Coleman Creek for Cape Meares Community Association,

Coleman Creek, Tillamook Co., OR

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The Coleman Creek Property is a 118-acre parcel which is sited above the community of Cape Meares, southwest of Tillamook in Tillamook County. Coleman Creek passes through southern leg of the property and another unnamed creek passes through the northeast portion of the property. There are also several small, ephemeral tributaries that feed into these larger streams. There are two roads that access the property, both remnants of the timber harvesting history of the site. Both are gated and a 350-meter portion of the southern road has been washed out by landslides. The Cape Meares Community Association (CMCA) has already secured management of approximately 100 acres south of the proposed acquisition in a community effort to manage the Cape Meares Watershed and this property would expand the community's ability to manage water quality and livability concerns in their community.

I made two visits in the first week of February 2023, the first on 6 February with members of the CMCA to get a general sense of the points of access, historical context, and general condition of the property and a second visit by myself on 8 February to complete additional qualitative and quantitative assessments.

Forest composition – The property is entirely forested and most of the forested areas are a mix of young (30- to 50-year-old) Sitka Spruce, Western Hemlock, and Red Alder, much of it very densely spaced as is typical of systems that have a history of recent commercial logging followed by re-planting. Remnant stumps from the original old-growth forest are scattered throughout the property. These average between 6 and 10 feet in diameter.

Stream condition – Both large streams running through the property, as well as the ephemeral tributaries, show considerable impact from past forest harvesting practices and road building. Most streambeds lack woody debris and terracing resulting in erosion and siltation from unrestricted flow. The large landslide event along the southern edge of the property is also a likely artifact of effects of forest harvesting practices and road building on the waterflow dynamics of the site.

The entire property should be considered an extension of forested areas in adjacent properties already under management by CMCA, the Oregon State Park System and the USFWS Refuge System. This proposed acquisition shares a common ecological history with the surrounding areas which includes human impacts from logging, road-building, and development. As such, much of what would be expected regarding flora and fauna can be extrapolated from nearby analog sites.

BIRDS: The ecology of this site is very much like nearby areas including forested analogs at Cape Meares State Park and Cape Meares Wildlife Refuge. More than 90 species have been collectively observed at these sites. Most of the recorded species might reasonably be expected on the Coleman Creek Property (Table01). Notes on species of concern follow:

Marbled Murrelet - The adjacent forests of Cape Meares State Park have been surveyed for Marbled Murrelets with inconclusive results. Murrelets require large trees with substantial lateral branching and heavy moss cover. There are no trees that meet these conditions within the Coleman Creek system.

Spotted Owl – The forest structure in the Coleman Creek property is very young and it is highly unlikely that Spotted Owl will find this area habitable in the foreseeable future.

Species of concern that have been noted on nearby analog sites as likely breeders include Northern Pygmy Owl, Pileated Woodpecker, Band-tailed Pigeon, Olive-sided Flycatcher and Willow Flycatcher. Watch-list species include Rufous Hummingbird and Hermit Warbler. All these species are very likely to occur on the site. See appendix for specifics on these and other species.

MAMMALS: Most mammal data was inferred from identification of tracks and scat, anecdotal descriptions from CMCA members and data from analog sites (Table02). There is a sizable Roosevelt Elk (*Cervus elephus*) herd in the area and many Columbia Black-tailed Deer (*Odocoileus hemionus columbianus*). Scat from Coyote (*Canis latrans*) was also noted. American Black Bear (*Ursus americanus*) has been reported on the property. See appendix for discussion on species of concern.

AMPHIBIANS AND REPTILES: Northern Red-legged Frog (*Rana aurora*) has been noted by CMCA observers and there is ample habitat for this species. Both Rough-skinned Newt (*Taricha granulosa*) and Western Red-backed Salamander (*Plethodon vehiculum*) were found during my visits (see Table03). The stream systems seem sufficiently intact for Columbia Torrent Salamander (*Rhyacotriton kezeri*) and Pacific Giant Salamander (*Dicamptodon tenebrosus*). A thorough survey would be necessary to confirm presence.

FISH: The current condition of streams within the system and fish access issues below the community of Cape Meares outside the property under consideration make it unlikely that the Coleman Creek system is Salmonid-bearing. Coastal Cutthroat Trout (*Oncorhynchus clarkii clarkia*) were reported anecdotally by local observers. A fish survey of the entire system including points below Cape Meares would be of value. The system has high potential for rehabilitation, however, and water quality of wetlands at the outflow to Coleman Creek, which provide likely salmon-smolt rearing sites through a connection with Tillamook Bay, would benefit from watershed protection.

HABITAT NOTES AND CONCERNS

DENSE YOUNG EVEN-AGED FORESTS: Much of the property has been logged sometime in the last 40-50 years. Aerial images indicate most of the site was clearcut between 1984 and 1990. Sitka Spruce and Western Hemlock appear to have been planted after the cut and have produced a dense even-age forest. These young, closely planted forests are too dense to allow for an understory of shrub and forb species and typically show lower diversity for both forest plant species and associated animal species. The remedy for this is thinning and selective day-lighting to break up what is, essentially a monoculture. The introduction of Red Alder and other native hardwood species should be encouraged. Material from thinning should be left *in situ* to increase woody debris and mycorrhizal activity to stabilize soil movement and improve stream clarity.

HUMAN ACTIVITY: Most of the site has been completely clearcut at least twice and shows the impacts of timber forest management. The access roads now have gates controlling vehicular access, but it is clear that these roads were open at one time. There are sites where tires, trash and yard debris were dumped. As a consequence, there are multiple areas where escaped exotic plant species can be found, including some species regarded as invasive. Removal of trash at dump sites and regular maintenance and removal of exotic species will be required.

There is also considerable evidence of mountain bike trail building. This activity, when left unmanaged, can have considerable impact on soil erosion, soil compaction and stream quality. If trail-biking is to continue as a component of public access for this site, all trails, including those already in place, need to be evaluated, mapped, and approved by the CMCA to ensure that this activity does not conflict with water quality and habitat goals for watershed in its entirety.

SUMMARY

The Coleman Creek Property is a densely reforested area that borders the community of Cape Meares. This forest has direct effects on the water quality and livability of the adjacent community and would, when added to properties already under Cape Meares Community Association management, benefit from acquisition and management by the CMCA. The property shows the impacts of past forest management practices which have impacted ecological diversity, soil stability and water movement within the system, but has high potential for rehabilitation through selective tree removal, riparian restoration, and stewardship. Through the CMCA, the community shows a strong sense of ownership and investment in improving and maintaining system dynamics and habitat values that contribute to a healthy and sustainable place to live.

Table01: Bird species list (n = 99). Boldfaced indicates species likely to breed on property or in adjacent forested areas of Cape Meares Area. Based on data extracted from eBird.com for Tillamook.

Mountain Quail	**Olive-sided Flycatcher**	**Swainson's Thrush**
Ruffed Grouse	**Western Wood-Pewee**	Hermit Thrush
Sooty Grouse	**Willow Flycatcher**	**American Robin**
Band-tailed Pigeon	**Hammond's Flycatcher**	**Cedar Waxwing**
Mourning Dove	**Pacific-slope Flycatcher**	**House Sparrow**
Common Nighthawk	**Black Phoebe**	American Pipit
Vaux's Swift	**Hutton's Vireo**	**Evening Grosbeak**
Anna's Hummingbird	**Warbling Vireo**	**House Finch**
Rufous Hummingbird	**Canada Jay**	**Purple Finch**
Great Blue Heron	**Steller's Jay**	**Red Crossbill**
Turkey Vulture	**California Scrub-Jay**	**Pine Siskin**
Osprey	**American Crow**	**American Goldfinch**
Northern Harrier	**Common Raven**	Fox Sparrow
Sharp-shinned Hawk	**Black-capped Chickadee**	**Dark-eyed Junco**
Cooper's Hawk	**Chestnut-backed Chickadee**	**White-crowned Sparrow**
Bald Eagle	**Purple Martin**	Golden-crowned Sparrow
Red-shouldered Hawk	**Tree Swallow**	Savannah Sparrow
Red-tailed Hawk	**Violet-green Swallow**	**Song Sparrow**
Barn Owl	Barn Swallow	Lincoln's Sparrow
Western Screech-Owl	Cliff Swallow	**Spotted Towhee**
Great Horned Owl	**Bushtit**	Red-winged Blackbird
Northern Pygmy-Owl	**Wrentit**	**Brown-headed Cowbird**
Barred Owl	Ruby-crowned Kinglet	Brewer's Blackbird
Northern Saw-whet Owl	**Golden-crowned Kinglet**	**Orange-crowned Warbler**
Belted Kingfisher	**Red-breasted Nuthatch**	**Common Yellowthroat**
Red-breasted Sapsucker	**Brown Creeper**	**Yellow Warbler**
Downy Woodpecker	**Pacific Wren**	**Yellow-rumped Warbler**
Hairy Woodpecker	**Marsh Wren**	**Black-throated Gray Warbler**
Pileated Woodpecker	**Bewick's Wren**	Townsend's Warbler
Northern Flicker	American Dipper	**Hermit Warbler**
American Kestrel	**European Starling**	**Wilson's Warbler**
Merlin	**Western Bluebird**	**Western Tanager**
Peregrine Falcon	**Varied Thrush**	**Black-headed Grosbeak**

Table02: Annotated mammal checklist of species likely to occur on property based on nearby analog sites. Boldface indicates species confirmed during February visits.

Virginia Opossum (*Didelphis virginiana*) – probable
Vagrant Shrew (*Sorex vagrans*) – probable
Coast Mole (*Scapanus oranius*) – mole mounds noted probably this species
Myotis sp. – several species likely to occur.
Big Brown Bat (*Eptesticus fuscus*) – probable
Brush Rabbit (*Sylvilagus bachmani*) – probable
Snowshoe Hare (*Lepus americanus*) – probable
Mountain Beaver (*Aplodontia rufa*) – probable
Townsend's Chipmunk (*Tamias townsendii*) – common
Douglas's Squirrel (*Tamiasciurus douglasii*) – common
White-footed Deermouse (*Peromyscus maniculatus*) – probable
Microtus sp. – several species likely to occur.
Coyote (*Canis latrans*)– probably common, scat noted
Gray Fox (*Urocyon cineoargentus*)– probable
American Black Bear (*Ursus americanus*) – probable
Common Raccoon (*Procyon lotor*)– probable
Long-tailed Weasel (*Mustela erminea*) – probable
Cougar (*Puma concolor*) – probable
Bobcat (*Lynx rufus*) – probable
Roosevelt Elk (*Cervus elaphus*) – common, abundant scat and other sign
Columbia Black-tailed Deer (*Odocoileus hemionus columbianus*) – photographed 2/8/2023

Table 03: Annotated Amphibian checklist of species likely to occur on property based on nearby analog sites. Boldface indicates species during February visits.

Northwestern Salamander (*Ambystoma gracile*) – likely
Long-toed Salamander (*Ambystoma macrodactylum*) – likely
Pacific Giant Salamander (*Dicamptodon tenebrosus*) – likely
Oregon Ensatina (*Ensatina eschscholtzii*) – likely
Dunn's Salamander (*Plethodon dunni*) – likely, habitat similar to *P. vehiculum*
Western Red-backed Salamander (*Plethodon vehiculum*) – common, photographs
Columbia Torrent Salamander (*Rhyacotriton kezeri*) – likely in rocky streambeds
Rough-skinned Newt (*Taricha granulose*) – common, photographs
Pacific Tree Frog (*Pseudacris regilla*) - likely
Northern Red-legged Frog (*Rana aurora aurora*) - likely

Photo01: Dominant plant species are primarily densely planted even-aged Sitka Spruce and Western Hemlock with a poorly structured understory dominated by Western Swordfern.

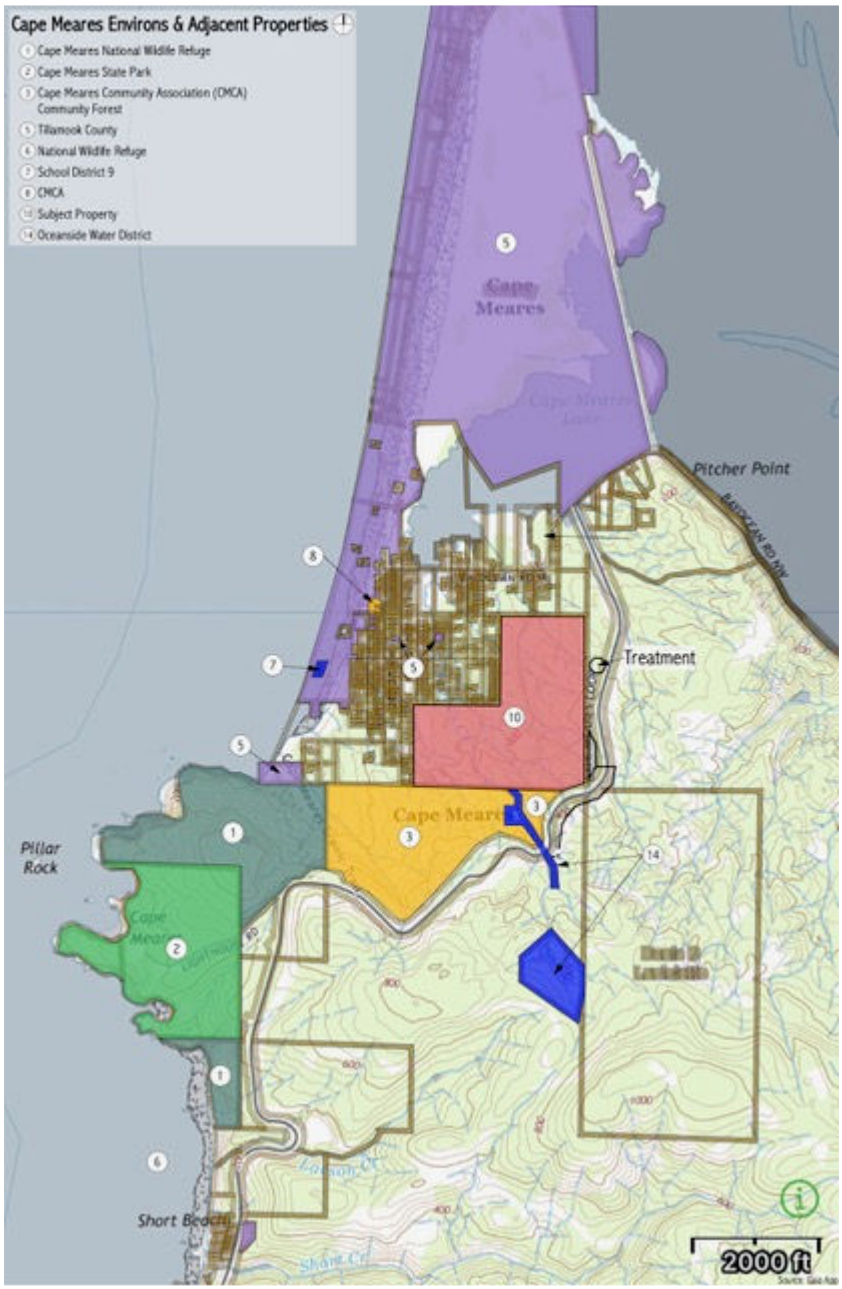
Photo02: Water has impounded in several areas along the southern edge of the property associated with a large landslide that occurred in 2017.

Photo03: Stumps and rejected old growth logs from one of the early harvests can still be found scattered throughout the understory.

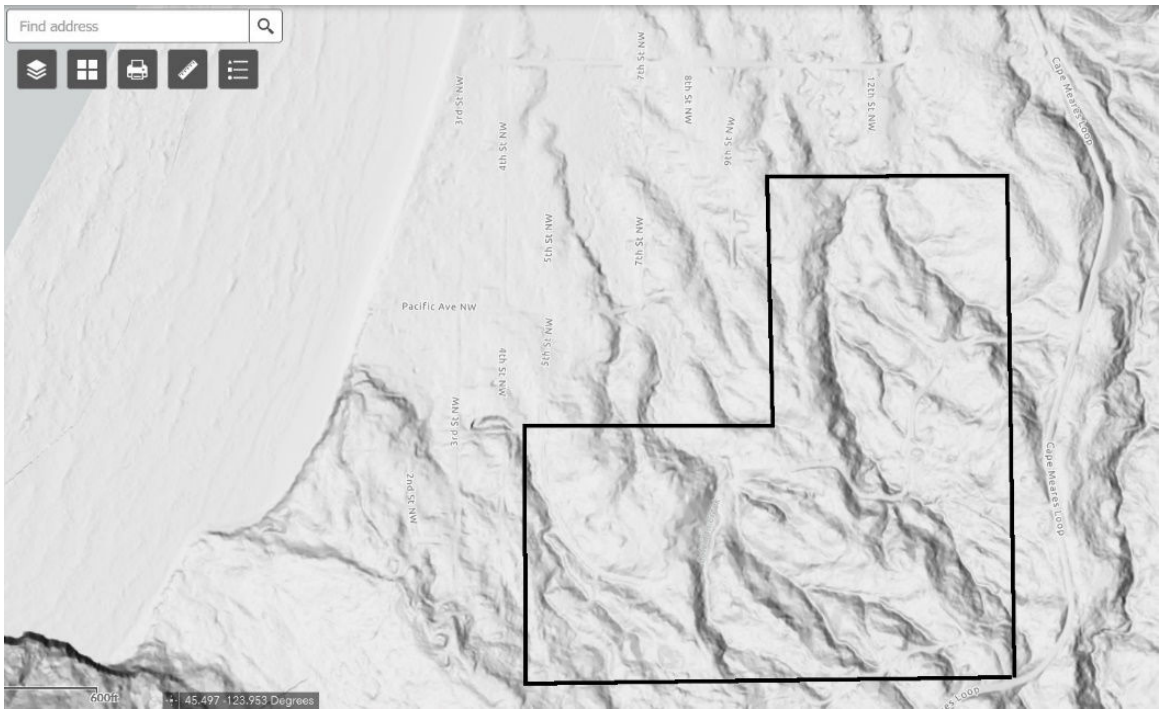
Photo04: Coleman Creek at UTM 425469.00 m E 5038428.00 m N.

Photo05: There is a 350-meter long landslide along the access road to the former water tower for the Cape Meares water supply.

Photo06: Western Red-backed Salamander found along the landslide trail.



Map01: Adjacent property owners. Area 10 is the property currently under consideration. Area 1 is managed by USFWS, Area 2 by Oregon State Parks, Area 3 by CMCA and Area 5 by Tillamook County. Dark blue (Area 14) is Oceanside Water District.



Map02: Bare Earth LIDAR showing physical terrain of proposed acquisition.

Map03: Highest hit LIDAR image of the proposed acquisition showing the distribution of young, even-age forests on the site compared to more mixed age stands outside the property boundaries.

Map04: Google Earth photo from 9/3/1994 shows the area with very young recently planted trees in southwestern third and somewhat older trees in the eastern part.

Map05: GPS track of landslide location. Length approximately 350 meters.

Appendix 01: Species of concern from Oregon Biodiversity Information Center (2019 list). List abridged to include only species that might possibly occur on or near the property detailed in this report with notes on current status in Tillamook Co.

Amphibia	Columbia Torrent Salamander	Occurs in most steams of appropriate water quality
Aves	Common Nighthawk	Breeds locally throughout the Coast Range
Aves	Bald Eagle	Breeds locally throughout the Coast Range
Aves	Mountain Quail	Breeds throughout Coast Range; well documented in region
Aves	Northern Spotted Owl	Historically present; presumably extirpated; not much habitat left; too many Barred Owls
Aves	Olive-sided Flycatcher	Breeds throughout Coast Range; well documented in region
Aves	Pileated Woodpecker	Breeds throughout Coast Range; well documented in region
Aves	Purple Martin	Breeds locally throughout the Coast Range; cavity nester using snags
Aves	Band-tailed Pigeon	Breeds throughout Coast Range; well documented in region
Aves	Western Bluebird	Breeds throughout Coast Range; well documented in region, cavity nester in snags and stumps
Aves	Willow Flycatcher (ssp *brewsteri*)	Breeds throughout Coast Range; well documented in region
Mammalia	California Myotis	Collection records Tillamook (Verts and Carraway 1998)
Mammalia	Fringed Myotis	Collection records Tillamook (Verts and Carraway 1998)
Mammalia	Hoary Bat	Collection records Tillamook (Verts and Carraway 1998)
Mammalia	Long-legged Myotis	Collection records Tillamook (Verts and Carraway 1998)
Mammalia	Silver-haired Bat	Collection records Tillamook (Verts and Carraway 1998)
Mammalia	Townsend's Big-ear Bat	Collection records Tillamook (Verts and Carraway 1998)
Fishes	Western brook lamprey	Historically present; current status requires some research
Fishes	Coastal Cutthroat Trout	Occurs in most steams of appropriate water quality
Fishes	Coho Salmon	Likely in lower reaches of larger streams

https://inr.oregonstate.edu/sites/inr.oregonstate.edu/files/2019-rte-book.pdf