

# Shillapoo Wildlife Area

## 2021-22 Wildlife Area Plan Update



### *Cinnamon Teal Drake*

This document is intended to highlight accomplishments as they relate to goals and objectives identified within the 2006 [Shillapoo Wildlife Area Management Plan](#). The plan addresses the status of wildlife species and their habitat, ongoing restoration efforts, and public recreation opportunities at the Shillapoo Wildlife Area. Every 10 years, the Washington Department of Fish and Wildlife (WDFW) develops a process for revising the management plans for each wildlife area to identify new management priorities and actions. In between plan revisions, the update focuses on recent accomplishments over the last two years.

### **Management Highlights**

#### **Using moist soil management to restore native wetland plant communities (Goal #1)**

Over the past several years there has been an increased effort to enhance native wetland plant communities on Shillapoo by controlling reed canary grass. Staff have developed new methods, adapted old methods, and combined methods to manage this invasive species that has been naturalized in the region for decades. These methods include mowing, disking, planting of cover crops, herbicide treatments, water management, timing of treatments, and recently prescribed burning. So far, prescribed burning has been conducted in two wetlands to remove canary grass

thatch. Although fire by itself will not kill canary grass, the hope is that fire will allow other plants to grow that often get shaded out by canary grass, and it adds another tool to be used to control invasive weeds.

By using best management practices and incorporating one or more of the above methods to control reed canary grass, the abundance of native vegetation has been greatly enhanced, while reducing reed canary grass cover in the wetlands across the wildlife area.

Although wetlands will still need to be treated on a regular basis to control the encroachment of reed canary grass, wildlife area staff estimate that the preferred method of fall herbicide application, winter inundation, spring/summer disking and planting of cover crop (if needed, as in some occasions native plants have germinated without any disking required after the water was off the site), and fall mowing will result in an improved wetland plant community for 3-5 years before retreatment is necessary.

The ultimate management goal is to create a hydrologic system that is beneficial to native plants, while suppressing reed canary grass growth without having to use, or very limited use of, the other management tools. The North Basin and South Cell wetlands are two of the areas in which the hydrology has been improved with the installation of new water control structures. Since the installations, the native wetland plants have thrived and expanded, while non-native vegetation has been significantly reduced.



*Native wetland plant community in the South Cell Wetland.*

### **Controlling Invasive Vegetation with Prescribed Fire (Goal #1)**

The objectives for conducting prescribed burning at Shillapoo are to decrease weed seed germination viability and decrease the cost of removing brush and fence lines that no longer serve any purpose. Although prescribed burning has only been conducted for a few years at Shillapoo, it appears the fire is hot and intense enough to sterilize weed seeds that are present on the ground, minimizing the use of additional herbicide treatments that have been needed to keep weeds from becoming re-established. The fire also quickly removes the unwanted brush,



reducing the need and cost of hiring contractors and Department of Natural Resources (DNR) Work Crews. With the brush being eliminated by fire, the old fences were much easier to remove and took much less time to dispose. Prescribed fire has become a valuable tool for vegetation and infrastructure management at Shillapoo, and something that wildlife area staff plan on using more often.



*DNR Wildland Fire Crews helping to conduct a controlled burn.*

Burning activities are conducted in both spring and fall to remove large amounts of unwanted brush. The prescribed burning was often conducted with the help of DNR Wildland Fire Crews, which used the controlled burning activity as training for their personnel. The relationship between WDFW and DNR is something that both agencies would like to see continued growth in as each agency can attain benefits from the prescribed burning activities on Shillapoo. DNR has the benefit of training fire crews in a controlled environment, while WDFW gets the ecological benefits that prescribed fire can bring to the land. On average about 10-30 acres are burned on Shillapoo annually.

#### **Agricultural Lease for Haying (Goal #5)**

In 2021, an agricultural lease was approved permitting haying on the Shillapoo Wildlife Area. Leasing of acreage to allow haying on Shillapoo did not occur before, because haying ground was widely available and the profit margin selling baled hay was very small. In recent years finding acreage to hay has become more difficult with the development of residential houses and the expansion of suburbs. Additional markets for selling hay regionally, nationally, and internationally have also been developed in the past several years. These situations have increased the demand for hay and improved the profitability of baling and selling hay on both local and national markets.

Allowing haying to take place on Shillapoo increases the palatability of grass and forbs for wildlife in the fall and winter months. It should also reduce weed densities and the presence of unwanted vegetation in the fields. Additionally, this should reduce WDFW's land management costs as the lessee will be conducting most of the mowing and weed control activities, enabling WDFW to accomplish other tasks on the wildlife area to improve and restore habitat for wildlife. The lessee can hay approximately 200 acres annually, however in the first year they only hayed

about 100 acres. It is expected that the lessee will hay closer to the maximum acreage in the years to come.



*Haystacks in the Shillapoo lakebed.*

## **New Issues**

### **Aging Water Control Structures Needing Replacement (Goal #7)**

Most of the water control structures (WCS) on the Shillapoo Wildlife Area were installed in the early 2000s and were made using galvanized culverts. The structures range in size from 18-36 inch diameter culverts, 25-40 feet in length. Over the years many of the culverts have begun to corrode and rot, causing significant leakage and even complete failures, resulting in the inability to hold water and inundate wetlands for the benefit of wildlife, hunting, and native plants.

Currently there are six WCS that need to be replaced, however through the upcoming years it is expected that others will begin to fail and require replacement as well. All structures that currently have leakage issues are scheduled to be replaced in 2024, using State Duck Stamp Funds. If these structures were not replaced, about 70 acres of wetland habitat would significantly be impacted. The cost to replace the six structures with new high density composite structures is more than \$300,000. Additional funding sources will likely need to be secured in the future to replace the other eight WCS when they start to corrode and leak as well.