SHILLAPOO WILDLIFE AREA
2014 MANAGEMENT PLAN UPDATE

Washington Department of Fish and Wildlife

Land Management Summary

This is an update to the 2006 Shillapoo Wildlife Area Management Plan (*http://wdfw.wa.gov/lands/wildlife_areas/management_plans/*) that provides management direction for the 2,341-acre Shillapoo Wildlife Area in Clark County Washington. The plan identifies needs and guides activities on the area based on the Washington Department of Fish and Wildlife (WDFW) Mission of *"Sound Stewardship of Fish and Wildlife"* and its underlying statewide goals and objectives as they apply to local conditions.

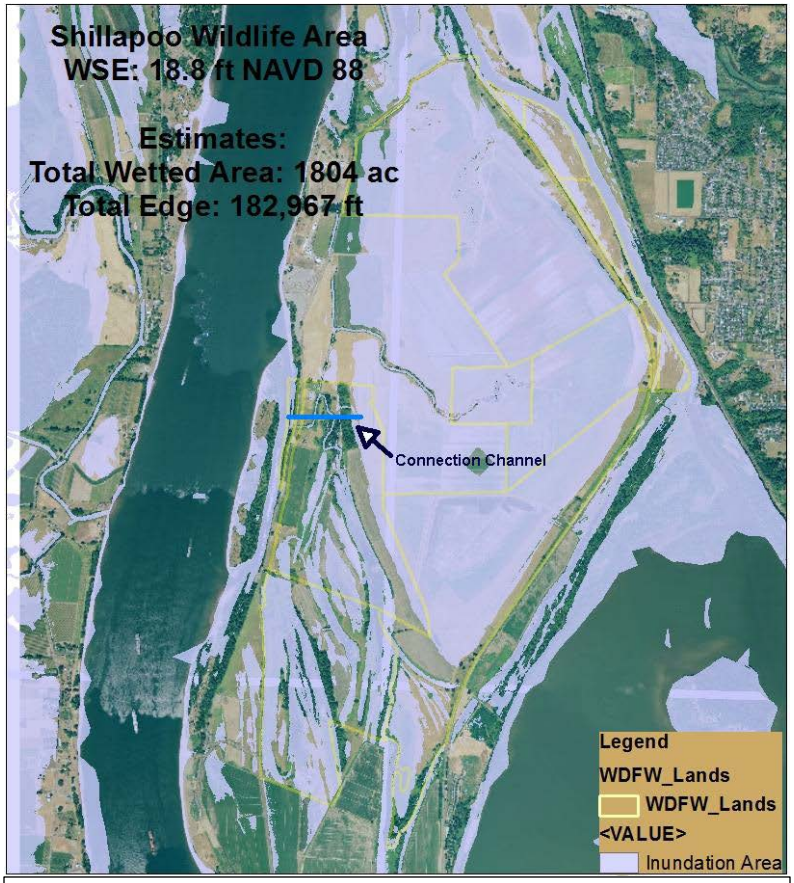
Plans are updated every two years as habitat and species conditions change, as new regulations and scientific knowledge develop, as public issues and concerns evolve, and as administration of Wildlife Areas change. This management plan update also includes 2012 and 2013 accomplishments, new issues, new land management strategies, and performance measures for 2014 and 2015.

Inside

Updates/Changes

Columbia River Restoration - Shillapoo Lakebed Re-connection

WDFW is working with the Corps of Engineers on project proposals to determine the feasibility of reestablishing a direct connection of the Shillapoo Lakebed, Buckmire Slough, and adjacent wetlands to the hydrology of the Columbia River. The main purpose is to expand habitat for out migrating and rearing of juvenile salmonids in the Columbia River System. In 2009 the Department entered into a memorandum of agreement (MOA) with the federal government which provides for the enhancement of off-channel rearing habitat for salmonids as they migrate to the ocean. The MOA contained a list of potential projects including two that would reconnect the Columbia River to the Shillapoo Wildlife Area at potentially three locations; by breaching levees to provide rearing habitat for ESA listed salmonids. These projects have been slow to develop as there are several constraints that need to be answered before they can proceed. The first constraint in the Shillapoo Lakebed project proposal is whether or not the private in holding within the lakebed can be acquired, and if a petroleum pipeline can be relocated outside any proposed inundation areas. WDFW and the U.S. Armey Corps of Engineers have talked to the owner (BP) of the pipeline who is willing to relocate the line, with the condition that all costs associated with the relocation would be the responsibility of WDFW, Bonneville Power Administration (BPA), and the Corps. The private property acquisition has also not taken place, but the landowner is willing to allow a property appraisal. The second constraint is how these projects will influence the quality of habitat for waterfowl and other wildlife that we currently manage the area for, as this project concept is substantially different than that outlined in the 2006 Wildlife Area Plan for reestablishing native plant communities and enhancing wildlife within the lakebed. The Buckmire Slough project has two possible project areas. The first being the slough itself, and the second being the slough and the adjacent wetlands that are currently not connected to it. All of these projects are to be scored in late-April 2014, to determine if the cost benefit ratio for enhancing juvenile salmonid habitat is applicable in moving forward to possible construction. Key to these project proposals is that wildlife, habitat, and fish values are fairly evaluated to understand the best outcome for salmonid habitat as well as for key wildlife species managed in the area.



Shillapoo Wildlife Area Inundation Model showing Columbia River re-connection. The model shows water level just under flood stage.

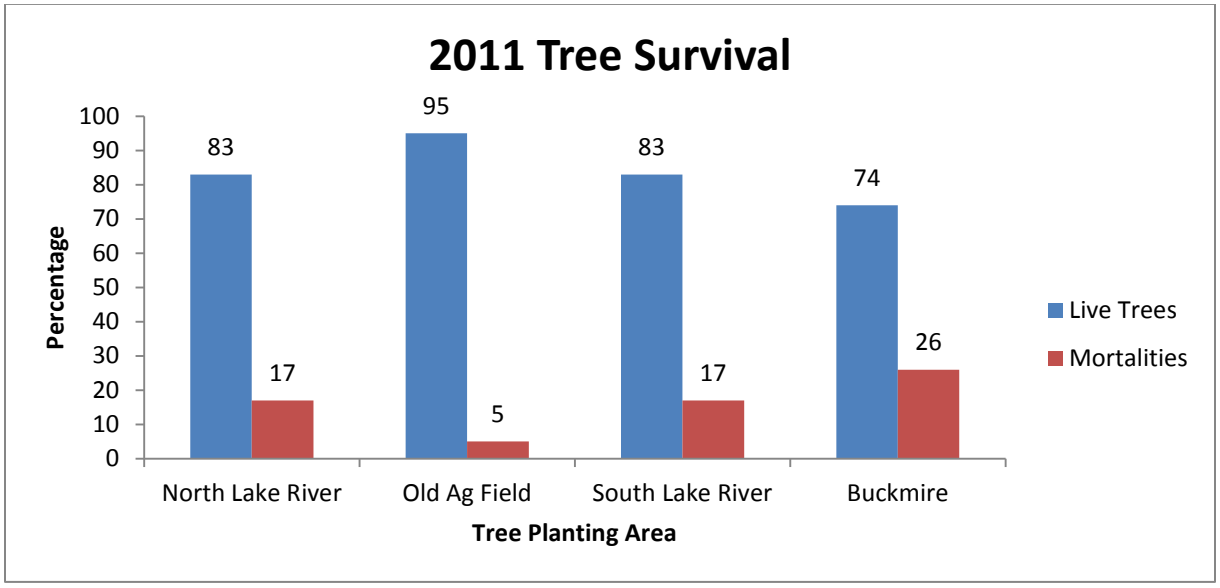
A change to the Wildlife Area the past two years has been the staffing, with the Manager, and Assistant Manager being new to their respective positions since the last plan update. Even though there have been staff vacancies the past two years, most of the performance measures were still met in large part from the help of other Wildlife Program Staff in the Region.

New Issues

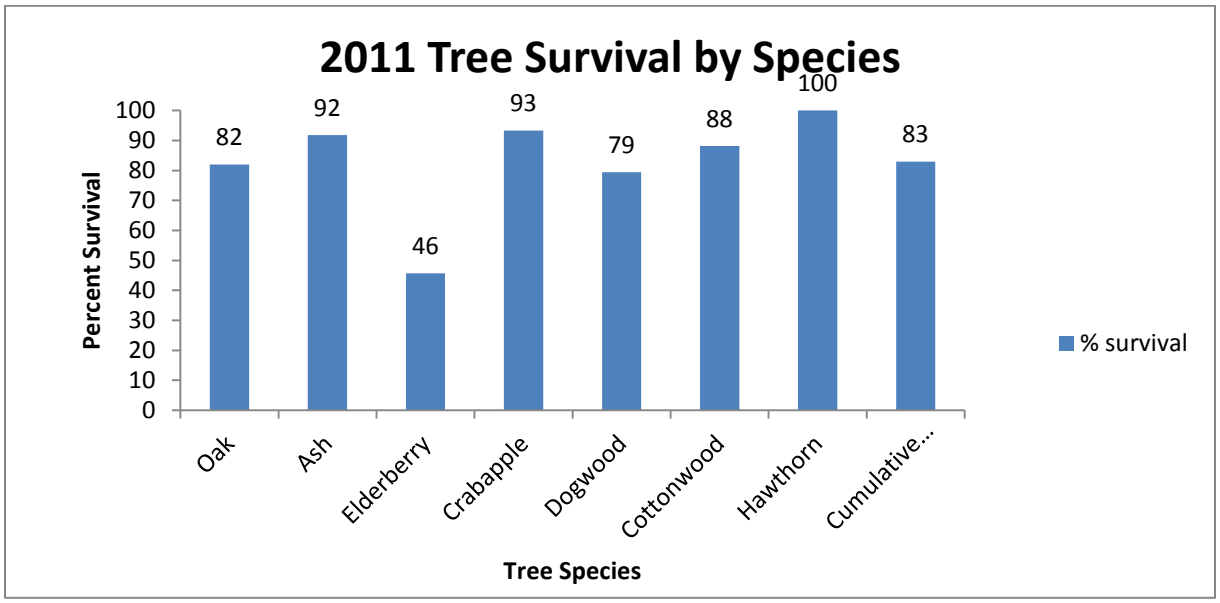
The translocation of the ESA listed Columbian White-tailed Deer to the Ridgefield National Wildlife Refuge began in 2013. The United State Fish and Wildlife Service (USFWS) began translocating deer from the Julia Butler Hansen Wildlife Refuge (JBHWR) in Cathlamet, WA to the Ridgefield Refuge, due to a possible levee failure that threatened to flood the JBHWR. About 50 deer have been relocated to date with most of the animals staying on the Refuge, but there have been a few observations of the deer in the Shillapoo area. If the deer become more common on the Wildlife Area, timing of some land management practices may need to change to minimize disturbances to the deer.

Major Stewardship Accomplishments

In 2012 tree and shrub plantings were completed at two sites in the South Unit (Reiger and McBride) resulting in high survival rates. Over 3,000 trees and shrubs were planted at the two sites over the past five years. Each of these areas will receive general plant and vegetation maintenance. In total for the past two years, we have planted over 7,100 trees and shrubs at six different sites on the Wildlife Area to enhance riparian, Oregon oak, and great blue heron habitat. The priorities now are to complete the Old Ag and Lake River plantings, as well as begin at a new site along Chapman Slough in the North Unit. The overall tree survival rate has been 74-95% one year after planting at the different planting sites, with the individual species survival being above 79% for all species except elderberry, which had a survival of 46%. Graphs 1 and 2 below show the survival rates of trees planted in 2011. Surveys were conducted in August 2012, eighteen months after planting.



Graph 1. Tree survival on the South Unit of Shillapoo Wildlife Area (2011)



Graph 2. Tree survival by species on the South Unit of Shillapoo Wildlife Area (2011)

Three pasture sites totaling about 50 acres were tilled and replanted with a grass, clover, and grain mix in the past two years. Due to staff vacancies during the past two springs planting periods, we were unable to plant additional acreage in 2012-13. Several areas totaling about 50 acres were sprayed to control Himalayan Blackberry, Canada thistle, or other broadleaf weeds to improve habitat value. Washington Department of Natural Resources (DNR) crews cleared over 17 acres of blackberries along five wetlands to either improve sight distances, for waterfowl, or to prepare sites for eventual planting of trees and shrubs. The initial clearing has or will be followed by herbicide treatment for long term control.

We continued to make progress with regard to reducing problems associated with noxious weeds, but this is tempered with the continual threat of new invasive species either on the Wildlife Area or in nearby sites. Although we have not encountered any new invasive plant species on the Wildlife Area these past two years, we continue to monitor the area in order to detect any new weed before it gets a foothold. All major stands of poison hemlock and all known patches of English ivy were treated. Purple loosestrife continues to be a major concern in the area, and we continue to monitor our progress on controlling this problem species. The first five years showed a decline in the number of plants encountered each year, but the past two years we have seen a rather large increase in the number of plants that we treat. After decreasing the weed by 87% between 2007 and 2011, we have seen a rebound in the number of plants encountered the past two years. We have seen an increase of 256% in the number of plants between 2011 and 2013. Although this is still 67% fewer plants encountered since the surveying began in 2007, it raises the alarm on why there has been an increase.

Status Report of 2012-13 Performance Measures

Key performance measures are identified each year to monitor progress and identify any issues that might interfere with planned priority activities. This information will be used to delete, add, or alter priority strategies for 2014-15.

2012-13 Performance Measure	Status of Performance Measure	Explanation of Progress/ 2014-15 Related Activity/ Comments
Participate in the feasibility study of reconnecting the Shillapoo Lakebed or other parts of the wildlife area with the Columbia River to potentially benefit juvenile salmonids. Include an evaluation of the potential benefits or impacts to other species important in the area.	The first phase of the feasibility study has started with the owner of the petroleum pipeline being open to relocating the line outside of the inundation area, and the private land owner allowing an appraisal of the property within the lakebed.	Wildlife Area staff will continue to be engaged in the process to assure that wildlife habitat concerns are addressed. Next steps would include assessing habitat influences and engineering considerations
Continue planting and maintaining trees and shrubs in the Lake River and Buckmire Slough riparian zones, abandoned heron rookery site, the old ag site in the North Unit, and others where planting has already been initiated. Permanent survey plots were also set up in each of the plantings to track longer term survival.	Planting occurred at all locations in 2012 and only at the Lake River and Old Ag site in 2013. Survival rates have been 75-95% one year after planting.	Planting will continue for several years until plant density and survival reach desired rates.
Continue clearing dense Himalayan blackberry along Buckmire Slough in preparation for ongoing understory enhancements.	Good progress was made along Buckmire slough, clearing about 6 acres blackberries.	Long term goal will require at least several more years of effort.
Continue wetland basin enhancement through the removal of reed canary grass by disking.	Disking occurred in three wetland basins in the North Unit, one in 2012 and two in 2013. All the sites were sprayed prior to disking, in hopes of increasing efficacy.	Spraying the sites prior to disking seems to have increased our control of reed canary grass, and allowed better native plant growth.
Control a minimum of 200 acres of Canada thistle and other broadleaf weeds by	This work was accomplished through both routine mowing and an increased spraying	Continue to maintain as a priority performance measure. Utilize monitoring results to

mowing or spraying. A survey method was developed and several sample sites have been established.	effort. Most weeds seem to be having a downward trend in population size and distribution, on the Wildlife Area.	inform adaptive management.
Continue weed monitoring efforts and strive for early detection and rapid response to controlling new high priority weeds	Two new locations of English Ivy were found and treated with a foliar spray. Italian thistle was identified and treated at one location in the North Unit (same site as previous years). Eurasian water speedwell was detected and controlled in the "V-2" wetland. Old Man's Beard was retreated to control an area that was missed the previous year.	This is among the most important aspects of land management and should remain a priority.
Maintain and enhance waterfowl pasture areas by replanting 50 acres, mowing all sites, and continued removal of undesirable brush that obscures sight distances.	Only 30 acres of pasture in 2012, and 20 acres in 2013 were replanted. All sites were mowed, and over 2,000 linear feet of blackberry hedges were removed; improving site distances and increasing forage opportunities for wintering waterfowl.	In 2014 and 2015 we should be back on target replanting 50 acres of pasture each year. Continue to remove blackberry hedge rows to improve sight distances.
Implement measures as needed to protect habitat and other features from damage due to vandalism and other unlawful acts.	More boulders were placed along the roadway at Vancouver Lake where off-road driving had occurred. A section of fence along the Reiger Highway was also replaced due to a vehicle driving through it.	Continue to monitor and address issues as they arise.
Begin developing a plan to address user conflicts and improve hunter satisfaction. Include opinion surveys in the process, and consider that potential landscape changes may affect recreation.	Due to staff vacancies and workload, user surveys were not conducted.	The information and maps are available to the public at the Regional office. Consider adding to the website and making a separate sheet specifically for waterfowl hunting.
Initiate construction of the Old	This project was put on hold	This project may be included

Slough Fence and preparation of the site for reforestation.	pending the outcome of the MOA Shillapoo Lakebed project as this fence may not need to be constructed if the project is implemented.	in work for the winter months of 2014, if needed.

New Strategies

The Wildlife Area plan identifies many strategies or activities to address the Agency's Strategic Plan goals and objectives, why the area was purchased, habitat conditions, species present, and public issues and concerns. The following updated strategies have been added to respond to previously unaddressed or new issues or changes on the Wildlife Area. New strategies may also be in response to adaptive management as staff evaluate the impacts of past management activities.

A new strategy for controlling reed canary grass, as part of our moist soil management, will be implemented after having success with a new method the past couple of years. Herbicide treatment of canary grass in the fall has proven to be a very effective control method, and reduces the workload on enhancing native wetland plant species. This method was tried in order to make the ground more workable during wetland disking the following spring by reducing the amount of vegetation present during workup. The thought was that by spraying an area in the fall, the vegetation would have all winter to decompose making the area easier to workup the following spring to allow native vegetation to germinate. There was also an additional benefit to this approach in that not all of the areas needed to be disked the following spring to allow for native plant germination. It appears that having the optimal inundation period and water level reduces the need to disk the site and promotes native plant species without the need of additional work. Of the three sites in which this approach was used, one needed no spring disking and resulted in about 70% native cover. One was disked the following spring and planted with a cover crop of grain resulting in 1,000 lbs. of grain and 600-700 lbs. of smartweed seed per acre in the fall. The third field was disked in the spring and planted with a cover crop of grain, but due to poor germination of the grain and an infestation of bull thistle, the site was disked again in the fall and planted with a cover crop of grain. Although it appears that this approach will be very useful in controlling canary grass, it will remain as one of many methods used to control undesirable vegetation in our wetland basins.

Lakebed herbicide treated area for canary grass control

2014-15 Performance Measures

Performance measures for the Shillapoo Wildlife Area for 2014-15 are listed below. Accomplishments and progress toward desired outcomes will be monitored and evaluated annually.

1) Participate in the feasibility study of reconnecting the Shillapoo Lakebed and/or other parts of the Wildlife Area with the Columbia River to potentially benefit juvenile salmonids. Include an evaluation of the potential benefits or impacts to migratory waterfowl and other species important in the area.
2) Continue planting and maintaining trees and shrubs in the Lake River and Buckmire Slough riparian zones, "old rookery" site, "old ag" site, and others where planting has already been initiated.
3) Continue clearing dense Himalayan blackberry along Buckmire Slough in preparation for ongoing understory enhancements.
4) Continue wetland basin enhancement through the removal of reed canary grass by disking. Continue to evaluate efficacy of including herbicide use, and/or planting cover crops.
5) Control a minimum of 200 acres of Canada thistle and other broadleaf weeds by mowing or spraying.
6) Continue weed monitoring efforts and strive for early detection and rapid response to controlling new high priority weeds
7) Maintain and enhance waterfowl pasture areas by replanting 50 acres, mowing all sites, and continued removal of undesirable brush that obscures sight distances.
8) Implement measures as needed to protect habitat and other features from damage due to vandalism and other unlawful acts.
9) Begin developing a plan to address user conflicts and improve hunter satisfaction. Include opinion surveys in the process, and consider that potential landscape changes may affect recreation.
10) Initiate construction of the Old Slough Fence and preparation of the site for reforestation. (This fence will only be constructed if the Shillapoo Lakebed MOA project does not move towards implementation.)

Wildlife Area Advisory Committee Input

The Advisory Committee meeting was held on April 9th, 2014 at the WDFW Regional office in Vancouver. In attendance were representatives from: Washington Waterfowl Association, U.S. Fish and Wildlife Service, Vancouver Wildlife League, Vancouver Audubon, Clark County Weed Management, and WDFW.

The following issues and new input were addressed at the meeting.

Issue: A representative from the Washington Waterfowl Association asked about potential impacts to wildlife from the proposed projects to reconnect the Wildlife Area to the Columbia and Lake Rivers.
Response: Impacts to wildlife from the proposed projects cannot be fully known until a feasibility study is performed and the projects are designed and modeled, but Wildlife Area Staff expect that some species will be displaced if these projects are implemented. Although species might be displaced they might not necessarily be displaced to where they are no longer on the Wildlife Area, but just travel to another site or portion of the area that has become more suitable with the changes in certain habitat types. There is also a likelihood that there will need to be property acquisitions to mitigate the impacts to wildlife. These acquisitions would need to be in the Vancouver Lowlands, if possible, to benefit the species that were displaced.

Issue: A representative from the Vancouver Audubon Society asked if there would be any impacts to Sandhill cranes if the Shillapoo lakebed was reconnected to the Columbia River to allow juvenile salmonid access.
Response: The WDFW Wildlife Program does see potential impacts to cranes if the lakebed is reconnected to the Columbia River. Some foraging areas would no longer be accessible to cranes because of the increased water depths on the area. Currently the highest water depth in the lakebed during the winter and spring months is about 7 feet; if the area is reconnected to the river, models predict that the highest water depth would be about 18 feet. Currently there are about 300 acres that cannot be used by cranes at the maximum water depth, if the project was implemented about 1,000 acres would be impacted to the point to which cranes could no longer use the area for resting or foraging.

Information on BPA's Wildlife Mitigation Program

The Bonneville Power Administration (BPA) has received mitigation credit for funding land acquisition, habitat enhancement, and ongoing management of habitats on the Shillapoo Wildlife Area, as described above in the Major Stewardship Accomplishment section. The project provides an estimated 1,581 habitat units (HUs) toward their overall Wildlife Mitigation Debt for the Columbia River hydroelectric system. Habitat Units are related to a portion of the wildlife impacts from Bonneville, John Day, and The Dalles Dams. The number of habitat units achieved is based on the sampling of a number of habitat characteristics that are components of mathematical models for individual species that generate a numeric value of habitat quality from zero to one, known as a Habitat Suitability Index. The suitability index is then multiplied by the number of acres being evaluated to generate the number of HUs. This process is commonly referred to as a Habitat Evaluation Procedure or HEP. Species models being applied to

mitigation activities on the Shillapoo Wildlife Area include: black-capped chickadee, western meadowlark, yellow warbler, mink, great blue heron, Canada goose, mallard, and dabbling duck.

Most of the management strategies relating to habitat management identified in the Shillapoo Wildlife Area Management Plan are funded through BPA's mitigation program. A summary of these activities can be found in our most recent project review and funding proposal to the Northwest Power and Conservation Council who provides oversight of BPA's mitigation programs. The Shillapoo Wildlife Area Proposal (Project #200301200) is located at: http://www.nwcouncil.org/Fw/budget/2010/proposal.asp?id=1008. This document includes a summary of activities (work elements), a link to the project narrative, an itemized budget request for 2010-2014, and estimated budgets through 2018. A number of activities included in the mitigation work plan are designed to monitor the effectiveness of the project including habitat/plant community monitoring, wildlife population response, and periodic HEP surveys to track progress toward mitigation goals.

As mentioned above, BPA helped to acquire portions of the Wildlife Area as part of their mitigation commitment to this site. One key parcel, that included the remaining portions of the Shillapoo Lakebed that is still in private ownership, was not acquired as the landowner was not willing to sell at the time. This parcel remains the highest priority for acquisition for this Wildlife Area, however, other properties in the vicinity should be considered as the opportunity may arise, including the area lying between the Wildlife Area and the Ridgefield National Wildlife Refuge.

While BPA funds most of the habitat management activity on the Wildlife Area, other contributions have come from outside sources including grants obtained in cooperation with Ducks Unlimited, Columbia Land Trust, Natural Resources Conservation Service, U.S. Fish and Wildlife Service, Vancouver Clark Parks and Recreation, Clark Public Utilities, and others. These grants have helped to fund many of the wetland enhancement projects on the Wildlife Area. While habitat work has been well funded, dollars for wildlife surveys and recreational management have lagged behind. Improvement of recreational activities will have to be funded through state funding or other grant sources. Much of the recreational emphasis in recent years has been directed toward waterfowl hunting through State Migratory Bird Stamp grants. A wildlife viewing area and parking facility are planned to be constructed on the South Unit, and a storage facility is needed, but additional funds will be required to complete construction.

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Want to see the full plan?
Go to -
http://wdfw.wa.gov/lands/wildlife_areas/management_plans/