AN ANALYSIS OF FORESTED AREAS SURROUNDING WETLANDS IN THE CEDAR RIVER MUNICIPAL WATERSHED

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Background

Ponds, wet meadows, riparian corridors, and other wetland types in the Cedar River Municipal Watershed (CRMW) provide diverse habitats for a wide range of plant and animal species. Wetlands are distributed throughout the watershed, spanning elevations from 640 to over 4,400 feet above sea level (asl). They range in character from large open water systems to small, wet depressions in meadows. Depressional wetlands provide the primary breeding habitat for pond-breeding amphibians in the watershed, as they typically hold pockets of water during the early spring when eggs are deposited, and maintain pools of water for the developing larvae. Small wet meadows distributed across the landscape, especially among forest patches, also provide important amphibian habitat, particularly at higher elevations.

Foraging and refuge habitats are important to both newly metamorphosed and adult life stages of many amphibian species. Amphibians use connective pathways between the upland forest and the breeding pond, although some individuals may remain in the breeding pond all year, particularly at higher elevations. Amphibians prefer areas with high humidity and will preferentially move through woody debris, plant cover, or leaf litter that retains moisture (deMaynadier and Hunter 1999). A diversity of plant species in the riparian zone between wetlands and upland forest helps maintain the moist microclimate favored by amphibians and provides refuge from predators during movements between pond and upland habitat. Downed logs provide especially important refuge habitat for salamanders and frogs, as well as retaining moisture near the forest floor (Dupuis et al. 1995). Amphibians may also use the small streams that run through wet meadows as natural migration corridors between pond and forest habitat.

The physical and microclimate characteristics of the surrounding forest can be important when assessing the suitability of depressional wetlands for amphibian use. Studies show that forests with higher levels of surface material (leaf litter, loose bark, logs) have higher relative abundances of terrestrial amphibians (Walls et al. 1992, Dupuis et al. 1995). These habitat elements are likely also important for pond-breeding amphibians. In Maine migrating juvenile pond-breeding amphibians preferentially moved into closed canopy habitat where foliage was dense in both the tree canopy and understory layer (DeMaynadier and Hunter 1999).

The purpose of this report is to:

1) discuss historical and future threats to wetland functions, and to the forests surrounding wetlands in the CRMW;
2) describe the general protections and forest habitat restoration, road improvement and decommissioning, and invasive species programs as they affect wetlands;
3) provide information on the classification of wetlands in the CRMW; and
4) evaluate the condition of the forested areas surrounding the wetlands.

Threats to Wetlands in the Cedar River Municipal Watershed

Historically, wetland habitats in the watershed were not protected during timber harvest activities (primarily clearcut logging). Most often wetlands and wet meadows were cut over and no forested buffers surrounding open water wetlands were established, resulting in significant ecological disturbance from the mechanics of the timber harvest. These practices altered the forest canopy cover directly associated with wetland habitat, as well as the condition of surrounding forest and riparian areas significant to natural functioning of all wetland types.

Additionally, logging practices may have altered the hydrology of at least some individual wetlands or wetland complexes.

Another major historical threat to wetlands was directly associated with road construction. Sometimes roads were constructed through the wetland itself, but most often immediately adjacent to the wetland. Subsequent fine sediment deposition from active forest roads to surface waters, especially from those historical roads that were not constructed to current standards, could negatively affect wetland function. Accumulated fine sediment can alter the hydrologic regime and plant community composition and structure of wetlands, as well as alter surface and/or shallow subsurface flow in the system.

Prior to establishment of the municipal water supply system in the watershed, some wetlands, especially those at lower elevations, were near areas of human habitation (e.g., homesteads, small towns, and logging camps), and now have heavy infestations of non-native invasive plants, including Bohemian knotweed (*Polygonum x bohemicum*), Himayalan blackberry (*Rubus armeniacus*), evergreen blackberry (*Rubus laciniatus*), and bittersweet nightshade (*Solanum dulcamara*). These invasive species often form large monocultures that do not perform the same ecological functions provided by an array of native plant species.

Despite this legacy, most depressional wetlands in the CRMW are currently considered to have few lingering threats to key ecological processes. The forested riparian areas surrounding the wetlands, however, are in differing stages of recovery from the long history of logging and road building activities under both public and private land ownership.

In the future, climate change in the Pacific Northwest is predicted to result in hotter, drier summers, and wetter falls, winters, and springs (Littell et al. 2009). More of the precipitation is predicted to fall in the form of rain, resulting in less snow accumulation in winter. The combination of less snowmelt in spring to fill and maintain ponds and hotter, drier conditions in the summer during larval development and juvenile migration could affect larval development and survival of amphibian populations. A study in Oregon showed that lower water levels in lakes increased exposure of larval toads to UV-B radiation, and consequently either reduced survival of developing larvae or increased the risk of disease (Kiesecker et al. 2001). Evidence for effects of climate change on amphibians and other wildlife continues to mount and should be considered in protection and restoration of depressional wetlands in the CRMW (Blaustein et al. 2001, Corn 2005). The effects of climate change may be significant in upper elevation wet meadows because they are reliant on spring snow melt to fill and maintain water levels. Changes in the amount and timing of snow melt may change the ecology of wet meadows and thereby potentially influence the suite of species they support.

Threats to Forests Surrounding Wetlands

Climate change may increase the risk of forest insect or disease outbreaks in the watershed (Kliejunas et al. 2009; McCloskey et al. 2009). Hotter drier summers will increase drought stress on trees. This, in turn, will lower tree vigor and defense mechanisms, making the trees more susceptible to a variety of both non-native and native insects and disease. This can result in increased tree mortality, both directly from drought stress and synergistically from insects and disease. The risk of mortality occurring on a large scale increases in forest patches dominated by a single tree species. If an insect or disease targets that particular tree species, large-scale mortality can result. For example, mountain pine beetle (*Dendroctonus ponderosae*) outbreaks have resulted in extensive mortality of whitebark pine (*Pinius albicaulis*) in the greater Yellowstone ecosystem, and increased pine mortality is associated with a warmer drier climate, due in large part to the increased beetle populations (Jewett et al 2009).

Large-scale fire is another threat likely to increase under climate change (Environmental Protection Agency: http://www.epa.gov/climatechange/impacts-adaptation/northwest.html). Altered fuel patterns, along with increased risk due to tree death from insects and disease, will increase the risk both of fire starts and of large-scale fire that could strip large portions of the watershed of tree and shrub cover. Severe fire resulting in loss of forested areas surrounding wetlands could increase erosion and sedimentation into the wetlands, directly altering amphibian habitat as well as changing hydrologic function. Loss of cover of both the trees and understory shrubs could increase the risk of predation on amphibians moving to and from breeding ponds.

Wetland Protection under the Habitat Conservation Plan

A 50-year Habitat Conservation Plan (HCP) for the CRMW was signed in the year 2000. Under this plan, all wetlands located within old-growth forest will be protected, because old-growth forest patches are considered ecological reserves. In addition, all old-growth forest that was obtained from the Forest Service in the 1990s is deed-restricted, such that no timber harvest can occur within them. The HCP specifies that no commercial timber harvest will occur within the entire CRMW, although thinning to enhance ecological function is allowed and excess trees from the thinning may be sold. This commercial restriction does not prevent the City from cutting trees to protect the drinking water supply or to protect the watershed from catastrophic damage. These activities could potentially affect a small proportion of forests surrounding wetlands, but is unlikely.

HCP Forest Habitat Restoration Program

Many dense second-growth forest stands in the CRMW have closed canopies with little light penetration, resulting in limited understory structural development and minimally diverse ground cover. In many cases, past logging practices included removal of much of the down wood that could now serve as migration corridors and microclimate refuge sites for amphibians. These are the types of forest targeted for habitat restoration projects under the HCP. Major goals of this program are to enhance biological diversity and restore a variety of ecological functions, as well as improve wildlife habitat. Thinning projects create forest patches of varying densities (ranging from small gaps, to patches of widely spaced trees, to small patches of dense forest), which encourage diverse vertical and horizontal understory development. In addition, dead wood is augmented by creating snags and leaving down wood on the forest floor, especially larger diameter logs used by amphibians in riparian areas near wetlands and small streams. During all thinning projects all applicable Washington Department of Natural Resources (DNR) forest practices rules are followed (http://www.dnr.wa.gov/BusinessPermits/ForestPractices/Pages/Home.aspx).

Another component of the forest habitat restoration program is planting native trees and shrubs in areas where there is poor plant species diversity or a lack of local seed source. A greater diversity of native plant species provides greater richness of food sources, breeding sites, and refuge habitats for a variety of invertebrates, birds, mammals, and amphibians. In riparian areas dominated by deciduous shrubs and trees, we have planted a variety of conifer tree species that will eventually provide shade, snags, and large diameter down wood within both riparian corridors and stream channels. This will benefit amphibians over the long-term, after the wood placed as part of restoration projects decomposes.

Some forest habitat surrounding depressional wetlands and wet meadows is naturally patchy due to the characteristically wet soils and unique geology of the local area. In these cases, the forest is often developing more complex structure and a wider diversity of native plant species naturally, so restoration intervention is not necessary.

HCP Road Improvement and Decommissioning Program

The HCP road decommissioning program focuses on removing roads that contribute excessive amounts of sediment to streams, ponds, lakes, and wetlands, or that have drainage or instability problems. In addition, road segments that are not projected to be needed for future watershed management activities are removed, thereby removing barriers to migration, reconnecting habitat segments, reducing fragmentation of sensitive habitats, fostering more natural function of ecosystems, and generally decreasing the human-caused disturbance to native wildlife populations. Removing roads that bisect wetland habitat in particular, improves connectivity of wetland hydrology, and removes a potential source of sediment to the wetland and eventually the entire downstream network. A total of 185 miles of forest road have been decommissioned through 2013 including prior to and during the HCP.

When road decommissioning in close association with wetland habitat is anticipated, there are several opportunities to improve both water quality and ecological structure and function of the wetland habitat. Any or all of the following are utilized where appropriate:

- Restore hydrologic connections within and between wetlands if the road prism bisected or fragmented wetland habitat.
- Remove the road prism and re-grade to near natural slopes in areas where the road created a physical barrier between a wetland and upland forest habitat.
- Add down wood (preferably in contact with the soil), creating a movement corridor across the decommissioned road for wildlife species, especially amphibians.
- Design planting projects to restore the native plant community on the decommissioned roadbed, thereby connecting the wetland with nearby upland forest habitat.

Roads that will be retained are being improved such that they meet current standards, as defined by the DNR. When these roads cross rivers or wetlands, whenever possible bridges or culverts are designed such that amphibians and other wildlife can move along the floodplain and do not have to cross the road. There is a legal requirement that all forest roads be brought up to current DNR Forest Practice Rules and standards by October 31, 2016 (with a possible extension to October 31, 2021, see WAC 222-24-050 and WAC 222-24-051). This should help minimize sediment input or other negative effects they might have on adjacent wetlands and streams.

Invasive Species Program

The invasive species program in the CRMW focuses on non-native plant species that are legally required to eradicate or control by King County. In addition, other species that pose significant ecological risk are also controlled in selected high value habitats. Habitat restoration projects that remove invasive species and replace them with an array of native shrubs and trees focus on wetland and riparian areas. These occur primarily in lower elevations, often in association with past human development, where the worst infestations occur.

The largest and most diverse wetland complex within the watershed is Rock Creek Wetland. It encompasses over 222 acres and is one of the wetlands most heavily infested with non-native invasive plants (Figure 1). It was bisected by an old logging road, portions of which became completely covered with Bohemian knotweed. The knotweed also spread along water channels and into some higher elevation areas. In addition, patches of both Himalayan and evergreen blackberry and bittersweet nightshade blanketed large areas of the wetland. The road was decommissioned, with portions removed to reconnect wetland habitat and hydrology. All of the knotweed and most of the large patches of blackberry and nightshade have been treated for several years, but will likely require additional treatments to prevent re-infestation. The old roadbed was planted with native trees and shrubs, and the remainder of the treated areas is reverting to an array of native wetland plants. Three smaller wetlands, plus the riparian areas of several rivers and creeks, have also had multi-year projects removing invasive plants and replacing them with native species.

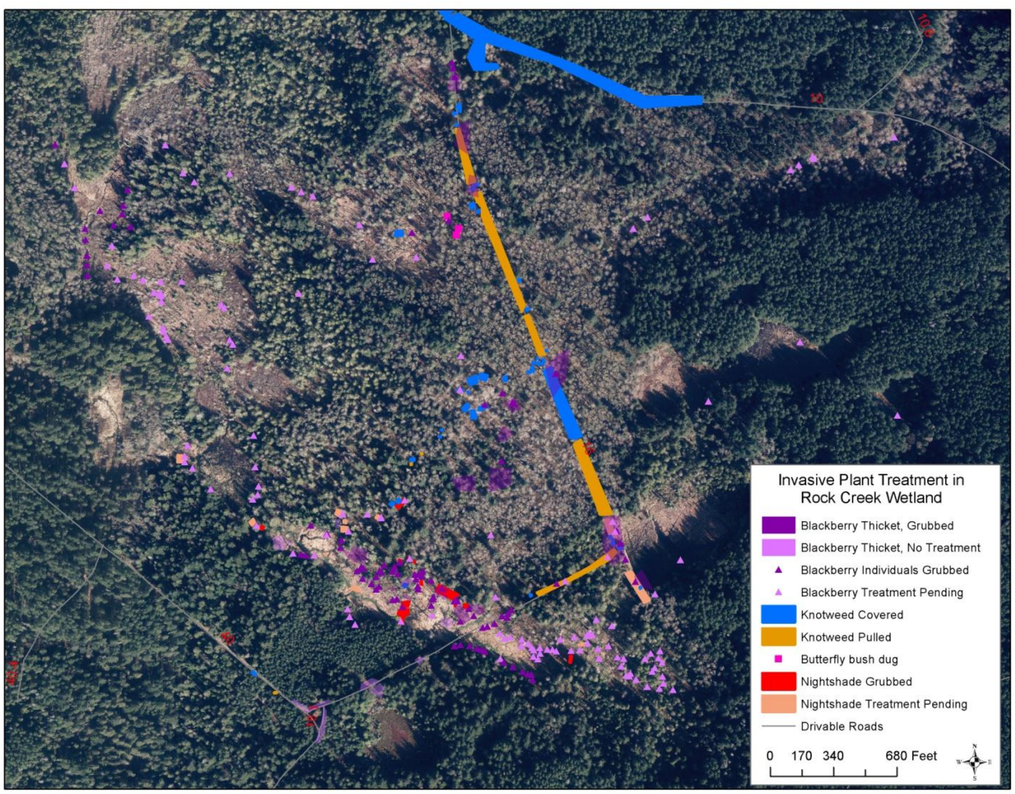

Figure 1. Invasive plant specie**s** in the Rock Creek Wetland complex, CRMW.

Wetland Classification

The hydrogeomorphic method (HGM) for classifying wetlands is based on the landscape position and the hydrologic regime supporting each wetland, rather than using a system that is limited to more changeable biotic characteristics (Brinson 1993, USDA Natural Resources Conservation Service 2008). Under the HGM approach, wetlands within each category are expected to function in a similar manner and are affected by similar geomorphic processes.

All identified wetlands within the CRMW were classified according to the HGM method. Of the seven approved HGM classes, four occur within the CRMW: Lacustrine Fringe, Depressional, Riverine, and Slope. In addition, we used six regional subclasses in our classification scheme (Hruby 2004), and mapped all wetlands using Geographic Information System software (ArcGIS). Information for the classification came from several sources, including the pre-existing National Wetland Inventory and a special habitats GIS layer developed by watershed staff. Many wetlands were field verified by watershed staff from 2001 to 2005.

The classification descriptions for CRMW wetlands (as defined for western Washington) are:

<u>Lacustrine Fringe.</u> If the area of open water next to a vegetated wetland is larger than 20 acres and more than 6.6 feet deep over 30% of the open water areas, the wetland is considered to be "lake-fringe". In the CRMW this includes Chester Morse Lake, Masonry Pool, Rattlesnake Lake, Walsh Lake, and Findley Lake. This class can include areas of open water that are less than 20 acres if the water depth in the deepest part of the basin exceeds 2 m (6.6 ft) at low water (from Cowardin 1992). In CRMW this includes Rex Pond. The dominant surface water movement in this class has a bi-directional horizontal component because of winds or currents. Additionally, there may be some vertical water movement due to seasonal water fluctuations.

<u>Depressional.</u> Occur where elevations within the wetland are lower than the surrounding landscape. Movement of surface water and shallow subsurface water is toward the lowest point in the depression. The depression may have an outlet, but the lowest point in the wetland is somewhere within the wetland boundary, not at the outlet. If a wetland has surface ponding, even if only for a short time, and is not lacustrine fringe or riverine, it can be classified as depressional. Depressional wetlands may have channels flowing into them from adjacent slopes.

- *Depressional Closed* – has no outlet.
- *Depressional Open* - has an outlet, but the lowest point in the wetland is not at the outlet.

<u>Riverine</u>**.** Occur in valleys associated with stream or river channels. They lie in the active floodplain of a river and have direct links to the dynamics of the stream or river. The distinguishing characteristic of these wetlands is frequent flooding by overbank flow from the stream or river (two-year return frequency). They can also receive significant amounts of water from groundwater and slope discharges. However, if wetlands lie in the floodplains but are not frequently flooded, they are not classified as riverine. Riverine wetlands are often replaced by depressional or slope wetlands near the headwaters of streams and rivers, where the dominant hydrologic process is surface runoff or groundwater seepage.

- *Riverine Flow-through* - does not retain surface water longer than the duration of a flood event.
- *Riverine Impounding* – is flooded more than one week after the flood event.

Slope. Occur on hill or valley slopes where groundwater "daylights" and begins running along the surface or immediately below the soil surface. Water in these wetlands flows only down the slope, and the gradient is steep enough that the water is not impounded. The downhill side of the wetland is always the point of lowest elevation in the wetland. Slope wetlands are distinguished from riverine wetlands by the lack of a defined stream bed with banks that can overflow during high water.

- *Slope Connected* – has a direct link to another wetland or stream.
- *Slope Unconnected* – is separate from another water body.

Wetland Riparian Forest Assessment

We evaluated the condition of the forested area surrounding CRMW wetlands using forest age as a proxy for habitat condition. We have a large amount of information about the watershed in GIS layers, including an estimate of forest age for much of the watershed, based on forest inventories conducted in 1973. We chose to evaluate the area within 300 feet of each wetland because that should represent the most critical transitional area traversed by migrating amphibians from breeding to upland forest habitat. It is also considered to be the minimum width in western Washington to retain plant structure required by a variety of wetland-dependent wildlife (Castelle et al 1992).

This assessment was a GIS exercise, procedure as follows. We first checked the GIS mapping of each wetland, and ensured that every unique wetland had only a single polygon to represent it. We then created a 300-foot zone around each individually mapped wetland polygon. For wetlands that were within 600 feet of each other, the zones were allowed to overlap. Consequently, a single area of ground could be associated with two or more wetlands, and thereby counted more than once. In addition to forest, these surrounding zones could also potentially contain portions of nearby wetlands, streams, lakes, or other non-forested habitat. Finally we combined tree age data, wherever available, with each zone and linked the zone to its respective wetland with a unique identifier.

We classified a total of 360 wetlands within the CRMW, with wetland area totaling 2,073 acres and area within the 300-foot surrounding zones totaling 6,758 acres (Table 1). We were able to classify forest age in an average of 77% of the surrounding zones, ranging from 54% for Lacustrine Fringe to 85% for Riverine Impounded. Only 22 wetlands had no information on forest age within their surrounding zones. Of these, 15 had significant portions of the zone consisting of non-forested habitat, or were frequently inundated (e.g., the zones adjacent to many Lacustrine Fringe wetlands encompassed portions of the adjacent lake). Only 48 of the 360 wetlands had forest age data for less than half of their surrounding area.

The age of the forest surrounding wetlands was put into eight classes: old growth (never harvested, age in the CRMW ranging from 200 to >800 years), 120-200 years, and six 20-year classes from 0 to 120 years. Number of acres within each forest age class in each zone was then calculated for each wetland class (Table 2). About 700 acres (13% of the total of 5,191 acres with forest age data) within these surrounding zones were classified as old growth. These generally occur at elevations greater than 3,500 feet asl.

Table 1. Classification of wetlands and 300-foot surrounding zones for each wetland.

Wetland type	Number of wetlands	Area of wetlands (ac)	Total zone area (ac)	Total zone area classified (ac)	Percent zone area classified	Number wetlands with no zone classified[1]	Number wetlands with <50% zone classified
Depressional Closed	78	236	1,147	933	81	2	7
Depressional Open	52	894	1,520	1,247	82	1	7
Lacustrine Fringe	44	274	974	530	54	5	15
Riverine Flowthrough	27	117	541	366	69	8	1
Riverine Impounded	5	170	213	180	85	0	0
Slope Connected	84	250	1,410	1,163	82	3	10
Slope Unconnected	70	133	954	772	81	3	8
Totals	**360**	**2,073**	**6,758**	**5,191**	**77**	**22**	**48**

[1] 15 of the 22 wetlands with no surrounding zone habitat classified had significant portions in permanent non-forest or were frequently inundated.

Table 2. Age of forest within 300 feet of wetlands.

Wetland Type	Total acres within 300 feet of wetlands by forest age class								Percent Classified
	Old growth	120-200	100-120	80-100	60-80	40-60	20-40	<20	
Depressional Closed	55	0	21	470	170	173	40	0	82
Depressional Open	123	0	25	320	532	201	69	0	79
Lacustrine Fringe	38	0	21	210	227	25	9	0	54
Riverine Flowthrough	38	0	0	117	166	42	2	0	68
Riverine Impounded	0	6	2	129	14	12	10	0	85
Slope Connected	252	0	8	185	164	453	101	0	82
Slope Unconnected	193	0	15	153	92	188	132	0	81
Total acres	**699**	**6**	**92**	**1584**	**1364**	**1093**	**362**	**0**	**77**
Percent of total classified area	**13**	**0.1**	**2**	**30**	**26**	**21**	**7**	**0**	

The vast majority (77%) of forested habitat classified in the zones around wetlands consisted of forest ranging in age from 40 to 100 years, with 56% of the zones having forest 60 to 100 years old. There was no forest less than 20 years old within any of the zones, and only 7% of the zones had forest less than 40 years. A total of 68 wetlands had a portion of their surrounding forested zone classified as 20 to 40 years old. Of these, only nine wetlands had surrounding zones consisting solely of 20 to 40 year old forest. The remaining 59 wetlands had a mix of forest ages within the surrounding zones, often including some old-growth forest. Five of the nine wetlands with only 20 to 40 year old forest within adjacent zones were thinned between 2001 and 2008 (for a total of 45 thinned acres). Carefully planned thinning should accelerate both tree growth and understory development, which should benefit the suite of species using these wetland riparian areas.

Timber harvest in the CRMW began in the early late 1800s. The logging companies started at the western end of the municipal watershed and basically logged from west to east. Most of the western end of the watershed was completely cut over, with very little old-growth forest remaining. Consequently, the forest in the lowermost elevation, western portion of the municipal watershed is generally 80 to 100 years old, while the high elevation forest in the eastern end of the watershed, which was logged much more recently, is much younger. The forested habitat surrounding wetlands in lower elevations generally ranges from 60 to 100 years old (Figure 2, forest in these age ranges depicted in yellow and light orange).

The central area of the watershed, south of Chester Morse Lake, was logged starting in the 1940s. So the forest surrounding wetlands in this portion of the watershed tends to be 40 to 60 years old (depicted in brown in Figure 2). Small patches of old-growth forest were left in this section of the watershed, so a few wetlands here are surrounded by old-growth forest.

The forest in the eastern portion of the CRMW contains the largest patches of old-growth forest, and also the most recently logged areas. Some old-growth forest was harvested as recently as the late 1980s and early 1990s. So forested habitat adjacent to wetlands in this portion of the watershed tends to range from 20 to 60 years (Figure 3, zones in brown or red) or of old-growth forest (Figure 3, dark green buffers).

Data by wetland, including wetland area, HGM classification, and information on the forest within 300 feet of each wetland can be found in Appendix I.

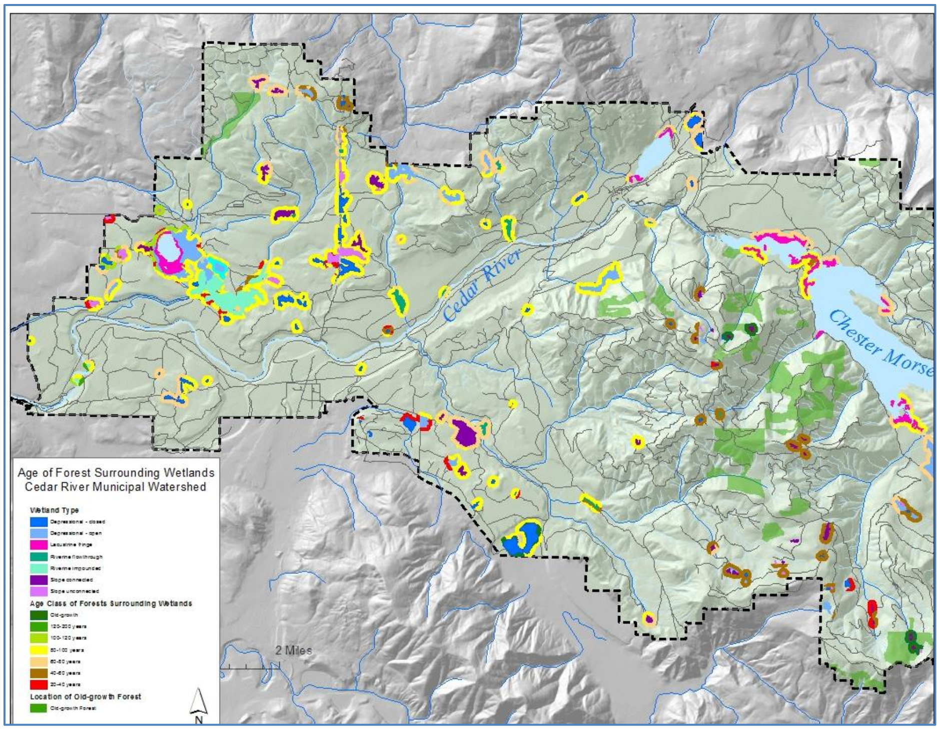

Figure 2. Wetlands by type and surrounding forest age classes, western portion of CRMW, lower elevations.

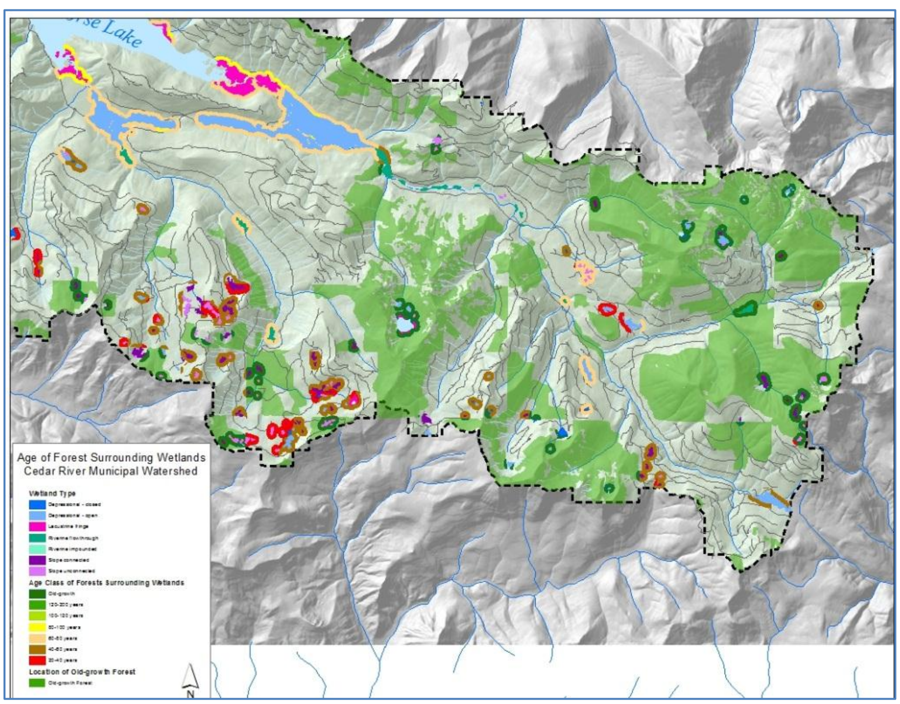

Figure 3. Wetlands by type and surrounding forest age classes, eastern portion of CRMW, higher elevations.

Summary

Wetlands and their associated forested riparian areas are recovering from past logging and road building activities in the CRMW. The majority of forests within 300 feet of wetlands are older than 60 years and should naturally develop both structural complexity and plant species diversity over the next 20 to 40 years. Because of their high habitat value for a large number of wildlife species, forests near wetlands and riparian areas have been given high priority when considering sites for habitat restoration projects. However, the HCP restoration thinning program (which targeted young forests) was completed in in 2013. The remaining HCP ecological thinning program is much more limited in scope, and may or may not target areas near wetlands, depending management priorities over time. Consequently, the number of acres of forested habitat adjacent to wetlands likely to be positively affected by thinning projects in the future will undoubtedly be small. There may be some continued opportunity under the ecological thinning program to add downed wood where it is scarce, which would provide critical corridors and refuge for amphibians.

The HCP road decommissioning program will continue through 2020, and will result in decommissioning approximately 84 additional miles of road. Other roads may be decommissioned beyond 2020, but is dependent on future SPU management decisions. The legal requirement to bring all forest roads up to current DNR Forest Practice Rules and standards by 2016 means that all CRMW roads that will be retained, including roads classified as temporary, should have decreased instability issues and sediment input to wetlands and streams by that time.

Wetland and riparian areas will continue to be a high priority for invasive species removal and planting to restore a variety of native plant species, as long as the Invasive Species Program continues as it is currently structured. Planting projects may be conducted under the HCP upland and riparian planting programs as well as the invasive species program, which is currently funded separately from HCP activities.

The HCP currently is in effect through 2050. If it continues to be the primary guide for management decisions in the CRMW, wetlands and their riparian areas should be well protected for the next several decades. This should allow the forest habitat surrounding wetlands to continue to develop the habitat complexity, structure, and diversity that are critical to an array of wildlife species, including amphibians. If future priorities change and the HCP is no longer the primary driver for management decisions, protection of wetlands and the surrounding forest should be re-assessed at that time. In addition, to allow timely management decisions and interventions, key wetlands and their surrounding riparian forest should be periodically monitored for their response to climate change.

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Appendix I. Data for each wetland and surrounding zone in the Cedar River Municipal Watershed

Wetland Code	HGM code	Wetland area, ac	Total zone area, ac	Zone area classified, ac	% zone classified	Number acres within surrounding zone by forest age class (2013)							
						Old growth	120-200	100-120	80-100	60-80	40-60	20-40	<20
1	DC	1.2	12.1	12.1	100.0						5.3	6.8	
2	DC	6.3	20.8	4.4	21.0	4.4							
3	DC	0.4	11.6	9.3	80.3	4.9					4.4		
4	DC	0.2	8.8	8.8	100.0	4.0					4.8		
5	DC	0.4	9.7	9.7	100.0	0.5					9.2		
6	DC	1.2	13.5	13.5	100.0					13.3	0.3		
7	DC	0.4	9.5	9.5	100.0						9.6		
8	DC	0.6	7.7	7.7	100.0						2.0	5.7	
9	DC	0.0	5.2	5.2	100.0						5.2		
10	DC	0.4	10.8	10.8	100.0						10.8		
11	DC	1.0	12.9	6.0	46.7						6.0		
12	DC	0.6	11.4	9.1	79.8	9.1							
13	DC	4.0	19.2	7.2	37.5							7.2	
14	DC	0.9	11.6	10.7	91.8						10.7		
15	DC	0.1	7.8	7.8	100.0						7.8		
16	DC	0.1	8.0	8.0	100.0						8.0		
17	DC	0.1	7.9	7.9	100.0						7.9		
18	DC	0.0	7.5	7.5	100.0						7.5		
19	DC	27.1	36.3	30.0	82.7	10.2			17.6	2.2			
20	DC	43.8	51.8	50.7	97.9	9.5			40.5	0.7			
21	DC	0.5	9.7	9.7	100.0						9.7		
22	DC	2.4	19.3	11.8	61.2				11.8				
23	DC	0.1	9.9	9.9	100.0				7.4			2.5	

Wetland Code	HGM code	Wetland area, ac	Total zone area, ac	Zone area classified, ac	% zone classified	Old growth	120-200	100-120	80-100	60-80	40-60	20-40	<20
24	DC	0.0	7.5	7.5	100.0					7.5			
25	DC	1.4	13.3	12.6	95.0				12.7				
26	DC	0.2	2.1	2.1	100.0					2.1			
27	DC	0.3	10.3	0.0	0.0								
28	DC	1.4	14.6	0.0	0.0								
29	DC	0.2	9.4	1.5	15.6							1.5	
30	DC	1.1	12.6	12.6	100.0						12.6		
31	DC	14.7	28.6	10.3	36.2							10.3	
32	DC	0.0	7.5	7.5	100.0				6.9	0.6			
33	DC	0.4	8.3	6.9	82.8				1.6	5.3			
34	DC	6.3	32.0	29.4	92.0				3.3	26.1			
35	DC	0.8	11.1	11.1	100.0				10.2	0.9			
36	DC	1.8	20.0	18.4	92.0				8.0	10.5			
37	DC	3.5	21.4	21.4	100.0				16.7	4.7			
38	DC	0.4	8.9	8.9	100.0				2.2	6.7			
39	DC	0.5	10.7	10.7	100.0					10.7			
40	DC	1.1	13.2	11.9	90.3				12.0				
41	DC	0.1	8.6	8.2	95.9	8.2							
42	DC	0.3	9.7	6.8	70.4				6.8				
43	DC	0.5	10.3	4.3	41.3	4.3							
44	DC	1.0	12.1	12.1	100.0				2.6		5.7	3.8	
45	DC	1.4	14.8	13.8	93.2				13.8				
46	DC	0.5	10.8	10.8	100.0						10.8		
47	DC	3.6	17.0	16.6	97.3				14.5			2.1	
48	DC	1.4	14.7	14.7	100.0				14.7				
49	DC	1.4	11.3	10.9	96.1				10.9				
50	DC	1.6	13.3	12.2	91.8				12.2				
51	DC	2.3	13.9	12.3	88.4				12.3				

Wetland Code	HGM code	Wetland area, ac	Total zone area, ac	Zone area classified, ac	% zone classified	Old growth	120-200	100-120	80-100	60-80	40-60	20-40	<20
52	DC	0.3	9.8	8.0	81.5				8.0				
53	DC	9.9	28.6	23.1	80.5				23.1				
54	DC	2.3	11.3	10.6	94.1				10.6				
55	DC	0.1	7.9	4.0	50.8				4.0		0.0		
56	DC	0.4	8.4	6.9	82.1			2.5	0.1	4.4			
57	DC	1.6	12.6	12.1	96.4			5.6	0.1	6.5			
58	DC	1.1	12.2	10.1	82.8				10.1				
59	DC	21.8	48.4	34.8	71.8				31.9		2.9		
60	DC	3.6	23.3	23.3	100.0				20.9		2.4		
61	DC	5.0	22.9	20.5	89.6			13.2	4.1	3.2			
62	DC	0.3	9.6	7.9	82.0					7.9			
63	DC	0.1	8.6	4.4	50.9				4.4				
64	DC	4.5	24.3	17.6	72.6				17.6				
65	DC	0.8	11.9	10.1	85.1				7.9	2.3			
66	DC	2.2	16.1	12.9	80.4				12.9				
67	DC	0.3	9.8	9.8	100.0				9.8				
68	DC	10.1	27.9	24.0	86.3				24.0				
69	DC	1.6	11.1	8.2	73.8				8.2				
70	DC	2.2	18.2	18.2	100.0				14.1	4.1			
71	DC	1.4	18.6	12.4	66.9				9.9	2.6			
72	DC	1.4	14.3	14.3	100.0					14.3			
73	DC	0.7	10.4	6.8	65.1				3.5		3.3		
74	DC	9.3	25.6	16.2	63.0				2.0	14.2			
75	DC	12.0	28.2	23.4	83.2				4.0	19.4			
76	DC	0.1	8.5	8.5	100.0						8.5		
77	DC	2.1	15.6	12.9	82.8						12.9		
78	DC	0.5	11.4	4.4	38.7						4.4		
79	DO	32.1	63.3	28.3	44.7						28.3		

Wetland Code	HGM code	Wetland area, ac	Total zone area, ac	Zone area classified, ac	% zone classified	Old growth	120-200	100-120	80-100	60-80	40-60	20-40	<20
80	DO	0.3	9.8	8.1	82.6	8.1							
81	DO	2.1	16.7	4.2	25.0	4.2							
82	DO	0.8	11.4	11.3	99.2	11.3							
83	DO	7.2	30.0	30.0	100.0						26.1	3.9	
84	DO	2.5	18.2	0.0	0.0								
85	DO	0.3	9.3	9.3	100.0						6.4	3.0	
86	DO	0.9	12.8	12.8	100.0						12.8		
87	DO	0.3	9.4	9.4	100.0						9.4		
88	DO	0.8	11.2	11.2	100.0						11.2		
89	DO	0.5	10.4	10.4	100.0						10.4		
90	DO	0.8	12.5	1.4	11.5						1.4		
91	DO	9.3	35.7	35.7	100.0					35.7			
92	DO	1.4	14.0	8.7	62.2	6.0					2.7		
93	DO	10.5	33.9	13.4	39.4					5.4		7.9	
94	DO	0.5	10.5	6.2	59.2							6.2	
95	DO	4.1	21.2	21.2	100.0	0.7						20.6	
96	DO	2.0	14.7	14.5	98.2	14.5							
97	DO	1.8	14.1	11.0	78.0	11.0							
98	DO	2.1	17.0	17.0	100.0						16.7	0.4	
99	DO	7.3	25.7	1.1	4.2						1.1		
100	DO	0.5	11.3	0.1	0.8						0.1		
101	DO	7.4	22.5	21.3	94.3	21.3							
102	DO	0.6	10.7	10.0	92.8						10.0		
103	DO	0.1	8.0	8.0	100.0	8.0							
104	DO	2.7	16.3	13.0	80.2	13.1							
105	DO	1.8	15.1	12.3	81.6						12.3		
106	DO	0.1	8.6	7.6	89.1	7.6							
107	DO	1.4	15.0	11.7	77.6	11.7							

Wetland Code	HGM code	Wetland area, ac	Total zone area, ac	Zone area classified, ac	% zone classified	Old growth	120-200	100-120	80-100	60-80	40-60	20-40	<20
108	DO	0.1	7.7	5.6	73.2	5.6							
109	DO	2.5	16.5	16.5	100.0						16.5		
110	DO	5.6	22.8	22.8	100.0					12.5	10.3		
111	DO	75.6	92.6	88.1	95.2					88.1	0.0		
112	DO	5.5	22.6	22.6	100.0				11.9	2.8		7.9	
113	DO	161.3	167.3	157.6	94.2				5.9	151.7			
114	DO	315.6	188.9	179.7	95.1				9.6	170.0	0.1		
115	DO	9.5	24.9	21.0	84.3				5.9	1.2		13.9	
116	DO	2.0	15.2	1.4	9.5						1.4		
117	DO	0.2	8.1	4.8	58.6						4.8		
118	DO	4.4	26.2	26.2	100.0				15.0	11.3			
119	DO	28.7	71.2	71.2	100.0				70.7	0.5			
120	DO	22.3	26.7	17.6	65.8				17.6				
121	DO	19.8	37.3	26.0	69.6				26.0				
122	DO	20.1	50.4	46.1	91.5			13.0	51.9			3.0	
123	DO	69.6	64.8	49.6	76.5			11.7	33.3	2.3		2.3	
124	DO	9.6	31.3	31.3	100.0				31.3				
125	DO	0.7	10.5	10.5	100.0				6.4	4.1			
126	DO	1.1	13.0	10.8	83.1				5.0	5.8			
127	DO	7.0	20.0	17.6	88.1				16.5		1.1		
128	DO	19.3	42.1	21.2	50.3				13.0	7.1	1.1		
129	DO	5.0	24.9	23.9	96.0				0.1	23.8			
130	DO	6.5	25.8	25.8	100.0					9.3	16.4		
135	L	4.5	26.1	23.7	90.7						17.3	6.4	
136	L	0.4	10.2	6.6	65.2	6.6							
137	L	0.4	10.3	6.2	59.6	6.2							
138	L	0.7	11.8	8.9	75.5	8.9							
139	L	0.2	8.9	5.6	63.4	5.6							

Wetland Code	HGM code	Wetland area, ac	Total zone area, ac	Zone area classified, ac	% zone classified	Old growth	120-200	100-120	80-100	60-80	40-60	20-40	<20
140	L	0.1	8.0	3.5	43.4	3.5							
141	L	0.6	12.5	6.8	54.8	6.9							
142	L	6.1	22.9	15.9	69.5				0.1	15.8			
143	L	1.9	10.8	10.8	100.0					10.8			
144	L	0.5	10.8	7.3	67.8				0.5	6.8			
145	L	0.5	11.3	11.3	100.0				8.8	2.5			
146	L	40.8	57.1	47.3	82.9				1.1	46.2			
147	L	1.1	12.5	12.5	100.0				12.0	0.6			
148	L	18.9	34.9	34.9	100.0				14.2	20.7			
149	L	2.8	16.3	14.3	87.4				14.3				
150	L	0.5	6.0	0.0	0.0								
151	L	31.5	40.4	18.1	44.9				11.1	7.1			
152	L	11.2	32.7	15.5	47.4				10.5	4.9			
153	L	6.7	21.1	6.4	30.4				6.4				
154	L	0.3	8.3	1.0	12.5				0.3	0.7			
155	L	0.5	9.9	5.4	54.9				2.3	3.1			
156	L	0.6	9.3	4.7	51.0				2.2	2.5			
157	L	0.7	10.9	0.0	0.0								
158	L	0.5	10.1	0.0	0.0								
159	L	3.2	20.5	8.2	40.1				8.1	0.1			
160	L	7.1	42.0	20.6	49.1				5.4	15.3			
161	L	0.9	14.3	5.3	37.0					5.3			
162	L	3.0	19.0	0.0	0.0								
163	L	1.8	16.3	14.3	87.8					14.3			
164	L	2.5	20.1	11.4	56.7					11.4			
165	L	6.7	35.5	21.9	61.6				21.9				
166	L	0.1	8.8	8.8	100.0				7.0		1.8		
167	L	5.5	27.1	16.1	59.3				13.0	0.1	3.0		

Wetland Code	HGM code	Wetland area, ac	Total zone area, ac	Zone area classified, ac	% zone classified	Old growth	120-200	100-120	80-100	60-80	40-60	20-40	<20
168	L	8.2	26.8	12.1	45.0				1.1	11.0			
169	L	5.0	23.3	9.8	42.1				9.8				
170	L	0.6	10.0	0.0	0.0								
171	L	5.0	25.9	17.1	66.0				13.9	0.0	3.2		
172	L	6.4	36.9	29.7	80.3	0.0			29.6				
173	L	1.3	13.8	0.4	3.0				0.4				
174	L	27.6	76.9	40.1	52.1				0.0	40.1			
175	L	47.5	79.7	38.9	48.8			21.5	15.0			2.5	
176	L	1.4	15.0	3.0	20.1				1.3	1.7	0.0		
177	L	3.1	18.0	0.0	0.3					0.1			
178	L	4.6	30.5	5.6	18.3				0.3	5.3			
180	RF	6.2	26.3	20.8	78.8					20.8			
181	RF	0.2	6.6	1.8	27.3							1.8	
182	RF	8.8	30.2	30.2	100.0	30.2							
183	RF	0.9	11.9	11.9	100.0					11.9			
184	RF	0.8	12.4	0.0	0.0								
185	RF	6.1	29.7	26.9	90.9					26.9			
186	RF	1.9	14.4	0.0	0.0								
187	RF	1.6	15.6	0.0	0.0								
188	RF	1.9	15.9	0.0	0.0								
189	RF	1.8	15.9	0.0	0.0								
190	RF	4.9	26.3	0.0	0.0								
191	RF	1.4	15.0	0.0	0.0								
192	RF	2.3	16.5	0.0	0.0								
193	RF	10.5	29.6	29.6	100.0					29.6			
194	RF	25.0	50.1	32.8	65.5	8.1				11.3	13.5		
195	RF	3.6	28.1	28.1	100.0				22.2		5.9		
196	RF	0.4	8.0	8.0	100.0					8.0			

Wetland Code	HGM code	Wetland area, ac	Total zone area, ac	Zone area classified, ac	% zone classified	Old growth	120-200	100-120	80-100	60-80	40-60	20-40	<20
197	RF	4.7	24.2	23.7	97.8				1.1	22.6			
198	RF	0.8	12.5	12.5	100.0						12.6		
199	RF	0.3	10.2	10.2	100.0						10.2		
200	RF	17.1	38.2	38.2	100.0				32.8	5.5			
201	RF	0.8	14.4	9.3	64.7				6.9	2.4			
202	RF	0.5	11.5	11.5	100.0				6.0	5.5			
203	RF	8.9	34.9	33.5	95.9				29.6	3.9			
204	RF	1.2	10.2	10.2	100.0				10.2				
205	RF	3.0	19.9	17.5	88.0				2.7	14.8			
206	RF	1.1	12.3	8.9	72.3				5.7	3.2			
208	RI	0.0	0.6	0.6	100.0					0.6			
209	RI	1.7	14.2	10.9	77.0		3.3	1.6	6.0				
210	RI	0.8	12.1	10.0	83.1		2.5		5.6	2.0			
211	RI	152.4	142.8	115.7	81.0				94.4	2.6	4.5	5.5	
212	RI	15.5	43.1	43.1	99.8				22.9	8.7	7.1	4.4	
213	SC	0.5	11.3	10.5	93.6	0.6					7.9	2.1	
214	SC	1.2	12.7	12.7	100.0	2.9					9.8		
215	SC	1.0	13.4	13.4	100.0						13.4		
216	SC	3.8	20.3	20.3	100.0						20.3		
217	SC	0.7	12.6	12.6	100.0	12.6							
218	SC	0.3	10.3	10.3	100.0						10.3		
219	SC	0.2	8.8	4.9	55.8	4.7						0.2	
220	SC	0.2	9.0	9.0	100.0							9.0	
221	SC	0.2	8.8	8.8	100.0						5.9	2.8	
222	SC	0.7	12.8	12.7	99.7						12.0	0.7	
223	SC	0.5	11.6	4.8	41.1	2.9					1.9		
224	SC	0.2	9.2	8.6	93.3	0.9					7.7		
225	SC	0.7	12.0	10.7	88.9	1.4					9.3		

Wetland Code	HGM code	Wetland area, ac	Total zone area, ac	Zone area classified, ac	% zone classified	Old growth	120-200	100-120	80-100	60-80	40-60	20-40	<20
226	SC	0.9	11.6	5.9	50.9						5.8	0.1	
227	SC	7.1	25.7	0.1	0.4	0.1							
228	SC	1.0	14.4	11.5	79.7						11.5		
229	SC	2.4	23.5	22.7	96.6	22.2						0.5	
230	SC	0.9	12.9	12.9	100.0						12.9		
231	SC	0.3	10.5	10.4	99.3	10.4							
232	SC	0.6	9.6	9.6	100.0						0.4	9.2	
233	SC	1.2	12.9	12.7	98.4	12.7							
234	SC	0.7	14.0	14.0	100.0						5.1	8.9	
235	SC	0.7	11.4	11.4	100.1	8.7					2.7		
236	SC	5.9	26.2	25.5	97.5						17.3	8.2	
237	SC	1.9	16.0	16.0	100.0						14.6	1.4	
238	SC	0.7	10.4	10.4	100.0						10.4		
239	SC	5.2	24.0	18.3	76.2	18.3							
240	SC	1.2	13.6	13.1	96.5	10.1					3.0		
241	SC	1.6	17.0	16.9	99.1	16.9							
242	SC	0.7	12.0	12.0	100.0						12.0		
243	SC	0.6	13.1	3.8	29.3						3.8		
244	SC	2.7	17.0	17.0	100.0						17.0		
245	SC	2.8	17.5	13.2	75.7						13.2		
246	SC	3.3	20.5	18.0	87.6						18.0		
247	SC	10.6	31.7	12.0	38.0	6.0					4.2	1.8	
248	SC	2.1	16.7	11.6	69.5	11.6						0.0	
249	SC	2.3	15.8	3.3	21.0	3.3							
250	SC	0.4	10.7	10.7	100.0					10.7			
251	SC	2.5	19.8	7.7	38.8						2.7	5.0	
252	SC	5.8	25.7	25.7	100.0						25.7		
253	SC	0.4	10.3	10.3	100.0						10.3		

Wetland Code	HGM code	Wetland area, ac	Total zone area, ac	Zone area classified, ac	% zone classified	Old growth	120-200	100-120	80-100	60-80	40-60	20-40	<20
254	SC	0.4	10.7	8.7	82.1	8.7							
255	SC	1.7	15.7	15.7	100.0						15.7		
256	SC	2.8	19.4	5.2	27.0							5.2	
257	SC	0.9	12.0	12.0	100.0	12.0							
258	SC	0.5	11.3	11.3	99.9	11.3							
259	SC	3.7	18.9	1.7	8.8						1.7		
260	SC	0.8	10.9	10.6	97.8	10.1					0.6		
261	SC	10.9	38.6	32.9	85.2						11.4	21.5	
262	SC	0.6	11.2	11.2	100.0						4.8	6.2	
263	SC	4.1	18.2	17.8	97.7				4.1	13.7			
264	SC	1.2	13.2	13.2	100.0	13.2							
265	SC	1.0	16.9	16.9	100.0						2.4	14.5	
266	SC	0.8	10.2	10.2	100.0	10.2							
267	SC	2.0	13.1	11.3	86.3						11.3		
268	SC	1.8	12.5	9.8	78.4						9.8		
269	SC	0.7	11.2	2.7	24.0						2.7		
270	SC	2.0	16.7	16.7	100.0	16.7							
271	SC	1.8	14.6	14.6	100.0					6.4	8.2		
272	SC	2.0	17.0	0.0	0.0								
273	SC	7.1	28.6	24.2	84.4						24.2		
274	SC	4.6	22.3	22.3	100.0				22.3				
275	SC	0.5	11.5	11.5	100.0						11.5		
276	SC	2.0	17.8	17.8	100.0						17.9		
277	SC	0.8	11.2	11.2	99.7				11.2				
278	SC	1.3	13.8	13.8	99.7				13.8				
279	SC	0.6	13.3	13.3	100.0						13.3		
280	SC	51.1	54.6	54.6	100.0				2.3	52.3			
281	SC	1.5	14.7	14.7	100.0				4.2	10.5			

Wetland Code	HGM code	Wetland area, ac	Total zone area, ac	Zone area classified, ac	% zone classified	Old growth	120-200	100-120	80-100	60-80	40-60	20-40	<20
282	SC	0.8	12.8	10.4	81.7	0.0					7.5	2.9	
283	SC	0.5	10.7	8.9	83.3						8.9		
284	SC	0.8	11.5	8.7	75.5	8.7							
285	SC	0.4	11.3	0.3	3.0						0.3		
286	SC	0.7	11.3	0.0	0.0								
287	SC	2.1	16.0	14.6	91.6	14.7							
288	SC	0.6	11.0	0.0	0.0								
289	SC	2.2	16.7	11.0	66.0						11.0		
290	SC	5.3	24.9	24.9	100.0			8.3	11.3	4.0	0.8	0.6	
291	SC	8.5	37.3	37.3	100.0				35.4	1.9			
292	SC	14.6	35.5	35.5	100.0				35.5				
293	SC	12.6	32.4	30.8	94.9				25.6	5.1			
294	SC	7.2	30.6	30.6	100.0				18.4	12.2			
295	SC	3.5	22.9	22.9	100.0				0.9	22.0			
296	SC	4.1	27.6	25.0	90.6					25.1			
297	SU	0.7	11.9	11.9	100.0						11.2	0.6	
298	SU	0.2	8.8	8.8	100.0						4.1	4.7	
299	SU	0.3	9.8	9.8	100.0						1.8	8.0	
300	SU	0.9	11.4	10.2	89.8	10.1						0.1	
301	SU	0.6	11.7	11.7	100.0							11.7	
302	SU	1.9	15.1	13.9	92.0	5.0						8.9	
303	SU	1.5	15.0	15.0	100.0	12.8						2.2	
304	SU	3.1	20.8	20.0	96.1	20.0							
305	SU	0.9	12.0	12.0	100.0						0.1	11.9	
306	SU	2.2	17.0	17.0	100.0							17.0	
307	SU	0.2	9.0	7.1	79.2	6.9						0.3	
308	SU	0.2	7.9	7.9	100.0	7.9							
309	SU	3.9	25.4	25.0	98.5	23.9					0.8	0.3	

Wetland Code	HGM code	Wetland area, ac	Total zone area, ac	Zone area classified, ac	% zone classified	Old growth	120-200	100-120	80-100	60-80	40-60	20-40	<20
310	SU	0.8	11.8	11.6	98.2	11.6							
311	SU	0.3	9.5	9.5	99.8	9.5							
312	SU	1.0	11.7	11.7	100.0						5.7	6.0	
313	SU	0.2	8.0	8.0	100.0						8.0	0.0	
314	SU	0.9	11.8	11.8	100.0						11.6	0.2	
315	SU	0.3	9.6	9.6	100.0	9.6							
316	SU	3.4	16.6	15.3	92.5	15.3							
317	SU	0.6	11.1	9.5	85.6	9.5							
318	SU	1.7	15.7	15.7	100.0						15.7		
319	SU	0.6	10.7	10.7	100.0						10.7		
320	SU	0.4	5.7	0.0	0.0								
321	SU	0.7	11.6	10.7	92.1						2.6	8.2	
322	SU	1.1	12.4	3.9	31.1	3.9							
323	SU	1.0	14.2	6.1	43.0	6.1							
324	SU	1.1	13.4	13.4	100.0						7.8	5.7	
325	SU	1.4	16.0	13.1	82.2						12.7	0.4	
326	SU	1.4	13.5	13.5	100.0						13.5		
327	SU	0.5	10.3	10.3	99.2	10.3							
328	SU	1.2	12.7	12.7	100.0						7.3	5.4	
329	SU	0.7	11.7	11.7	100.0						1.6	10.1	
330	SU	6.1	25.5	4.0	15.5						4.0		
331	SU	4.4	20.7	18.1	87.3						3.9	14.2	
332	SU	0.6	11.1	5.9	52.9	5.9							
333	SU	2.7	22.1	5.9	26.5						5.9		
334	SU	0.6	10.6	10.6	100.0					10.6			
335	SU	0.8	11.7	11.7	100.0					11.7			
336	SU	0.6	10.0	10.0	100.0					10.0			
337	SU	1.6	13.1	13.1	100.0					13.1			

Wetland Code	HGM code	Wetland area, ac	Total zone area, ac	Zone area classified, ac	% zone classified	Old growth	120-200	100-120	80-100	60-80	40-60	20-40	<20
338	SU	0.2	9.7	9.7	100.0					9.7			
339	SU	0.6	12.5	12.1	96.6					11.3		0.8	
340	SU	0.6	7.6	7.3	94.9	7.3							
341	SU	0.3	8.7	6.0	68.4						6.0		
342	SU	0.6	11.8	11.8	100.0						11.8		
343	SU	0.4	10.9	3.0	27.3						3.0		
344	SU	1.4	14.3	14.3	100.0						14.3		
345	SU	1.0	12.3	0.0	0.0								
346	SU	0.5	10.0	0.0	0.0								
347	SU	1.5	8.5	8.5	100.0					2.7	5.7		
348	SU	1.1	12.4	11.9	95.8	11.9							
349	SU	5.3	20.6	5.9	28.4	5.9							
350	SU	0.8	13.5	3.4	25.3						3.4		
351	SU	6.1	23.4	23.3	99.7				18.6			4.8	
352	SU	6.3	21.8	21.8	100.0				18.3	3.6			
353	SU	11.7	25.7	21.4	83.2				14.1			7.4	
354	SU	1.8	11.7	11.7	100.0			2.7		4.7	4.3		
355	SU	5.7	19.7	19.7	100.0			1.6	7.4	8.2	2.5		
356	SU	22.1	42.3	37.4	88.5				37.3			0.1	
357	SU	0.4	10.2	9.5	93.4				8.4	1.1			
358	SU	1.4	14.1	7.6	53.7						4.6	3.0	
359	SU	0.5	10.7	10.3	96.9			10.3	0.0				
360	SU	0.7	10.5	10.5	100.0				10.5				
361	SU	5.9	22.2	16.5	74.2				16.3	0.2			
362	SU	1.6	14.6	10.1	69.2				9.3	0.9			
363	SU	0.4	9.7	5.9	60.4				5.5	0.4			
364	SU	0.2	9.2	4.6	49.7				2.6	2.0			
365	SU	0.2	8.9	5.6	63.2				3.2	0.3	2.1		

Wetland Code	HGM code	Wetland area, ac	Total zone area, ac	Zone area classified, ac	% zone classified	Old growth	120-200	100-120	80-100	60-80	40-60	20-40	<20
366	SU	0.1	7.9	4.4	55.5				1.6	1.7	1.0		
Totals		**2072.9**	**6757.9**	**5186.7**	76.7	**698.7**	**5.8**	**91.9**	**1584.1**	**1364.4**	**1092.6**	**362.1**	**0.0**