rare plant conservation program. This is an opportunity to assure that CPW adequately meets Colorado's species conservation needs.

Sharing of Internal Expertise

The merging of Parks and DOW provides opportunities for the sharing of the expertise of personnel formerly unavailable due to the separate functioning of the two parent agencies. An integrated agency opens lines of communication that were formerly not apparent or non-existent. Within the CPW, the public will expect expertise to be shared and collaboration to exist between employees, so collaboration and the sharing of expertise should be highly encouraged. This, in turn, will facilitate opportunities to find cost savings, efficiencies, and elegance through collaboration.

Parks Resource Stewardship (RS) Biologists regularly hire outside consultants to collect scientific wildlife information that is used to guide the management process on State Parks. DOW Wildlife Programs (WP) biologists may utilize vegetation ecologists to perform rare plant surveys as part of habitat research.

These purchased services (which may take the form of discretionary purchases, purchase orders, contracts or Inter-Agency Agreements) can take up a large portion of an agency employee's time to develop, oversee and review. Additionally, these external services are likely to be much less cost-effective than if highly-qualified agency personnel performed the work internally.

The new integrated agency offers the opportunity for employees to reach across former boundaries and work together through collaboration and sharing of scientific expertise. There is a wide range of wildlife species expertise within the terrestrial and conservation biologists, aquatic biologists, and the research biologists of the new agency, as well as a wealth of local knowledge of species habitat use by Regional, Area and District wildlife managers. There is also a wealth of knowledge on rare plants, forestry, resource planning, and vegetation management within the Parks Resource Stewardship section.

Wildlife surveys, inventories or monitoring conducted by WP biologists are generally conducted on a landscape level, with property boundaries considered but not driving the scientific process. However, by collecting wildlife data on State Parks and SWAs wherever possible, wildlife species data could serve a statewide wildlife management purpose and provide utility for highly informed management decisions to be made on state owned and managed parcels. .

We recommend more formalized collaboration between agency biologists to reduce the need for external biological contractors where possible. We recognize that contractors are required for the performance of certain types of biological work, and that experts within the agency may not always have the capacity to assist with collaborative biological work. However, whenever possible, the agency would benefit from greater sharing of data, field time, equipment, and expertise in lieu of contracting work to consultants. This type of cooperation between personnel will also begin to erode some of the boundaries that existed within the former two agency structure creating a greater sense of a single agency.

Some examples of this type of collaboration currently exist, but could be expanded upon. Wildlife biologists and stewardship biologists have worked together on projects like creating wildlife monitoring protocols, managing for aquatic nuisance species, performing bat surveys, whitenose syndrome protocols, rare fish management, and grouse management . While examples of this precedence do exist, it is on an overall small scale and they are not integrated within the agency at a high level. We would like to see this integration take place on a broader scale and in a standardized way.

Significant Property Monitoring and Stewardship

Properties managed under the new Division of Parks and Wildlife will include some of the most significant natural features in the state of Colorado. These features, which may include rare species habitats, representative plant communities, fossils or unique geologic formations, are managed as a trust for the citizens of Colorado, and their monitoring and stewardship is of great importance to ensure they are kept in good condition for future generations. The merger of Parks and DOW presents a unique opportunity for the combined agency to enhance the monitoring and stewardship of these most significant properties.

Some of the most significant properties in Parks and DOW, such as Roxborough State Park or Dome Rock State Wildlife Area, are already cooperatively monitored as State Natural Areas. The Colorado Natural Areas Program (CNAP) is working with land managers of these properties to provide annual condition assessments and to lend assistance to protect significant features. However, the current ability of CNAP staff to lend support to CPW land managers on the most significant properties does not meet the needs that the agency has to protect these areas. While there are currently 8 designated Natural Areas on lands managed by Parks or DOW, there are 16 additional sites of statewide significance managed by

CPW that may warrant Natural Area designation and are *not* getting Natural Area monitoring or stewardship. A potential opportunity to bridge this gap may be found in a relationship with another agency within DNR.

For decades, CNAP has been working with the State Land Board (SLB), the other land management agency in the Department of Natural Resources, to provide monitoring and stewardship of their best lands. There are currently 21 State Natural Areas on SLB land and an additional 18 potential SLB Natural Areas without CNAP designation. Similarly as with Parks and Wildlife, CNAP has not been able to meet SLB's needs for monitoring all of the sites with significant natural features, including the 18 potential Natural Areas or the 300,000 acres of Stewardship Trust Lands that are mandated to be monitored and sustainably managed. Because CNAP has the expertise and experience in monitoring significant features such as rare plants, fossil sites and unique plant communities, and because of CNAPs ability to mobilize highly-skilled volunteers, SLB would like to work more closely with CNAP to meet their monitoring and stewardship needs. In order to accomplish this increase in CNAP's capacity, SLB has allocated funding for a half FTE (~$40,000 per year) that would be provided annually to CPW to assist with the monitoring and stewardship of the most significant SLB properties.

We recommend that CPW leadership consider matching the SLB's commitment to support the other half of a joint FTE to enhance CNAP's ability to monitor and steward the most significant properties on CPW lands. This investment of $40,000 annually would 'break down the silos' within the Department of Natural Resources by creating the capacity for Department-wide monitoring and stewardship of the best DNR-managed lands. This unique opportunity resulting from the merging of CNAP's functions with DOW and the offer on the table from SLB may be a way to assure that the best natural features in the newly-merged agency are given adequate attention.

Besides the enhancement of our agency's ability to adequately monitor and protect the best CPW and DNR properties, an additional benefit of this joint CPW-SLB FTE would be the subsequent increase in capacity of the CNAP coordinator to address other agency and statewide conservation needs. If all monitoring and stewardship of CPW and SLB significant properties fell to the joint FTE, than the CNAP Coordinator could enhance CPW rare plant functions and the federal and private land conservation work that is done statewide.

Terrestrial Weed Coordination

Noxious weeds are a significant threat to all natural resources and recreation activities in Colorado, and the threat from weeds is increasing, with new weeds regularly being introduced. Noxious weeds affect both the appearance and biological function of state lands, and are therefore a major threat to the mission of CPW. Additionally, weeds threaten wildlife habitat composition and function across the landscape and management/control/eradication of these invasives are a priority to maintain wildlife populations. This Work Group recognizes that the Invasives Work Group is developing alternatives that address the terrestrial weed function of the new agency. However, because of the extreme biological threat that noxious weeds pose, biologists are compelled to recommend that **there be an employee devoted to the terrestrial weed coordination function.**

Terrestrial weed management on Parks is carried out through a close relationship between region managers, park managers, park resource techs (PRTs) and the Resource Stewardship section. There are currently four Resource Stewardship biologists that combine to play a centralized and active role in terrestrial weed management on properties that has proven to be effective. In this model, the RS Manager works in coordination with Parks staff to prioritize weed management needs annually and to allocate funding devoted to weed management to each Park. Throughout this process, Resource

Stewardship is involved in weed mapping, producing prioritized weed management plans, recommending weed treatment and monitoring methods, and assisting with revegetation to reduce the need for future weed treatments. Weed identification training is provided and weed mapping training is provided upon request. These coordinated statewide activities are helping Parks to address the threat from noxious weeds on Parks (although Parks is still able to only treat ~25% of the weeds on its properties due to limitations in funding).

In DOW, Area Wildlife Managers are responsible for property management, which includes weed management. The Wildlife Property Technicians implement control efforts and perform the work on the ground. The Invasive Species Coordinator, who is currently located in the Aquatics section of Wildlife Programs, provides guidance, technical support and education to field operations to enhance weed management activities on properties. Coordinated weed mapping or prioritization is not currently performed in the DOW and weed management funding is allocated through the regions.

Given the successful model that Parks Resource Stewardship has created for weed management activities on Parks that provides more comprehensive collaboration between statewide prioritization and field implementation, **we recommend that the terrestrial weed function be closely associated with the Resource Stewardship function in the new agency.** The active weed mapping, prioritization and revegetation work performed by RS is most closely aligned with the terrestrial weed function. By assuring the Resource Stewardship biologists are heavily involved with the terrestrial weed function, it would create more fluid exchange of information that would ultimately benefit the coordination of statewide weed prioritization, mapping, etc. on agency properties. This would be especially beneficial if the RS biologists are able to increase their capacity to provide stewardship services to all CPW properties (see Alternative 4). By coordinating efforts between RS biologists and a terrestrial weed coordinator, CPW could gain efficiencies and cost savings through the reduction and elimination of weed treatments by reducing and eradicating weed populations and replacing them with native vegetation.

ALTERNATIVE 1 – MINIMAL INTEGRATION

Alternative 1 aims to accomplish all currently recognized and necessary biological functions under Parks Resource Stewardship (RS) and DOW Wildlife Programs (WP) by maintaining these functions as they currently are. The rationale for advancing Alternative 1 is based on two premises: 1) there is relatively minimal overlap in job responsibilities between RS and WP, and 2) employees in these groups have achieved significant efficiencies and cost savings during the past two years through reorganization, elimination of supervisory FTE, expanded job functions, and budget reductions. Further efforts to achieve cost savings and efficiencies could compromise the ability of biological staff in Resource Stewardship and Wildlife Programs to conduct their job functions. Thus, Alternative 1 is deemed viable in the context of the merger only because it is the safest approach to ensure that the current level of resource stewardship, species conservation, and population management continues to be provided.

This alternative **retains the Aquatic and Terrestrial Sections in the WP Branch in their existing forms** so they may continue focusing on managing game species for harvest and managing declining or sensitive species to keep them off state or federal lists. Alternative 1 likewise **retains the existing Parks RS Section, including CNAP, in its existing form**, to provide the **same level of statewide support for natural resource prioritization and management on State Parks,** including stewardship planning, forestry, noxious weed mapping and assistance, Threatened and Endangered (T&E) species and cultural review of development projects, etc. The Colorado Natural Areas Program would remain under the Resource Stewardship Program to retain close collaboration with other Parks biologists who specialize on

property stewardship. We continue to recommend **including the GIS function within RS**, as this would retain the same level of support for statewide natural resource needs for Parks, which is a model that has worked well for State Parks. However, we understand that these functions are being discussed in other Work Groups.

We recognize that both the ANS and terrestrial weed functions are being addressed in the Invasives Work Group. However, due to the biological nature of these functions, our Work Group makes some recommendations that are outlined in the '*Common Efficiencies and Enhancements Across All Alternatives'* section of this report. One recommendation is that the **Parks ANS function be aligned with the Aquatics section of the WP Branch.** This would eliminate the ANS component from the Resource Stewardship Manager's duties and **increase their capacity to work on stewardship planning and support for Parks**.

Additionally, we recommend that **there be an employee devoted to the terrestrial weed function** and that the **terrestrial weed function be closely associated with the RS function** (see '*Common Efficiencies and Enhancements Across All Alternatives')*. In this alternative, this scenario could be realized by housing the terrestrial weed function within the existing RS Program. By assuring the devoted terrestrial weed function and the RS biologists have a close working relationship, it would create more fluid exchange of information that would ultimately benefit the coordination of statewide weed prioritization, mapping, etc. on agency properties.

Alternative 1 recognizes the functional differences and unique job functions distinguishing RS and WP biologists/scientists. Parks RS biologists presently have diverse job responsibilities such that individual positions are responsible for completing an array of different job functions. For example, one RS biologist is responsible for GIS, Forestry, and T&E/cultural compliance on state parks. One way to achieve efficiency and savings is to have employees diversify; yet RS biologists are already maximally diversified. Changes to the status quo inevitably require RS biologists to become more specialized resulting in the need for others to pick up distributed job functions or to eliminate functions from the agency's priorities. After a review of the functions carried out by biologists in the agency, we believe that there are no expendable biological functions. And DOW Aquatic and Terrestrial staff have limited capability to pick up additional tasks in an efficient way because they are presently responsible for management of all fish and wildlife species and their habitats at a statewide scale. For Alternative 1, further improvements in the biological functions of CPW would be gained only through recommendations described in 'Efficiencies and Enhancements' common to all alternatives (above).

Desired Outcomes & Measures for Success

Desired outcomes for Alternative 1, including efficiencies, enhancements and reduced duplication that may be gained through this alternative:

- Allow biologists and scientists to continue to perform essential job functions at the same level we've been meeting them, assuming funding to support biological work remains.
- Recent efficiencies enacted by WP (including the creation of a Habitat Section, etc.) would be allowed to develop fully.
- Safely assure that essential biological functions in the merged agency would be met. These functions include:
    - Continue to meet the resource monitoring and stewardship needs of State Parks and Natural Areas,
    - Effectively manage populations of game species to support recreational harvest, and

- Effectively manage populations of declining and sensitive species to prevent them from becoming state or federally listed as threatened or endangered.

Our corresponding measures of success are:

- Number of data analysis units (DAUs) being managed at or towards the long-term objectives.
- Increasing trends in license sales and/or customer satisfaction from hunter surveys.
- Decreasing trends in numbers of species petitioned for listing or becoming listed.
- Trends in meeting resource stewardship requirements on **State Parks** (e.g., noxious weed problems decreasing rather than increasing, number of stewardship plans completed and implemented, acres of forest management treatments on Park properties, number of degraded ecological sites decreasing rather than increasing, etc.).

The assumption for Alternative 1 is that recent (i.e., during the past 1-2 years) organizational changes, cost reductions, and FTE savings will lead to optimal functioning, and that additional reorganization at this time may compromise job function rather than improve it.

Information Technology (IT) Considerations

Information technology requirements should not change under this Alternative.

Potential Short-Run Considerations

In the short-run, this alternative preserves efficiencies in both Parks and WP that have been implemented in recent years while ensuring that desired outcomes will continue to be met effectively.

Advantages of this alternative are:

- It is easily implemented,
- It virtually guarantees that biologists will continue to effectively accomplish their currently recognized and necessary biological functions and job responsibilities.
- Biologists will not be asked to re-prioritize tasks at the possible expense of accomplishing core work functions, and they will not have to go through an 'adjustment period'. So this alternative will probably result in the most consistent way to assure the current CPW mission is adequately addressed.
- Existing attempts at efficiencies will not be tampered with and may therefore result in greater efficiencies over time.

Disadvantages of this alternative are:

- There are no additional efficiencies beyond those identified above that are common to all alternatives,
- There is minimal potential for RS staff to support biological needs on SWAs, and for WP staff to assist with species monitoring needs on State Parks, and
- The isolation of RS and WP biologists may result in missed opportunities to collaborate and reach common goals, thereby creating a combined agency that is not reaching its highest potential.

There are no short-run 'hurdles' or potential pitfalls with this alternative because it makes minimal changes. However, it may be unrealistic to assume that separate Parks and Wildlife structures will be retained in the newly merged agency.

Potential Long-Run Considerations

The long-term outlook for this alternative depends entirely on how well efficiencies and cost savings that were adopted prior to the merger are realized in future years. There are no future 'hurdles' or potential pitfalls with this alternative because it makes minimal changes. As alluded to above, this option is the safest approach in the long-run, but it has the least potential to realize additional efficiencies and savings that could result from greater integration of Resource Stewardship and Wildlife Programs biological staff.

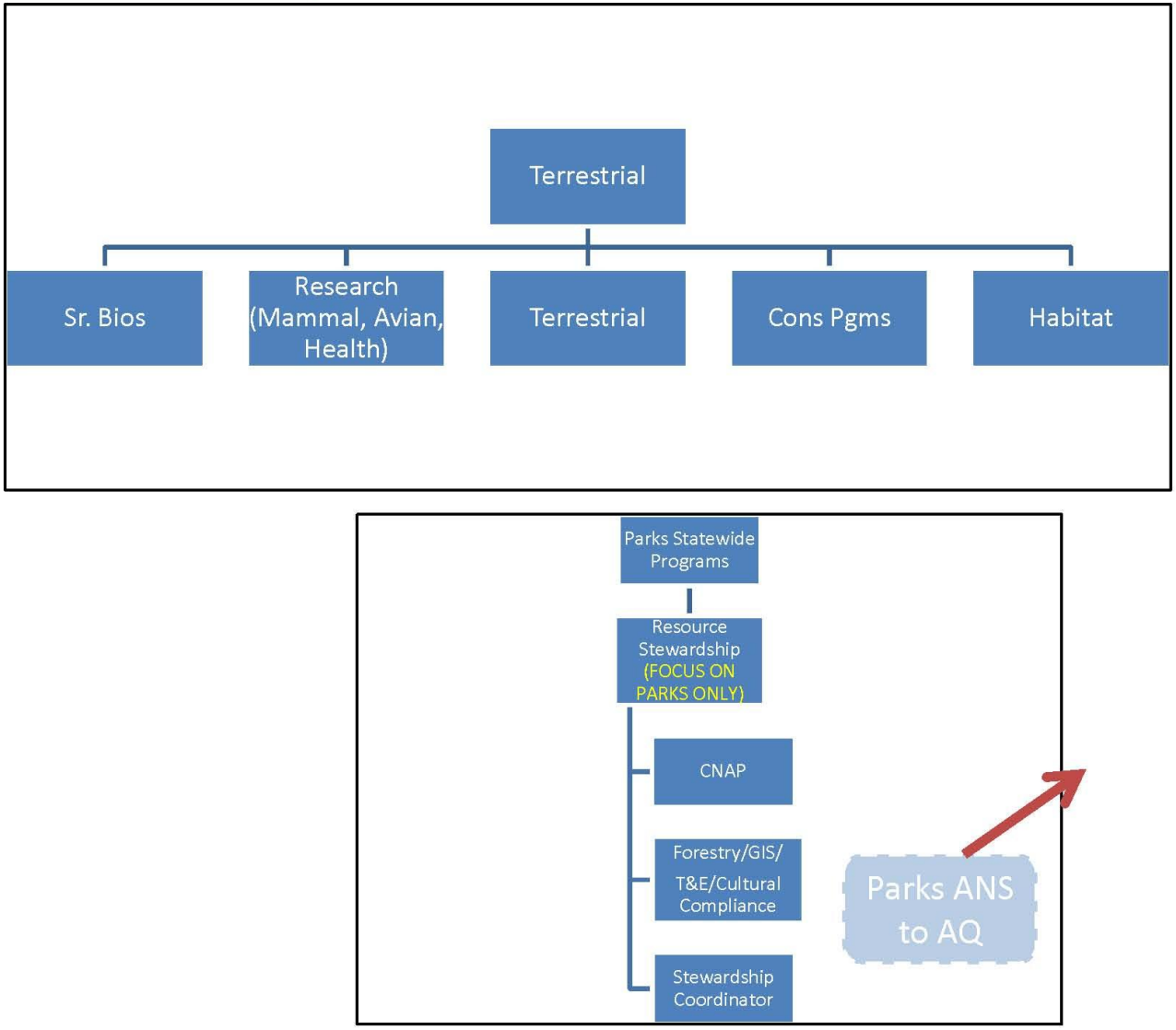
Suggested Statutory Changes

This alternative does not have significant Statutory implications other than the need to retain existing Statutes that direct the work functions of biologists and scientists in RS and WP. Some statutes will require updating to reflect the new Division, Commission/Board, and Director.

Organizational Structure Considerations (see Figure 1)

Alternative 1 has essentially no impact on organizational structure. Alternative 1 retains the existing Parks Resource Stewardship Section, which includes the Colorado Natural Areas Program (CNAP), in its existing form. Alternative 1 likewise retains the Aquatic and Terrestrial Sections in the Wildlife Programs Branch in their existing forms. Under all alternatives we recommend that the vacant Habitat Conservation Program Manager be filled, which is located in the Terrestrial Section of Wildlife Programs. The Parks RS section would be located within Parks Statewide Programs as it is now. This alternative recognizes the clear differences in work function and scale that distinguish RS and WP biologists. Under this alternative, no supervisory or FTE changes would occur, which in part reflects the fact that our Work Group has minimal potential to realize cost savings through FTE given little overlap in job functions between the two agencies.

Figure 1. Alternative 1



ALTERNATIVE 2 – PARTIAL INTEGRATION I

Alternative 2, similar to Alternative 1, generally keeps the biological functions for Parks Resource Stewardship (RS) and DOW Wildlife Programs (WP) separate, but would **house Parks RS under the Resource Support Section of WP**. This option allows RS and WP biologists to focus on meeting their respective parts of the CPW mission as they will not be asked to increase their capacity, alter their focus or distribute duties. This brings biologists whose functions may have some peripheral intersection (although very little direct overlap) into the WP Branch so as to seek additional synergies and collaboration. This arrangement of functions could encourage some additional communication and cooperation between RS and WP biologists. Additionally, RS biologists that provide natural resource support to property managers would be aligned with others that specialize in providing key support across the various branches of the agency to accomplish the mission.

As part of this Alt, the Resource Support Section Supervisor would supervise the Resource Stewardship Program. Our recommendation is that, along with the existing resource support functions of this Supervisor, there be clear direction in the Resource Support Supervisor PDQ to support stewardship and forestry to assure that these functions are not reduced in the new agency.

By moving the RS functions into Resource Support, Parks RS biologists would be more integrated with other functions (e.g. GIS, real estate, water) that also provide support for agency needs. Thus, Stewardship may improve their level of support for protecting Parks' natural resources through synergies with other services provided by Resource Support, especially if other planning functions fell within the structure. GIS is a prime example of where additional collaboration and synergies, between the Parks GIS function (housed within RS) and the DOW GIS function (housed within the Resource Support Section), could be significantly improved just by having the functions under common leadership. Another example is better collaboration with the Climate Change Coordinator as that issue is covered in Stewardship Plans. It is important to note that under this Alternative, **Parks RS would still focus primarily on State Parks natural resource issues**, with some increased capacity for such work as described below.

We recognize that both the ANS and terrestrial weed functions are being addressed in the Invasives Work Group. However, due to the biological nature of these functions, our Work Group makes some recommendations that are outlined in the *Common Efficiencies and Enhancements Across All Alternatives'* section of this report. One recommendation is that the **Parks ANS function be aligned with the Aquatics section of the WP Branch.** This would eliminate the ANS component from the Resource Stewardship Manager's duties and **increase their capacity to work on stewardship planning and support for Parks**.

Additionally, we recommend that **there be an employee devoted to the terrestrial weed function** and that the **terrestrial weed function be closely associated with the RS function** (see '*Common Efficiencies and Enhancements Across All Alternatives')*. In this alternative, it would be more challenging to accomplish this unless the terrestrial weed function was housed within the newly placed Resource Stewardship Program.

The **GIS function of Parks would be retained within the Resource Stewardship Program** to provide the same level of support for mapping needs on Parks. There would be extensive opportunities for greater collaboration between the RS Program and the GIS Program, which would be located within the same Section under this alternative. But the retention of GIS responsibilities by the current Parks GIS

coordinator would be preferred in this alternative to assure consistency in the support that the combined Resource Stewardship Program receives.

The rationale for **keeping Resource Stewardship as a stand-alone Program under the Resource Support Section** is that Resource Stewardship biologists perform a unique set of functions that are not easily integrated with other existing functions or duties. This branch would involve the forestry, stewardship planning, revegetation advice, GIS, environmental/cultural review of development projects and the terrestrial weed functions for State Parks. These functions provide better support to State Parks if kept together under one Program (e.g. forestry projects may be better prioritized with information from stewardship planning, etc.).

An additional feature of this alternative would be to move the statewide functions performed by the **Colorado Natural Areas Program (CNAP) under the Habitat Program of the Terrestrial Section of WP**. This is recommended because of the similarities in the functions of the Habitat Program and CNAP. The Habitat Program works on coordinated, landscape-scale conservation actions to ensure suitable wildlife habitat across property boundaries. The Natural Areas Program coordinates conservation actions with various landowners across the state, with priorities driven by the conservation of significant natural features rather than by land ownership. Thus, although the Habitat Program focuses on wildlife habitat and CNAP focuses on significant natural features, the approach to statewide conservation is very similar. (It also should be noted that it is in CNAP's mandate to help monitor and protect significant wildlife habitat, so many synergies could be gained by more integration in the Habitat Program). Keeping CNAP with the Resource Stewardship Program in Resource Support would have some advantages given the importance of CNAP's property stewardship work, however, similarities with the Terrestrial Section are much greater and would therefore be more beneficial to CNAPs mission.

This alternative **retains the Aquatic and Terrestrial Sections in WP in their existing forms** (with the exception of the addition of CNAP to Habitat) so they may focus on managing game species for harvest and managing declining or sensitive species to keep them off state or federal lists, and conducting associated research.

Alternative 2 retains the job responsibilities that RS currently has and recognizes the functional differences and unique job functions distinguishing RS and WP biologists/scientists. Some additional efficiencies or enhancements may be gained from locating RS in the WP Branch within Resource Support, but generally, biological functions will remained unchanged.

Desired Outcomes & Measures for Success

Desired outcomes for Alternative 2, including efficiencies, enhancements and reduced duplication that may be gained through this alternative:

- Resource Stewardship may improve their level of support for protecting Parks' natural resources through synergies with other support services (e.g. GIS, water), but at the least would continue to meet the resource inventory, monitoring and stewardship needs (planning, weed management, forestry, etc.) of State Parks at the current level.
- Biological needs all addressed in WP Branch.
- Common leadership under WP could help improve potential synergies of RS and WP biologists which would enhance their functions (e.g. wildlife species surveys on state parks performed, advised or supervised by WP).
- Effective management of populations of game species to support recreational harvest.

- Effective management populations of declining and sensitive species to prevent them from becoming state or federally listed as threatened or endangered.
- Sharing of resources and knowledge between RS and WP biologists.
- CNAP statewide conservation function enhanced through collaboration with Habitat biologists.
- CNAP's presence in Terrestrial may result in greater collaboration for DOW rare plant issues and wildlife issues on Natural Areas.
- Recent efficiencies enacted by WP (including the creation of a Habitat Section, etc.) would not be complicated with additional structural changes.

Corresponding measures of success are:

- Number of data analysis units (DAUs) being managed at or towards the long-term objectives.
- Increasing trends in license sales and/or customer satisfaction from hunter surveys.
- Decreasing trends in numbers of species petitioned for listing or becoming listed.
- Additional wildlife habitat monitored and/or protected through collaboration of CNAP and WP Biologists, meeting needs of both CNAP and DOW.
- Rare plant protection successes resulting from collaboration of CNAP and WP biologists.
- Trends in meeting resource stewardship requirements on **State Parks** (e.g., noxious weed problems decreasing rather than increasing, number of stewardship plans completed and implemented, acres of forest management treatments on Park properties, number of degraded ecological sites decreasing rather than increasing, etc.).
- Examples of collaboration between Resource Stewardship and the Resource Support Section employees (e.g. GIS information exchange, work in climate change issues, etc.).

Alternative 2 starts to expand the level of integration of Parks biological functions based on Resource Stewardship's role in the agency as providing 'resource support' for agency land managers to steward our State Parks effectively. Some efficiencies will start to be gained by overlapping these resource stewardship functions with other statewide support functions. There will also be some efficiencies and enhancements of biological functions in the new agency through the occurrence of all these functions under one WP Branch.

The functions of the large number of WP biologists generally do not overlap with the functions of Parks RS biologists (except for Habitat biologists, where some overlap does exist); therefore Alternative 2 does not make any recommendation for changes to these non-overlapping functions. However, efficiencies between the larger group of WP biologists and RS biologists may still be gained through some of the 'Efficiencies and Enhancements Common to All Alternatives' outlined previously.

Information Technology (IT) Considerations

Information technology requirements should not change under this Alternative.

Potential Short-Run Considerations

In the short-run, this alternative preserves a majority of efficiencies in WP that have been implemented in recent years while desired outcomes will be met satisfactorily. The major anticipated hurdle with this alternative is broadening the scope of the Resource Support Section to include stewardship planning and forest management coordination.

Advantages of this alternative are:

- Resource Stewardship will be able to maintain or enhance their level of support for protecting Parks' natural resources through synergies with other services provided by Resource Support (GIS, Water, Real Estate).
- Maintaining a cohesive, dedicated group focused on Resource Stewardship functions to assure this work continues in the new agency.
- Resource Stewardship and forestry work of RS biologists is focused only on Parks, providing slightly enhanced statewide support for natural resource prioritization and management (as opposed to Alternatives 3 and 4 where a broader scope of work for Parks biologists may reduce the focus on Parks in lieu of more support for DOW properties).
- CNAP found in a branch with similar approach to statewide conservation; closer collaboration with Habitat Coordinators, Wetlands and Private Land Coordinators, all of which coincide with CNAP's mission; greater collaboration on rare plants with Terrestrial biologists.
- GIS functions of both agencies are aligned under the Resource Support Section Manager, ensuring a higher level of collaboration.
- Low diversion potential.

Disadvantages of this alternative are:

- Limited increase in biological efficiencies beyond those identified above that are common to all alternatives.
- No potential for Resource Stewardship staff to support stewardship needs (e.g. stewardship inventories, weed management, monitoring) on SWAs. Although forestry management needs on Parks and SWAs would both be addressed, there is potential these activities will be conducted in an uncoordinated fashion.
- Forest management is handled by two disparate systems, depending on land designation. Forest management on SWAs would emphasize wildlife habitat whereas forest management on Parks would emphasize public safety, fuel mitigation, aesthetic and general ecological objectives.
- Staff would have less opportunity to collaborate with a diverse set of biologists in the Terrestrial Section and reach common goals than in Alternatives 3 and 4.
- The functions of RS biologists are generally different from most functions carried out by the Resource Support Section, resulting in challenges in the integration of these groups.
- Coordinated environmental/cultural review of development projects is not implemented agency wide, maintaining two disparate approaches to comply with environmental and cultural laws.

Potential Long-Run Considerations

The long-term outlook for this alternative depends on the acceptance and integration of the Resource Stewardship function into the Resource Support Section. Functional similarities between the Stewardship Program and the whole Resource Support section should be sought and enhanced, and the Resource Support Supervisor must adopt the Resource Stewardship goals and objectives under their charge. Otherwise, Resource Stewardship would likely be marginalized and less effective at achieving its part of the agency's mission.

Additionally, given that the Parks GIS function is located in the Resource Stewardship Program, it is likely that over time this function would be integrated more heavily with the existing GIS Program found within Resource Support. This could be beneficial to the agency only if the unique GIS data collected by and managed by the Parks GIS staff are thoughtfully integrated into the GIS Program's responsibilities.

Suggested Statutory Changes

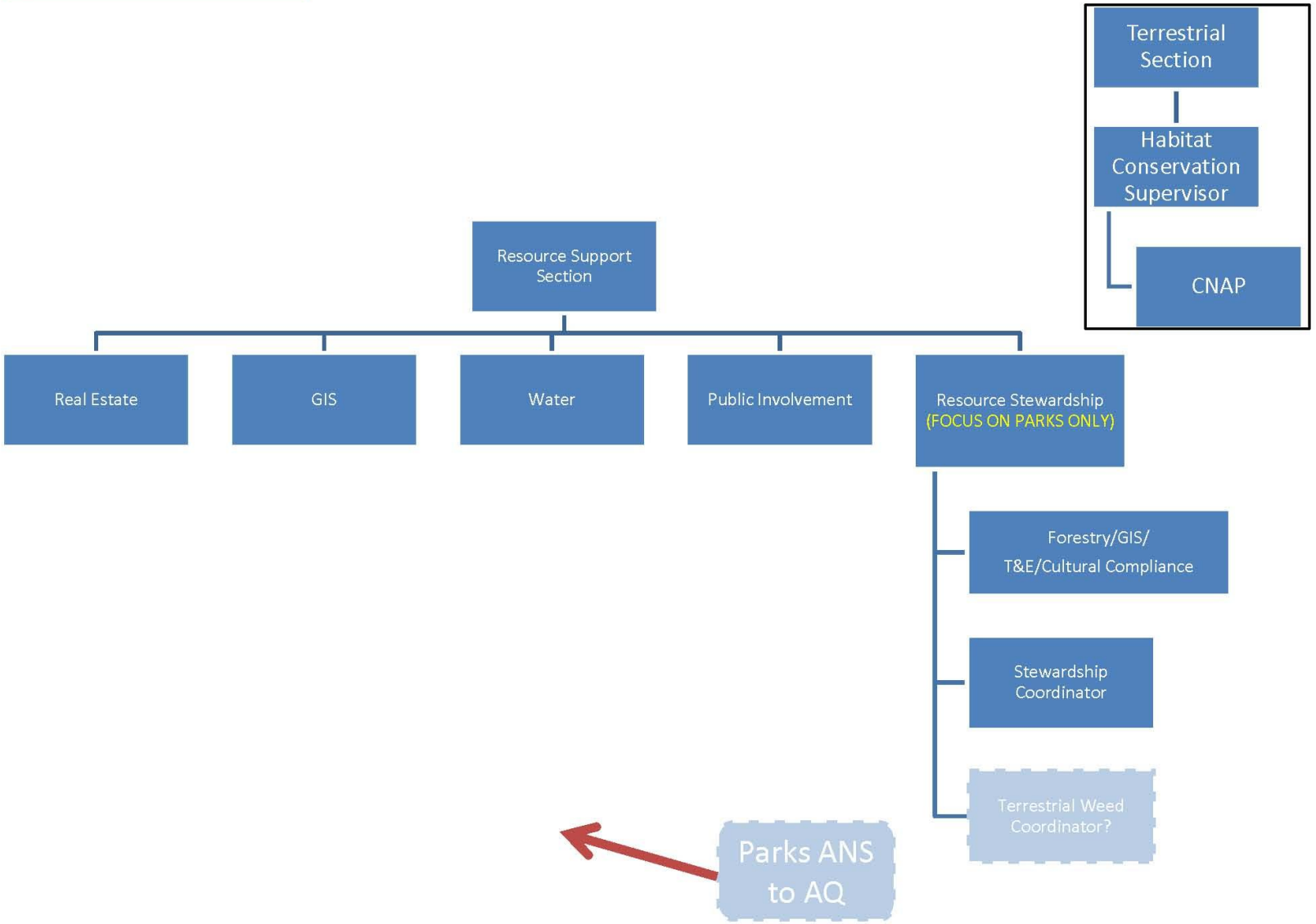
This alternative does not have significant statutory implications other than the need to retain existing Statutes that direct the work functions of biologists and scientists in RS and WP. Some statutes will require updating to reflect the new Division, Commission/Board, and Director.

Organizational Structure Considerations (see Figure 2)

Alternative 2 integrates the Parks Resource Stewardship Program into the Resource Support Section of WP and integrates CNAP into the Habitat Program of the Terrestrial Section of WP. The Resource Support Supervisor PDQ would need to be updated to support stewardship and forestry to assure that these functions are not reduced in the new agency. The aquatic nuisance species (ANS) function of Resource Stewardship is recommended to be placed in the Aquatic Section, whereas the Terrestrial noxious weed function is suggested to be closely associated with the Resource Stewardship Program. . Under this alternative, Resource Stewardship remains mostly intact with the Resource Stewardship Program Manager reporting to the Resource Support Section Manager. The CNAP Coordinator would report to the Habitat Conservation Supervisor. Alternative 2 retains the Aquatic and Terrestrial Sections in the WP Branch in their existing forms. This alternative recognizes the need to maintain a group of employees focused on state property stewardship needs yet enhances synergies by having all biologists working within WP and by having the Parks GIS function and DOW GIS function all within Resource Support. This alternative recognizes the clear differences in work function and scale that distinguish RS and WP biologists. No FTE savings would be realized under this alternative, which reflects the fact that there is little overlap in job responsibilities between the two agencies' biologists. However, work efficiencies would be realized through sharing of resources, expertise and some job functions.

Finally, as the Habitat Program Supervisor is backfilled, the PDQ would have to be revised to include CNAP functions under supervisory duties.

Figure 2. Alternative 2



ALTERNATIVE 3 – PARTIAL INTEGRATION II

Alternative 3 aims to **integrate the Parks Resource Stewardship (RS) and CNAP functions with the existing biological functions performed in the Terrestrial Section of Wildlife Programs (WP)**. This brings biologists whose functions may have some peripheral intersection (although very little direct overlap) into the same Section so as to seek additional synergies and collaboration. This is a step further towards integration than described in Alternative 2. This arrangement of functions would encourage more communication and cooperation between RS and WP biologists and common leadership would also help assure that these entities enhance their respective functions. While the Parks biological functions (stewardship, noxious weeds, forestry, etc.) would be integrated with WP biologists, **the focus of Parks RS biologists would remain on State Parks properties first and foremost, and secondarily support SWA stewardship needs as opportunities arise**. However, this does not necessarily mean that *more* stewardship and forestry work could get done in CPW unless steps are taken to increase the capacity of Resource Stewardship biologists, which is not proposed in this alternative.

Under this alternative, **Resource Stewardship remains as a separate Program within the Terrestrial Section**. The argument for keeping this as a stand-alone Program under Terrestrial is that Resource Stewardship biologists perform a unique set of functions that are not easily integrated with other existing functions or duties. Also, these functions may work better if kept together under one Program (e.g. forestry projects may be better prioritized with information from stewardship planning, etc.).

As part of this Alternative, the Terrestrial Section Supervisor would supervise the Resource Stewardship Program. Our recommendation is that, along with the existing resource support functions of this Supervisor, there be clear direction in the Terrestrial Supervisor PDQ to support stewardship, CNAP and forest management to assure that these functions are not reduced in the new agency.

Under this alternative, **CNAP would preferably perform statewide conservation functions under the most functionally similar group in the new agency, the Habitat Program in the Terrestrial Section. Alternatively, CNAP could remain in the Resource Stewardship Program of Terrestrial** to maintain close stewardship and monitoring collaboration. There are advantages to both options. If found in the Habitat Program, CNAP's statewide conservation mandate may be better supported, along with a closer working relationship with habitat biologists with expertise in particular biomes (sagebrush, grasslands, wetlands, etc.), work on native plants, and collaborate with various landowners. If found in Resource Stewardship, the property stewardship aspect of CNAP would be better supported and the experience with noxious weeds could be better applied to Natural Area work.

We recognize that both the ANS and terrestrial weed functions are being addressed in the Invasives Work Group. However, due to the biological nature of these functions, our Work Group makes some recommendations that are outlined in the *Common Efficiencies and Enhancements Across All Alternatives'* section of this report. One recommendation is that the **Parks ANS function be aligned with the Aquatics section of the WP Branch.** This would eliminate the ANS component from the Resource Stewardship Manager's duties and **increase their capacity to work on stewardship planning and support for Parks and some State Wildlife Areas**.

Additionally, we recommend that **there be an employee devoted to the terrestrial weed function** and that the **terrestrial weed function be closely associated with the RS function** (see '*Common Efficiencies and Enhancements Across All Alternatives')*. In this alternative, this scenario could be realized either by housing the terrestrial weed function within the newly created Resource Stewardship Program or somewhere else in the Terrestrial Section. By assuring the devoted terrestrial weed function and the

Resource Stewardship biologists have a close working relationship, it would create more fluid exchange of information that would ultimately benefit the coordination of statewide weed prioritization, mapping, etc. on agency properties. Additionally, the **GIS function of Parks would be retained within the Resource Stewardship Program** to provide the same level of support for mapping needs on Parks.

This alternative **retains most of the Aquatic and Terrestrial Sections in the WP Branch in their existing forms (with the exception of the potential addition of CNAP to Habitat)** so they may focus on managing game species for harvest, managing declining or sensitive species to recover them so as to no longer need protection of state or federal lists, and conducting associated research.

Desired Outcomes & Measures for Success

Desired outcomes for Alternative 3, including efficiencies, enhancements and reduced duplication that may be gained through this alternative:

- Terrestrial biological needs all addressed in one section.
- Common leadership under Terrestrial would help ensure that RS and WP biologists are taking advantage of potential synergies which would enhance their functions (e.g. wildlife species surveys on state parks performed, advised or supervised by WP).
- Effective management of populations of game species to support recreational harvest.
- Effective management populations of declining and sensitive species to prevent them from becoming state or federally listed as threatened or endangered.
- Sharing of resources, knowledge, and to a limited extent, job functions, between RS and WP biologists.
- CNAP statewide conservation function enhanced through collaboration with Habitat biologists.
- CNAP's presence in Terrestrial may result in greater collaboration for DOW rare plant issues and wildlife issues on Natural Areas.
- Cost savings related to bringing in additional grant funding for forestry projects due to the inclusion of DOW properties in the forestry function (e.g. grant funding for fuel mitigation on DOW properties).
- The resource stewardship (planning, weed management, forestry, etc.) of State Parks does not decline significantly and some stewardship support for DOW properties would be provided as opportunities arise. This would begin a process leading to more consistent and widespread protection of natural resources on Parks and SWAs.
- Potential cost saving due to native seed and plant coordination (cooperation between Native Seed Coordinator and Parks volunteers to collect wildland seed, etc.).

Corresponding measures of success are:

- Number of data analysis units (DAUs) being managed at or towards the long-term objectives.
- Increasing trends in license sales and/or customer satisfaction from hunter surveys.
- Decreasing trends in numbers of species petitioned for listing or becoming listed.
- Amount of collaborative projects between Resource Stewardship biologists and Terrestrial biologists (e.g. wildlife surveys).

- Additional wildlife habitat monitored and/or protected through collaboration of CNAP and WP Biologists, meeting needs of both CNAP and DOW.
- Rare plant protection successes resulting from collaboration of CNAP and WP biologists.
- Trends in meeting resource stewardship requirements on **State Parks and some SWAs** (e.g., noxious weed problems decreasing rather than increasing, number of stewardship plans completed and implemented, acres of forest management treatments on Park properties, number of degraded ecological sites decreasing rather than increasing, etc.).
    - Of particular interest would be the number of Stewardship Plans, weed mapping/management plans and/or public safety forest management projects (e.g. for beetle kill) on SWAs that would not have been accomplished previously.

Under this alternative, our Work Group is confident we would continue to accomplish our desired outcomes at a high level and likely enhance our efficiency through sharing of resources, knowledge, and job functions.

Information Technology (IT) Considerations

Information technology requirements should not change significantly under this Alternative.

Potential Short-Run Considerations

In the short-run, this alternative builds upon recently implemented efficiencies by placing biologists in close working environments that will facilitate sharing of resources, expertise and some job functions.

Advantages of this alternative are:

- Maintaining a cohesive, dedicated group focused on Resource Stewardship functions to assure this work continues in the new agency.
- DOW properties would be provided limited assistance with stewardship planning, noxious weed support, inventory and monitoring, as opportunities arise. This would begin to address natural resource stewardship needs on CPW properties in a more comprehensive fashion.
- Terrestrial biological needs are all addressed in one Section (depending on the location of the terrestrial weed function as recommended by the Invasives Work Group). Combines RS biologists with other biologists in the agency.
- Greater collaboration between Resource Stewardship and CNAP biologists and Terrestrial biologists (e.g. wildlife surveys).
- CNAP found in a branch with similar approach to statewide conservation; closer collaboration with Habitat Coordinators, Wetlands and Private Land Coordinators, all of which coincide with CNAP's mission; greater collaboration on rare plants with all Terrestrial biologists.

Disadvantages and potential hurdles of implementing this alternative are:

- Without further increasing the capacity of the Resource Stewardship Program (as in Alternative 4), expanding Parks stewardship role to include more DOW properties may lessen attention to Parks needs.
- The Resource Stewardship Program would be significantly smaller than the other 10 programmatic groups in Terrestrial.

- Depending on the resulting makeup of the Resource Stewardship Program, the Resource Stewardship Manager may supervise less than 3 FTE, requiring the creation of a Work Unit, which wouldn't be viable directly under the Terrestrial supervisor. Regardless, this Resource Stewardship Manager would supervise fewer employees than any other supervisors in the Terrestrial section, which may not be viable in the long run.
- Resource Stewardship biologists expanding to limited work on SWAs could face challenges tracking time and budgets to avoid Federal Aid diversion.

Potential Long-Run Considerations

The long-term outlook for this alternative depends on the acceptance and integration of the Resource Stewardship function into the Terrestrial Section. This also depends, in a large part, on how well biologists are able to collaborate on complementary functions. One potential hurdle in the long-run is that the Resource Stewardship Program would be significantly smaller than the other 10 Programs in Terrestrial. It is likely that over time efforts would be made to "equalize" workload of supervisors and possibly restructure the Resource Stewardship Program. This could potentially compromise one of the main benefits of this alternative – maintaining a dedicated group of employees for accomplishing stewardship needs on State Parks. Specifically, If CNAP is in the Habitat section and the current Parks ANS function goes elsewhere without Parks retaining an FTE for terrestrial weed functions, there are issues with the Resource Stewardship Supervisor supervising less than 3 FTE (this would need to be a 'Work Unit').

Aside from this hurdle, Alternative 3 is a viable long-term solution for achieving efficiencies while guaranteeing that desired outcomes are adequately met.

Suggested Statutory Changes

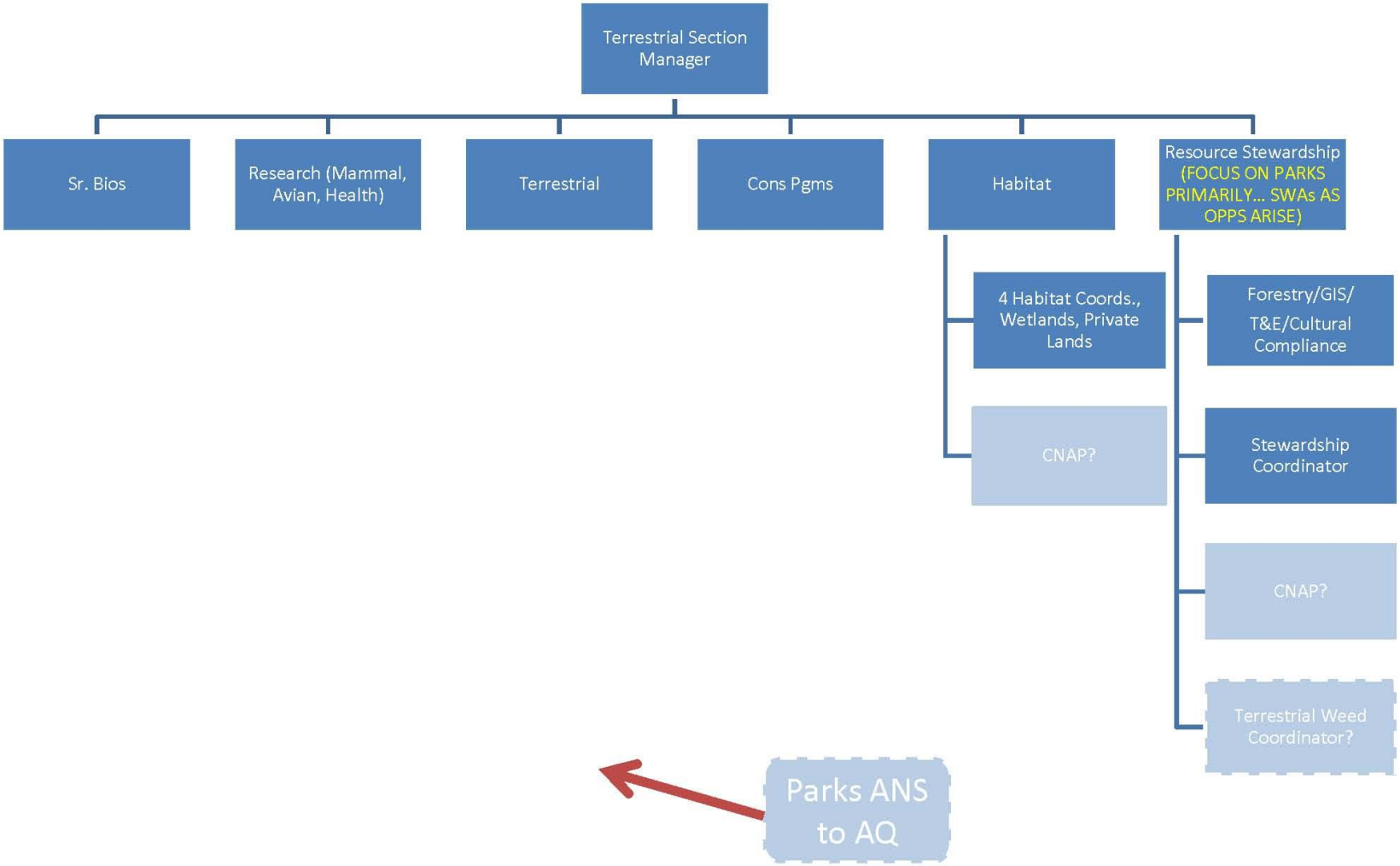
This alternative does not have significant Statutory implications other than the need to retain existing Statutes that direct the work functions of biologists and scientists in RS and WP. Some statutes will require updating to reflect the new Division, Commission/Board, and Director.

Organizational Structure Considerations (see Figure 3)

Alternative 3 integrates the Parks Resource Stewardship Program and CNAP into the Terrestrial Section of WP . The Terrestrial Supervisor PDQ would need to be updated to support stewardship and forestry to assure that these functions are not reduced in the new agency. The aquatic nuisance species (ANS) function of Resource Stewardship is recommended to be placed in the Aquatic Section, whereas the Terrestrial noxious weed function is suggested to be closely associated with the Resource Stewardship Program. Under this alternative, Resource Stewardship remains intact with the Resource Stewardship Manager reporting directly to the Terrestrial Section Manager. CNAP is preferably moved to the Habitat Conservation program of Terrestrial or retained within the Resource Stewardship program. No FTE savings would be realized under this alternative, which reflects the fact that there is little overlap in job responsibilities between the two agencies. However, work efficiencies would be realized through sharing of resources, expertise and some job functions.

Finally, as the Habitat Program Supervisor is backfilled, the PDQ would have to be revised to include CNAP functions under supervisory duties if CNAP is placed in that Program.

Figure 3. Alternative 3



ALTERNATIVE 4 – MAXIMUM INTEGRATION

The primary overlap in biological functions of Parks Resource Stewardship (RS) and DOW Wildlife Programs (WP) occurs with the Habitat Conservation Program in DOW. Alternative 4 recognizes the similarities in these programs by recommending that **Parks RS be integrated with the Habitat Conservation Program within the Terrestrial Section of WP**. These groups both work towards natural resource maintenance and enhancement by promoting appropriate land management activities. There are some obvious differences in these groups' objectives: Resource Stewardship works toward the maintenance or enhancement of natural, cultural, scenic or scientific resources on State Park properties; Habitat Coordinators work toward the maintenance or enhancement of habitat to benefit wildlife species across the landscape. However, both groups perform their duties by analyzing, promoting and working towards beneficial land management options. Additionally, both groups work heavily in vegetation management and native plants. There would therefore be efficiencies and enhancements gained by having these groups better integrated under the same supervisory structure.

The Habitat Conservation Supervisor is currently a vacancy. This alternative recommends that the **Habitat Conservation Supervisor position be filled to provide leadership to the new 'Habitat Conservation and Resource Stewardship Program' within the Terrestrial Section**. Our recommendation is that, along with the existing wildlife habitat functions of this position, there be clear direction in the Habitat Conservation Supervisor PDQ to support stewardship, forestry and CNAP to assure that these functions are not reduced in the new agency.

Within the Habitat Conservation Program, **Resource Stewardship could be kept as a 'Work Unit'** with the current Resource Stewardship Manager as the unit leader. Keeping Resource Stewardship as a Work Unit within a Program would have several practical benefits. A cohesive Work Unit would assure that those performing stewardship functions are maximally coordinated (e.g. if Resource Stewardship and Forestry FTE's are highly coordinated, noxious weed and sensitive species issues would be adequately addressed in forestry projects). In this scenario, the Resource Stewardship group would be joining a group that already has set priorities and objectives. Retaining a cohesive unit to provide stewardship support with a Work Unit leader to guide priorities may lower the risk of dispersing and possibly dissipating the importance of Resource Stewardship over time.

Alternatively, we recognize the possibility that the Resource Stewardship Manager could potentially qualify for and either test into the Habitat Conservation Supervisor position or be transferred into this position if the PDQ was revised to allow a GPV to move into a position that is currently a WMV. Was this to occur, there could be a vacancy in the Resource Stewardship Manager position. **We recommend that the Resource Stewardship Manager position be retained with a Resource Stewardship-focused function**. The Resource Stewardship function that currently provides inventory, monitoring and protection of the natural resources on State Parks would not be possible without the three dedicated FTE's that currently focus on these tasks (RS Manager, Stewardship Coordinator and Forestry). This streamlined group performs essential functions for the agency. If the RS Manager position were to be reallocated or lost, this would effectively compromise the agency's ability to perform Stewardship for properties, which we believe would be inconsistent with the intention of this merger. Additionally, the retention of a third Resource Stewardship FTE would provide the opportunity to provide stewardship services across CPW properties, thereby realizing an expressed need recognized by DNR leadership.

Should the RS Manager position become vacant, it may be possible to re-classify the position as a GPIV instead of a GPV to realize some cost savings. This would require the dispersal of all Resource Stewardship positions out of the Resource Stewardship Work Unit to report directly to the newly hired

Habitat Conservation and Resource Stewardship Supervisor. **If the Habitat/Resource Supervisor position had a clear and equal charge to implement both habitat conservation and resource stewardship, the assimilation of the Work Unit into this Program may be viable**, but there are benefits to keeping Resource Stewardship as a Work Unit that are mentioned above.

The Resource Stewardship Program currently assists Parks Field Operations staff to address natural resource management needs on Parks through stewardship planning, weed management assistance, forestry projects, etc. A close working relationship between Resource Stewardship and Parks field staff has produced an effective model for keeping Parks natural resources in the best condition possible while assisting with public safety issues (i.e. assuring beetle-kill trees don't fall on visitors). Under Alternative 4, we recommend that **Resource Stewardship staff support property stewardship and work with Habitat Coordinators to implement multiple objectives for forest management on the highest priorities in the new agency, irrespective of property type (i.e. Park or SWA)**. This would enhance for the consistency of property stewardship and forestry on both Parks and SWAs. However, this does not necessarily mean that *more* stewardship and forest management work could get done unless steps are taken to increase the capacity of Resource Stewardship biologists (including the Program Manager, the Stewardship Coordinator and the current Forestry/GIS/T&E positions).

It should be clear the 'Forestry' or 'forest management' function described for the Parks Resource Stewardship biologist includes vegetation management work performed only on Parks properties and intended to meet public safety, fuel mitigation, aesthetic and general ecological objectives. This work primarily takes place on forests but can include veg management on woodlands, shrublands or grasslands on Parks. The 'forestry' position has fundamental differences with the existing 'Forest Habitat Coordinator' that coordinates vegetation management work on forests statewide for the benefit of wildlife habitat improvement. These positions, while different in their scope and objectives, have great potential for collaboration to assure the agency meets multiple objectives with the vegetation management work that is performed. Occurrence of both of these positions in the Habitat/Resource Program would encourage extensive collaboration.

Alternative 4 includes a model for increasing the agency's capacity for property stewardship through the sharing of some functions that may overlap with existing DOW functions. To increase capacity for property stewardship functions (planning, weed mapping, etc.), some adjustments could be made to the priorities of the Parks Resource Stewardship Manager position. As mentioned in the Aquatic Nuisance Species '*Common Efficiencies and Enhancements Across All Alternatives*', the **movement of the ANS function would increase the RS Manager position's capacity to work on stewardship planning and support for both Parks and State Wildlife Areas**. Additionally in this Alternative, if the Resource Stewardship Manager was vacated, the reduction of the vacant GPV to a GPIV could eliminate the supervisory function of this position. These supervisory responsibilities could then be shifted to meet additional Resource Stewardship needs on state properties. **This outcome would meet a need expressed in DNR for more property stewardship in the CPW.**

Additionally, one RS biologist currently coordinates Parks GIS, forestry and T&E/Cultural Compliance. We recommend in this alternative that the **majority of the Parks GIS functions be transferred over to the GIS Program found under the Resource Support Section of WP**. These transferred GIS functions would include the maintenance and coordination of all merged datasets that would be easier to handle in one unit in the new agency (i.e. real estate, water, facilities, etc.). This FTE could retain some level of coordination for GIS datasets that are specific to the functions of the Resource Stewardship biologists, at least for the first couple of years after the merger. This would assure that some Parks biological data, which would generally be uncommon to DOW staff, is handled consistently and is easily available for

stewardship planning. We acknowledge that the GIS function is being primarily addressed within the Real Estate and Water Work Group. However, we make this recommendation because by reducing the GIS functions of this FTE, this would **create more capacity to expand the forest management function in our agency** to include both Parks and DOW properties. Under this scenario, the FTE would continue to oversee and coordinate all forest management on State Parks. In addition, and under the guidance of the Habitat Coordinators, the Parks FTE could plan and/or implement vegetation management projects to meet public safety, fuel mitigation, aesthetic and wildlife habitat improvement objectives on DOW properties as well. In collaboration with wildlife habitat management being performed by the WP Habitat Coordinators, this would increase the agency's capacity to address its highest priority vegetation management issues (such as public safety).

Another function performed by Resource Stewardship biologists that could be better integrated into the new agency is the review of development projects on both Parks and SWA's for compliance with threatened or endangered (T&E) species or cultural regulations. This function has been required under Parks Directive B-304 since 2009, but has been performed since 2004 to assure compliance of ground-breaking development projects with all state cultural regulations or federal or state T&E laws. These reviews require extensive collaboration with field staff and capital development personnel to assure a timely process. These reviews have never halted a proposed project on State Parks, and they have assured that Parks is in compliance with all federal and state requirements. This function has primarily been performed by the same FTE that performs forestry and GIS for State Parks. However, if CPW leadership believes that these compliance reviews should be enhanced and/or expanded to include some DOW capital developments as well, the current model for their processing would be inadequate. With the merger of Parks and DOW, some of the experts needed to adequately review proposed development projects are found in the combined agency and a new model for assuring proper reviews may be developed. For example, some portions of the reviews could be performed by the GIS Section that performs spatial overlays of sensitive species, Senior Biologists that provide expert opinion on T&E wildlife, CNAP staff that provide expert opinion on T&E plants, or Species Conservation Coordinators as needed. By further integrating these functions with experts in the agency, this may result in better compliance with state and federal laws. Additionally, along with the redistribution of most Parks GIS functions from a highly diversified GIS/Forestry/T&E FTE, this would create a more specialized forest management coordinator who can work more closely with Habitat Coordinators to reach common forest management objectives on CPW properties, furthering more comprehensive property stewardship.

Alternative 4 also recommends the movement of statewide functions performed by the **Colorado Natural Areas Program (CNAP) into the Habitat Conservation Program within the Terrestrial Section of the WP Branch**. CNAP and the Habitat Conservation Program are similar in that they both work with landowners at a landscape scale with priorities driven by the conservation needs rather than by land ownership. Although the Habitat Program focuses on wildlife habitat and CNAP focuses on significant natural features, the approach to statewide conservation is very similar. (It also should be noted that it is in CNAP's mission to help monitor and protect significant *wildlife habitat*, so many synergies could be gained by more integration in the Habitat branch). An option under this alternative is to **house CNAP in the 'Resource Stewardship Work Unit' described above or as a direct report to the Habitat/Stewardship Supervisor**. If found in a Resource Stewardship Work Unit, the property stewardship aspect of CNAP would be better supported and the expertise with noxious weeds could be better applied to Natural Area work. If found directly under the Habitat Supervisor, CNAP's statewide conservation mandate may be better supported and result in closer collaboration on particular biomes (sagebrush, grasslands, wetlands, etc.), native plants or landowner relationships.

We recognize that both the ANS and terrestrial weed functions are being addressed in the Invasives Work Group. However, due to the biological nature of these functions, our Work Group makes some recommendations that are outlined in the *Common Efficiencies and Enhancements Across All Alternatives'* section of this report. One recommendation is that the **Parks ANS function be aligned with the Aquatics section of the WP branch.**

Additionally, we recommend that **there be an employee devoted to the terrestrial weed function** and that the **terrestrial weed function be closely associated with the RS function** (see '*Common Efficiencies and Enhancements Across All Alternatives')*. In this alternative, this scenario could be realized either by housing the terrestrial weed function within the same Section (Terrestrial) or Program (Habitat) as the Resource Stewardship function. By assuring the devoted terrestrial weed function and the Resource Stewardship biologists have a close working relationship, it would create more fluid exchange of information that would ultimately benefit the coordination of statewide weed prioritization, mapping, etc. on agency properties.

Desired Outcomes & Measures for Success

Desired outcomes for Alternative 4, including efficiencies, enhancements and reduced duplication that may be gained through this alternative:

- Greater integration of complementary biological functions performed by RS and WP would result in more efficient collaboration. By integrating Resource Stewardship and Habitat Conservation into the same Program, the following functions would be more integrated: Parks Stewardship Planning and SWA Habitat Management Planning; Forestry and Habitat Management activities on state properties; cooperation between Seed Warehouse Manager and Parks native plant functions.
- A 'Habitat Conservation/Resource Stewardship' Program under the Terrestrial Section would better address the agency's needs for both wildlife habitat conservation and support for property inventory, monitoring and stewardship.
- Optimally meet the resource stewardship needs of state properties through enhancing core functions within the current Parks Resource Stewardship Program. More consistent and widespread inventory, monitoring and stewardship of natural resource values on CPW-managed lands (State Parks and SWAs). Maximized efficiency with respect to property natural resource planning.
- Effectively manage populations of game species to support recreational harvest.
- Effectively manage populations of declining and sensitive species to prevent them from becoming state or federally listed as threatened or endangered.
- The reduction of some duplication of job responsibilities (e.g. GIS functions in RS and WP).
- CNAP statewide conservation function enhanced through collaboration with Habitat biologists.
- CNAP's presence in Terrestrial will result in greater collaboration for DOW rare plant issues and wildlife issues on Natural Areas.
- A streamlined process for T&E and cultural reviews of development projects, assuring compliance with state and federal regulations.
- Cost savings related to bringing in additional grant funding for forestry projects due to the increased employee capacity to pursue grants.

- Potential cost saving and efficiencies due to native seed and plant coordination (e.g. cooperation between Seed Warehouse Manager and Parks volunteers to collect wildland seed, etc.).
- Potential cost-savings related to more comprehensive approach to stewardship on CPW properties, including a reduction in the cost of weed management over time, retention or enhancement of more 'natural' and aesthetically pleasing landscapes on CPW properties which would retain or attract more visitors to Parks and SWAs.
- Potential cost-savings related to the re-classification of a GPV position to a GPIV, depending on personnel issues.

Corresponding measures of success are:

- Number of data analysis units (DAUs) being managed at or towards the long-term objectives.
- Increasing trends in license sales and/or customer satisfaction from hunter surveys.
- Decreasing trends in numbers of species petitioned for listing or becoming listed.
- Amount of collaborative projects between Resource Stewardship biologists and Terrestrial biologists (e.g. wildlife surveys).
- Additional wildlife habitat monitored and/or protected through collaboration of CNAP and WP Biologists.
- Rare plant protection successes resulting from collaboration of CNAP and WP biologists.
- Trends in meeting resource stewardship requirements on **State Parks and SWAs** (e.g., noxious weed problems decreasing rather than increasing, number of stewardship plans completed and implemented, acres of forest management treatments on Park properties, number of degraded ecological sites decreasing rather than increasing, etc.).
    - Of particular interest would be the number of Stewardship Plans, weed mapping/management plans and/or public safety forest management projects (e.g. for beetle kill) on SWAs that would not have been accomplished previously.
- Number of T&E/Cultural compliance reviews performed in a timely manner for appropriate development projects on both State Parks and SWAs.

Alternative 4 aims to integrate the most complementary functions of WP and RS biologists into the same program to realize efficiencies and to enhance the ability of our agency to meet our combined mission (specifically the resource stewardship needs of the agency). The functions of the large number of WP biologists generally do not overlap with the functions of RS biologists; therefore Alternative 4 does not make any recommendation for changes to these non-overlapping functions. However, efficiencies between the larger group of WP wildlife biologists and RS biologists may still be gained through some of the 'Efficiencies and Enhancements Common to All Alternatives' outlined previously.

Information Technology (IT) Considerations

The movement of a majority of the Parks GIS function into the WP GIS Section may require additional IT support to assure that Parks RS biologists have access to all necessary servers, etc. Refer to the Real Estate/Water Work Group report for GIS IT considerations.

Potential Short-Run Considerations

This alternative capitalizes on areas of job function overlap to accomplish work efficiencies. In the short term, this alternative would result in the greatest efficiencies and enhancements of the agency's biological functions while providing increased capacity for the agency's property stewardship needs. Alternative 4 comes closest to meeting the goals of the Parks-DOW merger while maintaining the diverse array of job functions performed by RS and WP biologists/scientists. However, Alternative 4 would also require the greatest changes to some biologist's job duties and priorities. The more extensive integration of complementary functions in the new agency would necessarily lead to a review of the priorities and duties of the biologists found in the newly merged 'Habitat Conservation and Resource Stewardship' Program. Depending on the level of integrated functions that leadership sought, there will likely be a need for additional training, a readjustment of existing priorities and the development of more formalized processes for collaboration between Resource Stewardship and Habitat biologists to assure that re-structuring also resulted in greater efficiencies.

Advantages of this alternative are:

- Places all Resource Stewardship, CNAP, and Habitat Coordinator biologists under a single Habitat Conservation and Resource Stewardship supervisor, thereby addressing similar biological functions in one Program (depending on the location of the terrestrial weed function as recommended by the Invasives Work Group). Combines RS biologists with other biologists in the agency.
- Greater collaboration between Resource Stewardship and CNAP biologists and Terrestrial biologists (e.g. wildlife surveys).
- Broader stewardship planning, noxious weed support, inventory and monitoring on both Parks and State Wildlife Areas, which would meet a need expressed in DNR for more property stewardship in the CPW.
- Enhanced opportunities to meet multiple objectives through vegetation management and forestry work on CPW properties, further providing for more comprehensive property stewardship. Improved public safety through protection of recreationists and visitors from effects of pine beetle and other insect and disease epidemics. Improved protection of communities and watersheds from negative effects of wildfire. A greater collaboration between the Parks forestry function and the wildlife habitat conservation function in the current WP Habitat Program.
- One process to assure agency compliance with State and Federal cultural and T&E regulations.
- CNAP found in a branch with similar approach to statewide conservation; closer collaboration with Habitat Coordinators, Wetlands and Private Land Coordinators, all of which coincide with CNAP's mission; greater collaboration on rare plants with all Terrestrial biologists.
- Most potential for cost-savings.

Disadvantages and potential hurdles of implementing this alternative are:

- Expanding Parks stewardship and forestry roles to include more support for DOW properties would lessen attention to Parks needs (depending on prioritization). The lower priority needs on Parks would not be addressed as thoroughly as they are in the current system. This could lead to the perception of decreased stewardship and forest management support for Parks.

- Biologists working in the same Program with responsibilities for both Parks and SWAs (e.g. Forestry, Resource Stewardship, Habitat management) could face significant challenges tracking time and budgets to avoid Federal Aid diversion.
- Some re-prioritization of job duties by both RS and WP biologists (as well as some of the DOW GIS Program staff) may compromise their ability to accomplish all desired outcomes. For example, an efficiency could be gained through Habitat Coordinators contributing wildlife habitat information to stewardship plans on state properties; but this would require a proportional reduction in landscape-level habitat management planning, implementation, and monitoring.
- Resource Stewardship would not retain its status as a distinct Program in the new agency, thereby potentially marginalizing the importance of this function.

Potential Long-Run Considerations

The long-term outlook for this alternative depends, in a large part, on how well biologists are able to collaborate on complementary functions. The acceptance and integration of the Resource Stewardship function into the Terrestrial Section. This, in turn, may largely depend on how much importance supervisors place on collaboration and what the functional priorities of the new 'Habitat Conservation and Resource Stewardship' Program may be. Prioritization of work activities will be critical for this alternative to succeed. This alternative will likely mean that lower priority stewardship and habitat management needs on state properties will not be addressed, or at least not in as timely of manner as present. However, higher priority needs would be addressed across all state properties better than they have been met to date. That is, biologists with differing skill sets and job functions could collaborate to provide biological support to all properties. SWAs could benefit from the added expertise and job support of Parks stewardship biologists and State Parks will benefit from the added expertise and job support of WP habitat coordinators and field level biological staff. It is understood, however, that without additional FTE, lower priority needs on properties will not be accomplished because the same number of staff will be covering a much larger number of properties. This will be the case because there is relatively little overlap in job responsibilities of stewardship biologists and habitat coordinators. The Federal-Aid diversion issue, as explained above, will also be a long-run consideration. The magnitude of this challenge will likely depend on how well it is handled in the short-run immediately following the merger.

Suggested Statutory Changes

This Alternative provides a plan to enhance opportunities for forest management work on CPW properties. Currently, State Statute #33-10-108 (3) addresses the need for State Parks to use fire mitigation personnel to conduct treatments on forested land. If the forestry function of the combined CPW is going to include a broader scope of forestry projects on both Parks and SWAs, we recommend updating this statute to reflect the importance of such work on all CPW properties and to add the Colorado State Forest Service as an entity that can help provide these services. Similarly, Alternative 4 suggests the importance of reviewing capital development projects in the combined agency for compliance with T&E and cultural regulations. State Parks currently has a Directive that mandates such reviews (Directive B-304). If leadership sees this function as important for the combined agency, this Directive could be updated accordingly. Several other directives or policies have minor changes, a listing of those can be found starting on Page 11.

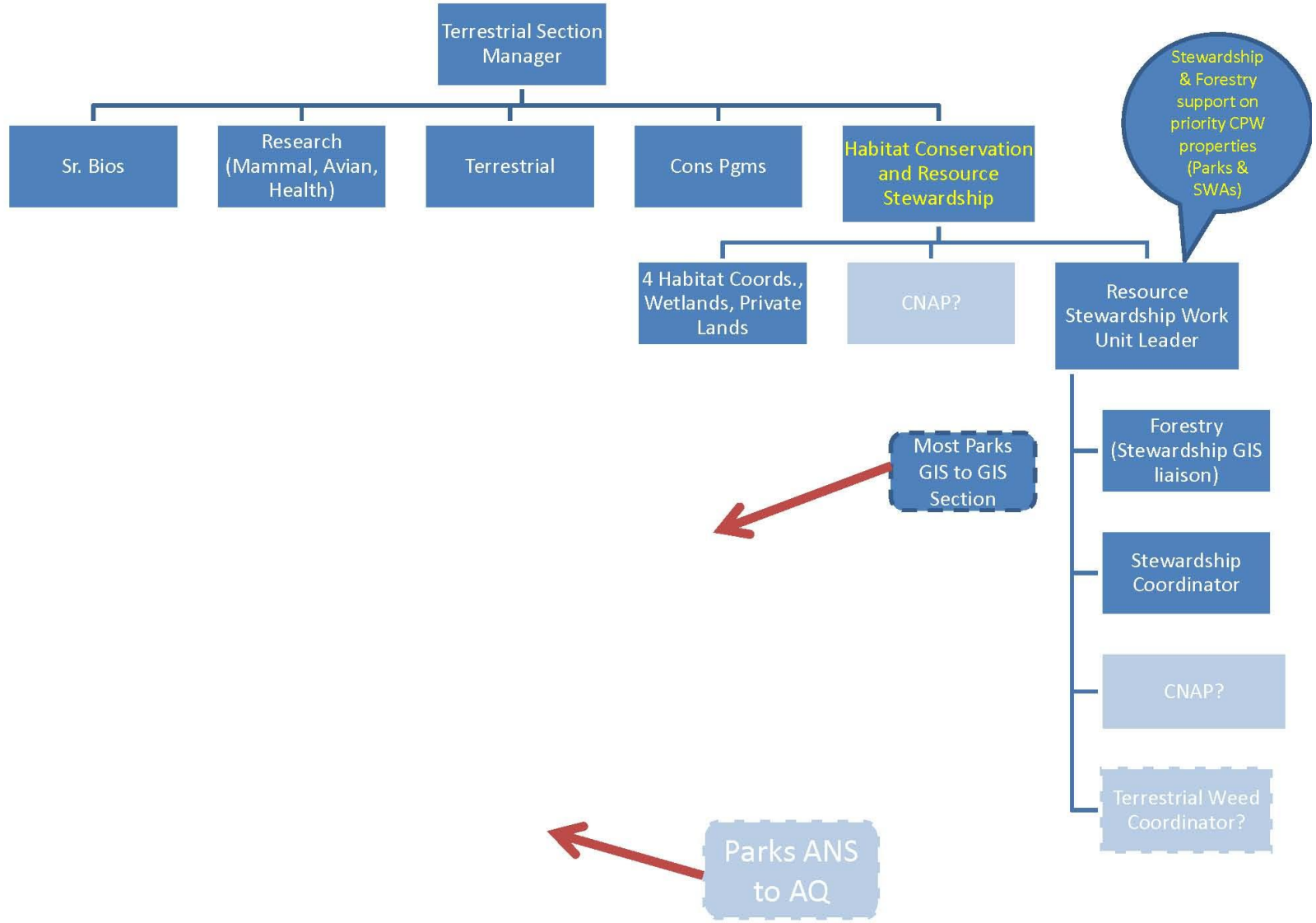
Organizational Structure Considerations (see Figure 4)

Alternative 4 requires further integration of existing organizational structures. Alternative 4 integrates the Parks Resource Stewardship Program and CNAP into the Habitat Conservation Program within the Terrestrial Section of WP. This would create a new 'Habitat Conservation and Resource Stewardship Program' within the Terrestrial Section. The Habitat Conservation Supervisor position would be filled with a PDQ to represent both habitat and resource stewardship functions. Resource Stewardship could be kept as a 'Work Unit' with the Resource Stewardship Manager as the unit leader. An option under this alternative is to house CNAP in the 'Resource Stewardship Work Unit' or as a direct report to the Habitat Conservation Supervisor.

Alternatively, the current Resource Stewardship Manager could potentially qualify for and either test into the Habitat Conservation Supervisor position or be transferred into this position if the PDQ was revised to allow a GPV to move into a position that is currently a WMV. Was this to occur, there could be a vacancy in the Resource Stewardship Manager position. We recommend that the Resource Stewardship Manager position be retained with a Resource Stewardship-focused function to assure that this essential function still be performed in the combined agency. However, through this scenario it may be possible to re-classify the Resource Stewardship Manager position as a GPIV instead of a GPV to realize some cost savings by eliminating a supervisory position. This is only considered a viable option if the Habitat/Stewardship Supervisor had a clear and equal charge to implement both habitat conservation and resource stewardship to assure the continuation of both functions.

The aquatic nuisance species (ANS) function of Resource Stewardship is assumed to move to the Aquatic Section, which would likely result in the movement of the ANS FTE out of the Resource Stewardship Program. However, the Terrestrial noxious weed function is recommended to be retained in the Terrestrial Section (closely associated with the Resource Stewardship function due to great overlap in weed mapping, reveg, etc.).

Figure 4. Alternative 4



ADDITIONAL AREAS FOR FUTURE CONSIDERATION

Centralized Planning Function

Efficiencies and cost savings can be realized through a centralized planning function for property management. Identification of key resources on properties can help identify locations on properties that are best suited for development, steer development and recreation away from sensitive resource areas, and aid in avoiding federal resource law and state historical issues. The workgroup believes that property/resource planning is an effective and useful management tool and that the use of this concept should be addressed in more detail. Within a planning process, it will be important for RS and WP biologists to be involved to lend resource data and expertise to the process.

Discrepancies in Pay Grade

Merging biologists into an integrated Parks and Wildlife agency brings to light the issue of discrepancies in pay grade between the two agencies. In the Division of Wildlife, biologists that serve a statewide function and do not supervise FTEs are in the WMIV or GPIV job class, at the lowest, with some employees without supervisory responsibilities classified as WMV's. In Parks, biologists that serve a statewide function and do not supervise FTEs are in the GPIII job class, with the lone biological supervisor as a GPV. This issue will be present across all alternatives. As an integrated agency, there will be a need to address this discrepancy and to create a standardized pay grade for all positions sharing the same title and similar statewide functions in order to achieve pay equality among peers. This equality will be necessary in order to attract new employees, as well as to ensure that employees of the new agency feel they are valued on equal footing with their peers.

Native Plant Materials Program

Background

The DOW has been partnering with members of the Uncompahgre Plateau (UP) Project since 2002 in an effort to develop plant materials for use in restoration, reclamation and habitat improvement projects. This need was recognized by the major UP Partners (primarily USFS, DOW and BLM) early on in the partnership, and funding for the effort has been provided almost exclusively by the federal agencies (over $2 million in the past 9 years). The development of new plant materials is a slow process. It takes years to perform the necessary collection, testing and evaluation of a plant species before it can enter commercial production.

After nearly a decade, this effort is now bearing fruit with the advancement of approximately 13 new plant varieties to commercial scale production. However, the effort reached a bottleneck several years ago when, for the first time, the amount of seed produced exceeded local demand. How and where to store this product for future use became a major issue. To address this problem, the DOW obtained a $1.2 million SCTF grant in 2009 to construct a seed storage and distribution facility on the Escalante SWA west of Delta. Construction has been contracted and the facility is scheduled to be in operation by the spring of 2012.

Approximately 20% of the PJ Habitat Coordinator's duties will be dedicated to running and maintaining the new warehouse. This arrangement addresses the short term need for storage, but the time allotted will be insufficient to implement a more comprehensive native plant materials program. In order to achieve the cost savings envisioned, build the necessary partnerships, and obtain outside funding, the

DOW has acknowledged the need for a full time position to implement a statewide native plant materials program. It is presently evaluating possible avenues to address this need.

A desire for a better and cheaper selection of native plant materials for use in reclamation and restoration efforts has also been expressed by State Parks during merger discussions. In addition, Parks can bring several elements to the table (volunteers, additional funding, potential growing sites, etc.) that could aid the program. This joint need has added urgency to the discussions and led to this matter becoming a "Parking Lot" issue.

Recommended Alternatives

Alternative 1 – No Action

The DOW has positioned itself in a manner that will allow the construction and maintenance of a warehouse to proceed long term without any additional FTE or dedicated funding. Outside agencies (BLM, USFS, NRCS, etc.) that have expressed a strong interest in using the facility could do so on a "pay-as-you-go" basis. If the demand is high enough, these partners could fund the hiring of temporary or contract personnel to assist in running the facility or furthering the goals of the UP Native Plant Program.

Advantages:

- No further financial obligations on the part of CPW.
- No reallocation of FTE or duties would be necessary.
- No complicated partnerships with federal agencies.
- The main focus of the PJ Habitat Coordinator is maintained on landscape planning and habitat restoration projects.

Disadvantages:

- The cost savings envisioned through coordinated, large scale seed purchases will not be realized.
- Grant funding (Elk Foundation, Mule Deer Association, NFWF, etc.) has been used extensively by the Utah DWR to support and enhance their seed warehouse facility in Ephraim Utah. There would be insufficient time for a warehouse coordinator to pursue these opportunities.
- CPW would remain reliant upon federal partners to continue underwriting the advancement of additional plant materials for the UP Program (collecting, testing, evaluation and production). In order to secure a steady supply of seed, CPW funding would likely be necessary to continue the contracting and grower interface functions now being performed by UP Staff. In the current federal budget climate, federal funding for these ongoing activities may be in doubt.
- There would be no statewide coordination of native plant material activities
- Only limited collaboration with State Parks staff that serve a native plant function for the agency, thereby seeing some potential efficiencies go unfulfilled.

Alternative 2 – Change Time Allocation of the PJ Habitat Coordinator

The duties of the PJ Habitat Coordinator could be altered to devote more time to the native plant materials issue and coordinate a limited program on a statewide basis. A 70-30 split is envisioned, with approximately 20% of their time devoted to running the warehouse, 50% devoted to plant material development/acquisition and the 30% devoted to Habitat Coordination activities of aiding in landscape-

level planning and project implementation. It is anticipated that winter months would represent "down time" and the coordinator could focus this period on performing planning duties.

Advantages:

- The need for a plant materials development program would be addressed and dependence on future federal funding for this aspect of the program lessened.
- Time would be available to more fully pursue outside grants and other funding for the program.
- CPW would be better positioned to commit the resources necessary to enter and maintain partnerships with outside entities.
- CPW could coordinate the purchase of plant materials across the agency (and possibly federal partners), achieving significant cost savings through bulk purchasing.
- Greater potential for collaboration with State Parks staff that serve a native plant function for the agency, thereby seeing greater internal efficiencies for CPW.

Disadvantages:

- CPW would lose .5 FTE that is now dedicated to landscape planning and project implementation in the PJ biome. Some of this effort could be absorbed by the Sagebrush Coordinator based in Grand Junction, but there will be an overall loss of function in an area that is experiencing high demand due to extensive gas development and mitigation issues across western Colorado.

Alternative 3 – Hire a Full Time Coordinator

A currently unallocated FTE could be devoted to creating a full time "Native Seed Coordinator" position. This person would have the time available to fully develop a state-wide native plant materials program. In addition, they could direct the development of native seed production on SWA's and suitable Parks. It is anticipated this will ultimately be necessary with some species due to issues that will arise with producing them on a commercial scale. These issues may include "weedy" or labor intensive species that prove unsuitable or unprofitable for commercial growers. The warehouse was located at the Escalante SWA in part because there is inmate labor available from the adjacent Delta Correctional facility. This labor pool could be tapped to produce seed that otherwise could not be produced economically by private industry.

Advantages:

- This option would encompass all the advantages listed in Alternative 2.
- A robust plant materials program would be put in place that could coordinate native seed issues and work with other native plant programs across the state and the Colorado Plateau.
- In conjunction with outside partners (University, NRCS & CSU Extension) local testing and evaluation of new materials could be coordinated across the state.
- There would be an increased function on the part of the PJ Habitat Coordinator, who could turn their attention 100% to landscape planning and implementation duties.
- Any winter "down time" on the part of the Native Seed Coordinator could be devoted to assisting the Habitat Coordinators in their planning functions. This could result in a total 30-40%

increase (20% redirected PJ Coordinator and 10-20% from the Native Seed Coordinator) in landscape planning function within the Program.

- Time would be available to pursue and coordinate research opportunities to test and evaluate techniques for applying new plant materials on the ground. Basic information such as ideal planting depths, timing, application tools, etc. are critical questions that should be scientifically addressed. Years of effort could be wasted if we cannot effectively incorporate new species into our restoration mixes.
- Greatest potential for collaboration with State Parks staff that serve a native plant function for the agency, thereby maximizing internal efficiencies for CPW.

Disadvantages:

- This option would require the reallocation of a scarce FTE and could result in the loss of function someplace else within CPW.

Vehicles

Given the number of vehicles in both Parks and DOW, it appears that the combination of Parks and DOW may assist in gaining efficiencies with vehicles. In certain instances (e.g. non busy times for either agency where vehicles can be loaned out for other purposes) this may be true, but the combination of Parks and DOW will not address the needs of both agencies for temporary vehicles. This can be attributed to the overlap in busy seasons (summer months) in both agencies and the need temporary vehicles during this time period. Parks and wildlife hire a combined total of approximately 1,300-1,400 temporary employees annually. This large temporary work force often requires the use of vehicles to accomplish work. In the last number of years, the combined number of temporary vehicles requested from both Parks and DOW was approximately 200 per year. Due to a lack of new vehicle replacements and state fleet management not being obligated to meet the temporary vehicle demand, state fleet has been able to accommodate approximately 45 of the 200 requested vehicles. This lack of temporary vehicles has resulted in the lease of vehicles from rental companies to fill the demand in DOW. In fiscal year 10/11, DOW leased 226 vehicles and spent $236,065.38 in lease cost, with the gasoline to drive the vehicles being in addition to this figure. In addition to cost, there are also image and usage issues with leasing vehicles from a rental company. Often, the 4-wheel drive vehicles have 4 doors and luxury packages. These amenities are not always necessary and could be perceived as such from the public. The leasing company also puts restrictions for off-road use, which limits their utility when conducting field work.

Given the cost, image, and usage issues associated with leased vehicles, we suggest there are large savings to be gained within both agencies if lower cost alternatives were available to fill the need for temporary vehicles. The issue of full time vehicles for permanent employees must also be examined. We currently have a number of full time, field based, personnel that have not been assigned a permanent vehicle with no access to pool vehicles. Individuals in this situation have been directed to rent vehicles on an as needed basis. This is both expensive and inefficient for employees. We suggest that along with the merger of Parks and DOW, some evaluation of the efficiencies in our current vehicle situation also be initiated. This evaluation should include the cost associated with state fleet as compared to the direct purchase and maintenance of vehicles outside of the fleet system. An exemption from State Fleet could result in extensive cost savings for the agency. In addition, the idea of renting/leasing older vehicles (“rent a wreck” vehicles) that are not in new condition like the ones provided with our current lease company.

CONCLUSION

The Biologists and Scientists Work Group was charged with evaluating alternatives for merging job functions of biologists and scientists in the Parks Resource Stewardship (RS) Section and the DOW Wildlife Programs (WP) Branch. Overall, job functions are fundamentally different between RS and WP biologists, as is the spatial scale at which work is performed. A majority of RS biologists are responsible for resource stewardship on State Park properties, including inventory and monitoring of natural and cultural resources, stewardship planning, weed mapping and prioritization, forest management, GIS, and other duties related to enhancing and protecting the natural resources on State Parks. In contrast, WP biologists are responsible for population and habitat management of all fish and wildlife species in Colorado, which includes harvest management of game species, conservation of sensitive species, and fish hatchery operations. RS biologists focus almost exclusively on State Park properties, whereas WP biologists conduct work at a statewide scale irrespective of landownership. The one exception is the Colorado Natural Areas Program (CNAP) in State Parks, which has a statewide focus on conservation of significant natural features that spans property boundaries. There are 5 biologists in RS, whereas there are greater than 200 employees focused on biological functions in WP. Given the overall differences in job function and number of employees, we recognized that most job functions conducted by WP biologists are not shared by RS and would continue largely unchanged in the future, irrespective of the merger (e.g., species conservation, population management, hatchery fish production). Therefore, we focused on those areas of job overlap between RS and WP biologists where efficiencies and enhancements could be obtained: resource stewardship, including vegetation management and wildlife surveys on state properties, wildlife habitat management, and plant/animal conservation related to CNAP's functions.

We first identified 11 efficiencies or job enhancements that could be achieved irrespective of which alternative is selected. We then identified four alternatives that spanned the range from minimum integration to what we considered was maximum integration. The first alternative recognizes that keeping WP and RS separate is a legitimate consideration given differences in job focus, and that we would still be able to achieve a number of efficiencies and enhancements (see "*Efficiencies Or Enhancements That Span All Alternatives*"). The second alternative recognizes the inherent biological support function of RS biologists and places them within the Resource Support Section of WP. GIS is a prime example in this Alternative of where collaboration and synergies could be significantly improved, because the present GIS functions in Parks and DOW would be placed under common leadership. Under this alternative, CNAP would be integrated into the Habitat Conservation Program within the Terrestrial Section because these programs share a number of similarities. For Alternative 3, RS would be placed as a stand-alone program within the Terrestrial Section of WP, and CNAP would be placed under either RS or the Habitat Conservation Program. This alternative seeks efficiencies and enhancements by facilitating close working relationships between RS biologists and Terrestrial biologists in WP. Finally, Alternative 4 seeks the greatest integration by incorporating all RS biologists directly into a Habitat Conservation/Resource Stewardship Program within the Terrestrial Section of WP. The rationale for Alternative 4 is that the 5 biologists in RS (excepting the ANS function) have the greatest synergy with the 6 habitat coordinators in the Habitat Conservation Program, and the greatest efficiencies and enhancements could be gained through integration of these functions. Additionally, this Alternative proposes ways to enhance support for stewardship of natural resources on CPW properties.

Our Work Group believes it is important that efficiencies, job enhancements, and cost savings be considered from the recent merger of the Wildlife Conservation Section with the Terrestrial and Aquatic

Sections in WP. This reorganization wasn't fully completed and implemented until July 2011, and objectives of this effort were similar to the objectives of the Parks-DOW merger in terms of seeking efficiencies and savings and expanding job function. We also believe it is important that resource stewardship of state properties and CNAP remain a priority in the merged agency, which can only occur if the five RS and CNAP biologist FTEs are retained.

Finally, our Work Group believes that centralized, coordinated planning and data collection is vital for CPW to maintain credibility with a host of external constituents, including anglers, hunters, parks visitors, wildlife enthusiasts, NGOs, other agencies, and universities. RS and/or WP biologists are charged with designing and implementing scientifically-sound surveys, inventories and monitoring; developing and maintaining statewide databases to support management decisions; analyzing and interpreting data; translating results into viable management recommendations; and writing reports and publications. Maintenance of these job functions at the current level of rigor is necessary to support scientifically justified and accepted approaches to harvest management, resource stewardship, and species conservation. Failure to retain these functions at the current level would lead to decision processes that lack underlying support of objective, biological information, rendering CPW more vulnerable to external constituents that disagree with management decisions or question the state's commitment to land stewardship or fish and wildlife conservation.

BIOLOGIST AND SCIENTIST WORK GROUP- ALTERNATIVE SUMMARY TABLE

Strategy/ Alternative	Potential for Staffing Savings (low, med, high, none)	Potential Operations Savings	Potential Capital Cost Savings	Capital Investment Required (if any)	Impact on IT and Other Work Groups (high, med, low, none)	List of Implementation Requirements and Anticipated Hurdles	List of Related "enhancements" such as added value or improved customer service
Alternative "1"	NONE	NONE	$ NONE	$ NONE	MED (Invasives)	Implementation Requirements: • Minimal implementation requirements other than recommending that the aquatic nuisance species function of Resource Stewardship is moved into the Aquatic Section of Wildlife Programs Anticipated Hurdles: • No anticipated hurdles. However, it assumes that separate Parks and Wildlife structures will be retained in the newly merged agency, which may be unrealistic.	• Capitalizes on FTE savings and efficiencies recently implemented prior to the Parks-DOW merger. • It is the safest alternative because it virtually guarantees that biologists will continue to effectively accomplish their present, core job functions. However, it provides no additional opportunities for efficiencies or enhancements, beyond those efficiencies that are common to all alternatives.
Alternative "2"	NONE	$ LOW	$ NONE	$ NONE	MED (RE/Water and Invasives)	Implementation Requirements: • Requires that the Parks Resource Stewardship Program is merged into the Resource Support Section of Wildlife Programs. • Requires that the Colorado Natural Areas Program is merged into the Habitat Conservation Program in the Terrestrial Section of Wildlife Programs. • Recommends that the aquatic nuisance species function of Resource Stewardship is moved into the Aquatic Section of Wildlife Programs, whereas the terrestrial weed function is retained in Resource Stewardship. Anticipated Hurdles: • The functions of Resource Stewardship biologists are generally different from most functions carried out by the Resource Support Section, which could pose challenges in the integration of these groups. • Depending on the resulting makeup of the Resource Stewardship Program, the Resource Stewardship manager may supervise less than 3 FTE, requiring the creation of a work unit, which may not be viable directly under the Resource Support Section Manager	• Resource Stewardship will be able to maintain or enhance their level of support for protecting Parks' natural resources through synergies with other services provided by Resource Support (GIS, Water, Real Estate). • Maintains a cohesive, dedicated group focused on Resource Stewardship functions to assure this work continues in the new agency • Resource Stewardship and forestry work of Parks biologists is focused only on State Parks (as opposed to Alternatives 3 and 4 where a broader scope of work for Parks biologists may reduce the focus on Parks in lieu of more DOW properties) • Colorado Natural Areas Program (CNAP) placed in a Section with similar approach to statewide conservation; closer collaboration with Habitat Coordinators, Wetlands and Private Land Coordinators, all of which coincide with CNAP's mission; greater collaboration on rare plants with all Terrestrial biologists • GIS functions of both agencies are aligned under the Resource Support Section Manager, ensuring a higher level of collaboration • There is a relatively low potential for Federal Aid diversion, when compared to Alternatives 3 and 4.
Alternative "3"	NONE	$ MED	$ NONE	$ NONE	MED (Invasives)	Implementation Requirements: • Requires that the Parks Resource Stewardship Program is merged into the Terrestrial Section of Wildlife Programs as a stand-alone program. • Requires that the Colorado Natural Areas Program is merged into the Terrestrial Section of Wildlife Programs, placed in either the Habitat Conservation or Resource Stewardship Program • Recommends that the aquatic nuisance species function of	• Maintains a cohesive, dedicated group focused on Resource Stewardship functions to assure this work continues in the new agency. • DOW properties would be provided limited assistance with stewardship planning, noxious weed support, inventory and monitoring, as opportunities arise – this would begin to address natural resource stewardship needs on CPW properties in a more comprehensive fashion • Biological needs are all addressed in one Section, and Parks Resource Stewardship biologists would work directly with other biologists in the

						Resource Stewardship is moved into the Aquatic Section of Wildlife Programs, whereas the terrestrial weed function is retained in Resource Stewardship. Anticipated Hurdles: • The Resource Stewardship Program would be significantly smaller than the other 10 programmatic groups in the Terrestrial Section of Wildlife Programs • Depending on the resulting makeup of the Resource Stewardship group, the Resource Stewardship manager may supervise less than 3 FTE, requiring the creation of a work unit, which likely wouldn't be viable directly under the Terrestrial Section Manager • Resource Stewardship biologists expanding to limited work on SWAs could face challenges tracking time and budgets to avoid Federal Aid diversion. • Without increasing the capacity of the Resource Stewardship group, expanding the stewardship role to include more DOW properties may lessen attention to Parks needs.	agency • Greater collaboration between Resource Stewardship and Colorado Natural Areas Program (CNAP) biologists and Terrestrial biologists (e.g. wildlife surveys) • CNAP placed in a Section with similar approach to statewide conservation; closer collaboration with Habitat Coordinators, Wetlands and Private Land Coordinators, all of which coincide with CNAP's mission; greater collaboration on rare plants with all Terrestrial biologists. • Cost savings would be realized in terms of additional grant funding opportunities and native seed/ plant coordination
Alternative "4"	LOW (depending on options within Alternative)	$ MED	$ NONE	$ NONE	MED (RE/Water and Invasives)	Implementation Requirements: • Requires that the Parks Resource Stewardship and Colorado Natural Areas Programs are merged into a new Habitat Conservation/Resource Stewardship Program in the Terrestrial Section in Wildlife Programs. • Requires that the Parks GIS function, but not the associated 0.3 FTE, is moved to the GIS Program in the Resource Support Section in Wildlife Programs. • Recommends that the aquatic nuisance species function of Resource Stewardship is moved into the Aquatic Section of Wildlife Programs, whereas the terrestrial weed function is retained in Resource Stewardship. Anticipated Hurdles: • Expanding parks stewardship and forestry roles to include more support for DOW properties would lessen attention to Parks needs (depending on prioritization) – the lower priority needs on Parks would not be addressed as thoroughly as they are in the current system, which could lead to the perception of decreased stewardship and forest management support for Parks • Biologists working in the same group with responsibilities for both Parks and SWAs (e.g. Forestry, Resource Stewardship, Habitat management) could face significant challenges tracking time and budgets to avoid Federal Aid diversion • Some re-prioritization of job duties by both Parks and DOW biologists (as well as some of the DOW GIS Group staff) may compromise their ability to accomplish all desired outcomes • The Resource Stewardship Program would not retain its status as a distinct group in the new agency, thereby potentially marginalizing the importance of this function.	• Places all Resource Stewardship, Colorado Natural Areas Program (CNAP), and Habitat Coordinator biologists under a single Habitat Conservation and Resource Stewardship supervisor, thereby maximizing potential for direct collaboration • Broader stewardship planning, noxious weed support, inventory and monitoring on both Parks and SWAs, which would meet a need expressed in DNR for more property stewardship • Would result in more consistent management of CPW lands (State Parks and SWAs) while reducing duplication of some job responsibilities. • Enhanced opportunities for vegetation management and forestry work on CPW properties • A more streamlined process to assure agency compliance with State and Federal cultural and T&E regulations • CNAP placed in a Section with similar approach to statewide conservation; closer collaboration with Habitat Coordinators, Wetlands and Private Land Coordinators, all of which coincide with CNAP's mission; greater collaboration on rare plants with all Terrestrial biologists. • Cost savings would be realized in terms of additional grant funding opportunities, native seed and plant coordination, more comprehensive approach to stewardship on CPW properties, and potentially the reduction of a GP V position to a GP IV (depending on personnel issues). • Has the most potential for cost savings when compared to other alternatives.

APPENDIX A. ROLES AND RESPONSIBILITIES OF AQUATIC AND TERRESTRIAL BIOLOGIST/SCIENTIST POSITIONS IN DOW

Wildlife Programs
Biological Science
Job Category Breakdown*

Job Title	Number of Employees
Section Manager	2
Hatchery Chief	1
Wildlife Manager 4 Hatchery Program Manager	1
Hatchery Superintendent Technician 5	16
Assistant Hatchery Superintendent Technician 4	10
Fish Culturist	56
Researcher GP 6	4
Researcher GP 4	24
Researcher GP 3	1
Research Tech 5	1
Research Tech 4	5
Aquatic Technician 5	1
Aquatic Technician 3	2
Fish Pathologist 4	1
Fish Pathologist 3	2
Lab Technician	2
Wildlife Manager 5 Supervisor	11
Wildlife Manager 5 Coordinator	12
Wildlife Manager 4 Coordinator	5
Wildlife Manager 3 Area Field Biologist	57
Veterinarian	2
Total	**216**

*Does not include members of the Resource Support Section, clerical support, pilots, IT, etc. who are integral to accomplishing biological functions within Wildlife Programs.

Aquatic Biologist

- **Population Management, Population Surveys and Management studies:** Biologists are responsible for determining sampling approach, data collection, data analysis, and data

interpretation. Biologists then create and implement water specific management plans. Biologists are responsible for providing data to the Statewide Aquatic Database so staff can evaluate data on a watershed and statewide scale.

- **Stocking Schedule:** Stocking requests are made by each biologist for waters in their geographic area, requests made are for species, size and time.
- **Spawning operations:** Plan, equip, staff and execute wild spawning operations for fish needed by the hatchery section to fulfill the states stocking schedule and for arranged trades with other states.
- **Trap and transplant:** Establishes or supplements aquatic wildlife into appropriate habitats by trapping and transplanting.
- **Habitat improvement:** Designs and executes habitat improvement projects on lakes and streams.
- **Land Use (Water):** Provides aquatic expertise and comment when necessary for environmental impact statements, natural resource plans, energy development, Army Corps of Engineers federal permit process, and other decision documents proposed by federal agencies and private companies.
- **Angler Access:** Point of contact along with field operations on opening new waters for licensed anglers.
- **Draft Issue Papers:** Regarding species specific bag, possession, terminal tackle, and season restrictions.
- **Creel Surveys:** Design and implement creel surveys to evaluate angler use, angler satisfaction, catch rates, and demographic use.
- **Species Conservation:** Either in a lead or assisting role for the assessment and monitoring of aquatic nongame and listed species all drainage basins.
- **Education and Outreach:** Educates and informs the public on all facets of aquatic wildlife management by dissemination of fishing information to anglers, schools, and public media including newspapers and television.
- **Fish Health and Fish Kills:** Collect and provide samples for fish health assessments on wild populations and wild spawning operations.
- **Aquatic Nuisance Species:** Searching and collecting of ANS samples throughout the State.
- **Equipment maintenance/ Supervision:** Aquatic wildlife management is both equipment and labor intensive.

Terrestrial Biologist

- **Population Management:** Formulates Data Analysis Unit (DAU) plans for management for wildlife populations (deer, elk, pronghorn, bighorn sheep, bear, mountain lion, and moose).
- **Population Survey:** Performs both aerial and ground surveys for big game, waterfowl, upland birds, and grouse species.
- **Management Studies:** Improves population management of species by designing and conducting studies that address limiting factors of populations, inventory techniques, or harvest strategies.
- **Habitat Improvement:** Works collaboratively with other sections and agencies to implement wildlife habitat enhancement projects for various species.
- **Trap and Transplant:** Establishes new wildlife populations in unoccupied or restored habitats by trapping and transplanting.

- **Hunter Access:** Assists with the small game walk-in-access (WIA) program to create hunter access.
- **Land Use:** Provides expertise and comments when necessary for environmental impact statements, natural resource plans, energy development, and other decision documents proposed by federal agencies and private companies.
- **Education and Outreach:** Educates and informs the public on all facets of wildlife management by dissemination of wildlife information to hunters, non-hunters, schools, and public media including newspapers and television.

Wildlife Pilot

- **Aircraft Maintenance:** Oversee and ensures maintenance is conducted on the regional airplane.
- **Wildlife flying:** Assists all sections of the Colorado Division of Wildlife in tasks necessary for aerial work.

Conservation Biologist

- **Conservation Planning:** Formulates local conservation, restoration, and recovery plans for species of greatest conservation need.
- **Population Survey:** Participates in annual survey prioritization discussions for species of greatest conservation need. Conducts wildlife inventory surveys using standardized protocols.
- **Management Studies:** Improves population management of native and high priority declining species by designing and conducting studies that identify and address limiting factors of populations, improve inventory techniques or document results of specific management actions.
- **Habitat Improvement:** Works collaboratively with other sections, agencies, local governments, and private landowners to implement wildlife habitat enhancement projects for declining, sensitive and endangered species.
- **Habitat Protection**: Solicits habitat protection proposals and evaluates key properties for the conservation of declining species.
- **Trap and Transplant:** Plans and conducts trap and transplant operations for species of greatest conservation need.
- **Land Use:** Provides expertise and comments when necessary for local government land use planning permits, NEPA documentation, energy development, and other decision documents proposed by federal agencies and private companies.
- **Education and Outreach:** Provides workshops for private landowners to present information on habitat enhancements for species of greatest conservation need and incentive programs available to help fund on the ground habitat improvement projects.

Terrestrial Programs

This Program consists of the Ranching for Wildlife and Carnivore Coordinator, the Small Game Coordinator, the Big Game Coordinator, a Biometrician. This Program is responsible for coordinating and administering the Ranching for Wildlife (RFW), carnivore management, Walk-In Access, Pheasant Habitat Improvement, big game management, and auction and raffle program, as well as statistical assistance to Wildlife Programs Branch staff.

Species Conservation Coordinators

- **Regional, Statewide, Interstate Planning and Coordination of Species Conservation Efforts**: Coordinates statewide and interstate steering committees and conservation teams to develop statewide and range wide conservation strategies, assessments, and conservation plans.

- **Preparation of DOW Response to Listing Petitions and Federal Datacall Requests**: Coordinates, compiles, and completes Division response to federal listing petitions, annual candidate reviews, and other federal listing actions.
- **Developing Statewide and Rangewide Survey Protocols for Declining Species**: Coordinates the design and implementation of recovery and conservation goals and survey protocols to document progress towards these goals.
- **Threatened and Endangered Species Reporting**: Coordinates, compiles, and completes status reports required by the ESA and state and interstate recovery programs or Colorado State Statutes (e.g. House Bill 1314 requires an annual report on black-footed ferret status).
- **Contract Management**: Develops and manages contracts for conservation actions focused on species of greatest conservation need. Funding sources include Species Conservation Trust Fund, Section 6 Funds, Severance Tax Funding, and State Wildlife Grant Funding.
- **Statewide Observation Database Management**: Develops and maintains statewide observation databases for declining species.

Habitat Coordinators

This set of newly formed positions consists of four FTE dedicated to working to protect, preserve, and enhance priority wildlife species through the development and implementation of a strategic habitat conservation program focused on target ecosystems throughout the state. Each coordinator will focus on a specific biome or habitat type (pinyon-juniper, sagebrush steppe, forested and grasslands) across the state and will be an expert in the management and manipulation of that habitat type. Their work will be conducted in cooperation with other state and federal agencies and be directed towards the management of habitat on a landscape level. One coordinator (pinyon-juniper) will also oversee the construction and maintenance of a new native seed facility and will guide the development of new plant materials for use in restoring priority species habitats.

Wetlands Conservation Coordinator

This position is responsible for the development, implementation, and coordination of the DOW's Wetlands for Wildlife Program. The position is responsible for the development and maintenance of the strategic direction for the program; the allocation of available fiscal resources toward wetlands creation, enhancement, and protection; and the development of collaborative partnerships with internal and external stakeholders to facilitate the achievement of program and project goals and objectives. The position is responsible for promoting wetlands conservation to various lay and peer groups regarding the program and the value of wetlands to Colorado's residents and wildlife. The position develops and maintains an infrastructure of technical support to accomplish project engineering, water rights research, soils testing, cultural surveys, land surveys, etc. necessary for wetlands creation, enhancement, and protection. The position performs a variety of program administrative duties including developing program work plans, promoting and facilitating costsharing among DOW and external partners to achieve project objectives, allocating resources and administering program budgets, organizing grant cycles for the award of Wetlands funds, coordinating the review and selection of projects for funding, administering the payment of grant funds consistent with State fiscal rules and agency procedures, reviewing project progress and completion, preparing reports and records relating to projects and the program. The position is responsible for serving as the Division's authority on all matters relating to wetlands conservation.

Private Lands Conservation Coordinator

This position serves as the official DOW

Farm Bill Program representative at the local, state, and national levels. The position provides expertise and recommendations to Colorado NRCS, FSA, and DOW staff regarding policy and implementation of Farm Bill Programs in order to maximize conservation benefits for wildlife resources. Position serves as a member of the NRCS State Technical Committee and assists with the development of systems, guidelines, budgets and plans for Colorado Farm Bill programs and practices. Position negotiates and manages cooperative agreements and contracts on behalf of the
DOW with other agencies and organizations (NRCS contribution agreement, Habitat Collector Stamp contact with Colorado Natural Heritage Program, and the Private Lands Wildlife Biologist Program). Position represents DOW in Farm Bill policy development regionally and nationally through membership and participation with the Midwest Association of Wildlife Agencies Private Lands Working Group, the Western Association of Fish and Wildlife Agencies Access and Private Lands Working Group, and the Association of Fish and Wildlife Agencies
Agriculture Conservation Policy Analyst position in Washington D.C. Position coordinates the biological ranking process used to select projects for the Wildlife Habitat Protection Program and serves as a liaison with the Habitat Stamp Committee and GOCO Wildlife Subcommittee regarding the biological ranking criteria and process. Position promotes and coordinates DOW species and habitat conservation programs with private landowners and agricultural organizations (e.g. Colorado Cattleman's Association, Colorado Farm Bureau, Colorado
Association of Conservation Districts, Colorado Woolgrowers Association, Rocky Mountain Farmers Union). Position resolves conflict and creates political support for DOW policies and programs with landowners and landowner organizations by facilitating communication and maintaining positive working relationship with DOW. Position provides private landowner outreach through personal contacts, workshops, presentations, and news releases. Position plans and implements the Landowner of the Year Award program and ceremony.

Researchers

The DOW Research Sections (aquatic, avian, mammals, wildlife health) conduct scientific-based original research deemed valuable to DOW to enhance the management and conservation of wildlife species. The Sections may address critical ecological concerns about species and/or develop new methods, techniques, or systems to assess, maintain, enhance, and monitor the status of Colorado's aquatic and terrestrial wildlife species. The Sections synthesize existing information, produce new information/knowledge, interpret information, and facilitate integrating information into agency programs and decisions that affect hunted, non-hunted, and threatened and endangered species.

Research Scientists within the Research Sections serve the DOW as subject–matter experts at the State and National level. These Research Scientists design and perform biological experiments and field studies and oversee research programs which are conducted with sufficient scientific rigor to be published in peer-reviewed scientific journals. Research emphasis is focused on conducting studies that result in practical applications for fish and wildlife management in Colorado and North America. Researchers work closely with biological and management staff to guarantee that research activities are addressing the agency's highest priorities and improving management through direct, applied application of research results.

Hatcheries

- **Recreational Fish Production-** Plan, coordinate and implement production goals at 19 hatcheries to provide 3 million catchable trout, 16 million sub-catchable trout and salmon and over 70 million warm-water fish. This includes broodstock development, spawning operations,

production activities. Each year, nearly 3500 stocking trips by truck, boat, airplane and pack put these fish in over 1200 different waters in Colorado.

- **Species Conservation-** Plan, coordinate and implement production goals for 16 different species. Much of the non-game native species work is "cutting edge" requires significant time and resources.
- **Domestic and Wild Spawn Operations-** Coordinate and implement domestic spawn operations to provide over 15 million eggs/year. Coordinate and assist with wild spawn operations at 19 different sites statewide which produce an average of over 100 million eggs yearly.
- **Fish Health-** Coordinate, document and assist with fish health issues including diagnosis and treatment of fish on facilities. Plan and assist with annual fish health inspections. Comply with both federal and state regulatory requirements for implementation and documentation of fish health treatments.
- **Education and Outreach**- Educates and informs the public on all facets of aquatic wildlife production by dissemination of fishing information to hatchery visitors, anglers, schools, and public media.
- **Facility, Grounds and Equipment Maintenance-** Plan, oversee and implement maintenance plans for all water supplies, infrastructure, buildings, grounds and equipment on hatcheries. Hatchery work is reliant upon a large variety of buildings and equipment which require continual maintenance.
- **Supervision and Administration-** Direct and indirect supervision of 88 FTE and up to 30 seasonal employees as well as coordination with biologists, researchers, fish pathologists, both Federal and state regulatory agencies, other state and USFWS hatcheries and administrators.

APPENDIX B. ROLES AND RESPONSIBILITIES OF BIOLOGIST/SCIENTIST POSITIONS IN STATE PARKS

(All positions described include one FTE)

Natural and Cultural Resource Program Manager

- **Resource Stewardship Plans** - Analyzes, evaluates and prioritizes natural resource issues at state parks and recommends policies, strategies, solutions for resource problems.
- **Compliance Review for Threatened and Endangered Species and Cultural Resources** - Responsible for approving the approach for compliance with state and federal endangered species laws.
- **Forest Fuel Mitigation** - Requires coordination and negotiation with the State Forest Service and forestry contractors to accomplish the inventory, planning and implementation of mitigation and prescribed burning projects on State Parks.
- **Natural Areas Program Coordination** - Analyzes, evaluates and priorities potential land parcels for suitability for inclusion in the Natural Areas system based on established guidelines, models, theories, and personal expertise in the biological and geological field sciences.
- **Geographic Information System (GIS) production** - Responsible for the production of or the coordination of the production of a GIS database for each park and the Natural Areas system. Standards and protocols are developed, software and network structure are planned and purchased.
- **Budgeting/Contracting** - Responsible for managing budget for Resource Stewardship, Fuel Mitigation, and Natural Areas.
- **Section Management** - Development and operations of the Natural Resource Stewardship section. Decides priorities for effective section implementation, is the work leader for four FTE positions.
- **State Park and Natural Area field inspections**, wildlife/vegetation/ geophysical surveys, fuels and biological contractor oversight.
- **GPS Mapping fieldwork** - Conduct or oversee field mapping of roads, trails, boundaries, facilities, utilities, points of interest, natural resource elements at state parks and natural areas.
- **Volunteer coordination** - Coordinate or oversee the coordination of volunteers with appropriate scientific expertise to provide inventory and monitoring services at state parks and natural areas.
- **Noxious Weed Management Coordination** - Responsible for providing guidance on noxious weed management to agency administration and park staff.

Natural Areas Coordinator

- **Identify and Designate State Natural Areas:** identify the most significant natural features in Colorado; perform field assessments of the values and condition of potential Natural Areas;

recommend land management prescriptions that best protect natural values; work through the designation process with the owner/manager.

- **Monitor Natural Areas:** Visit each of the state Natural Areas every 2-3 years and assess the condition of significant features and threats; work with partners and/or contractors to perform special monitoring activities; coordinate the quantitative monitoring of rare plant populations.
- **Work with landowners (private and public) on addressing stewardship needs** on Natural Areas: Provide stewardship assistance through contracting, staff time, volunteer time or direct funding for projects; work with diverse partners (statewide non-profits, universities, etc.) who may provide in-kind services.
- **Coordinate and manage volunteers**: Recruit, support and regularly communicate with Volunteer Stewards that monitor Natural Areas; cooperatively manage the Rare Plant Monitoring Stewards who survey for and collect data on the rarest plants in Colorado.
- **Rare Plant Conservation:** Provide statewide leadership in rare plant conservation work, especially for DNR land-management agencies (Parks, SLB, DOW); collaborate with various partners to implement a statewide rare plant conservation strategy; identify high priority rare plant projects and seek cost-effective ways to accomplish goals.
- **Work with Natural Areas Council:** Organize and coordinate 4 quarterly meetings a year.
- **Acquire and administer grant funding:** Seek out grant funding for program activities, particularly rare plant conservation work.
- **Program budgeting, contracting and administration**
- **Temporary Supervision:** Train and supervise at least 2 temporaries a year to assist with program duties.
- **Outreach**

<u>Forest Management, GIS and T&E/Cultural Compliance Coordinator</u>

- **Forest Management**
    - Serve as Division's technical expert on forest issues and liaison to Colorado State Forest Service (CSFS)
    - Set Division priorities for forest management and ensure forest management plans are created and implemented for each park with significant forest resources.
    - Spearhead all major forest management and prescribed fire projects
    - Conduct regular monitoring of major projects for aesthetic, vegetation and wildlife concerns
    - Ensure the Division remains compliant with Significant User Permit and Air Quality restrictions for prescribed fire and act as Public Information Officer
    - Advise and educate field staff on insect and disease, hazard tree and firewood issues
    - Coordinate interpretive displays, press releases and informational materials
    - Secure, administer and report for all federal and state grant funding
- **Threatened and Endangered Species/Cultural Compliance**
    - Ensure all ground disturbing projects comply with state and federal endangered species laws and cultural resource protection laws
    - Form biological/archaeological opinion for each project based on scientific studies, literature, monitoring, models, theories and professional standards
    - Negotiate and determine proper compliance approach with state and federal authorities

  - Work with project manager to relocate, schedule, or otherwise modify development project, if needed.
  - Manage Class 3 archaeological surveys
  - Conduct fine scale mapping of T&E species habitat
- **GIS Program Coordination**
  - Provide technical expertise, statewide coordination and support for the GIS and GPS needs of the Division. Includes 44 parks and 8 statewide programs (Trails, Real Estate, Water, Resource Stewardship, Capital Development, Strategic Planning, Creative Services, and Natural Areas). This may include trainings and internal and external requests for data, maps and spatial analysis (minimum 30 per month).
  - Ensure the Division GIS database stays current with information acquired and stored at the field level, and design and develop geodatabases to improve current storage structure for spatial data
  - Manage and maintain all GIS and GPS hardware, software and licenses for the Division.

Aquatic Nuisance Species Coordinator

- **Aquatic Nuisance Species Coordination:**
  - Serving as Point of Contact for the ANS program in Parks.
  - Providing technical advice to parks for aquatic nuisance species program implementation, ANS control, prevention, inspection, education and eradication if possible.
  - Coordinating with CDOW and other ANS agencies on implementation, resources, successes and failures in a large scale, statewide ANS response program.
  - Serving on the Western Regional Panel on Invasives Boat Inspection work group.
  - Fielding questions and complaints about the Parks ANS program from the public.
- **Training**:
  - Developing ANS training protocols, including in-person, webinars and instructional videos for ANS inspection and decontamination protocols for all interested parties in parks and scheduling trainings to coincide with field needs.
  - Refining and adapting protocols to new developments, changes in parks and changes in ANS status.
  - Designing and implementing a parks-wide ANS Quality Control which visits all parks with ANS programs each year and reports deficiencies and outstanding work back to parks.
  - Sharing the successes of Colorado's ANS response with other agencies' ANS staffs and training them in coordination with CDOW.
- **Administrative Duties**:
  - Gathering and summarizing statewide Parks ANS inspection and decontamination numbers for use by Parks, Headquarters and the Legislative Report.
  - Planning, procuring, and replenishing ANS field materials for 29 sites, including seals, wire, signs, 9 different handouts, receipt forms and log forms.
  - Serving as project manager on ANS PDA-based data collection pilot project to move ANS program data collection to digital format.
  - Maintaining the ANS inspector database, certifying inspectors, making and shipping Inspector IDs in a timely manner for a 500+ individuals database.

  - Maintaining accurate and complete records on full inspections and mussel boats intercepted by inspectors in Parks.
  - Temporary supervision, contracting, budgeting.
- **Volunteer coordination**:
  - Coordinate volunteers with appropriate scientific expertise to provide inventory, monitoring and ANS control services at state parks and at Parks headquarters.

Resource Stewardship Coordinator

- **Stewardship Plan Writing**: Research issues, collect and organize data, write detailed stewardship plans
- **Resource Management Prescription writing**: Write/research management plans for specific issues in specific areas of individual parks
- **Resource Inventory/Surveys**: Supervise and conduct inventory work in the field
- **Contract Management**: Manage contractors to perform baseline inventories and resource management prescriptions
- **T&E and Cultural Compliance Reviews**: Assist Section staff with Threatened & Endangered Species Reviews
- **Raptor Monitoring Program**: Manage 50+ volunteers to monitor raptor breeding and use in state parks
- **Noxious Weed Management:** Assist Invasives Coordinator to provide weed management priorities, legal obligations, recommendations to all state parks
- **Breeding Bird Surveys**: Perform and manage contracts for breeding bird surveys.
- **Restoration/Revegetation on parks**: Work with partners to implement restoration projects on park lands; work with individual parks to plan and coordinate restoration efforts; write revegetation specs and reveg performance specs for ground breaking projects on parks.
- **Geographic Information System (GIS) production** - Collect and process GIS data; create maps depicting resource relationships.
- **Outreach**