A close-up photograph of a bald eagle perched on a tree branch covered in moss. The eagle has a white head and neck, a yellow beak, and dark brown feathers on its body. It is looking towards the left of the frame. The background is a soft-focus green forest.

THE WILD CASCADES

THE JOURNAL OF THE NORTH
CASCADES CONSERVATION
COUNCIL

Summer 2019

THE WILD CASCADES ■ Summer (June 2019)

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COVER: Eagle photo captured from the bridge over the Skagit at Rockport.
—© STEVE PHILBRICK PHOTO, PILBY.COM

The Wild Cascades

Journal of the North Cascades Conservation Council

EDITOR: Anne Basye

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Tom Hammond, Ed Henderson, and Rick McGuire

Pat Hutson, Designer | Printing by Abracadabra Printing

The Wild Cascades is published three times a year (Winter, Summer, Fall).

Letters, comments, and articles are invited, subject to editorial review.

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THE NORTH CASCADES

CONSERVATION COUNCIL was formed in 1957 "To protect and preserve the North Cascades' scenic, scientific, recreational, educational, and wilderness values." Continuing this mission, N3C keeps government officials, environmental organizations, and the general public informed about issues affecting the Greater North Cascades Ecosystem. Action is pursued through administrative, legal, and public participation channels to protect the lands, waters, plants and wildlife.

Over the past half century N3C has led or participated in campaigns to create the North Cascades National Park Complex, Glacier Peak Wilderness, and other units of the National Wilderness System from the W.O. Douglas Wilderness north to the Alpine Lakes Wilderness, the Henry M. Jackson Wilderness, the Chelan-Sawtooth Wilderness, the Wild Sky Wilderness and others. Among its most dramatic victories has been working with British Columbia allies to block the raising of Ross Dam, which would have drowned Big Beaver Valley.

N3C is supported by member dues and private donations. These contributions support the full range of the Council's activities, including publication of *The Wild Cascades*. As a 501(c)(3) organization, all contributions are fully tax deductible to the extent allowed by law. Membership dues for one year are: Living Lightly/Student \$10; Individual \$30; Family \$50; Sustaining \$100.

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The Wild Cascades is printed on recycled paper.

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Founded in 1957
SEATTLE, WASHINGTON

THE PRESIDENT'S REPORT

SUMMER 2019

Fellow N3C members,

What a privilege and pleasure it is to be the N3C President! After serving on the board for a decade or so, holding close the memory of our founders, and now on the threshold of a new era of conservation efforts with the next generation of guardians of the North Cascades, I feel I'm truly "standing on the shoulders of giants." My background is hardly what you might expect for this role, so I do hope you'll be patient as I find my way in this volunteer leadership position at a particularly crucial time. I see the N3C presidency as a place from which to preside over a group of motivated members. I'm reminded that we are a Council, not a Corporation, and as such we need to bring in our members and hear their opinions as we form our policies and take actions.

It seems that just as I take the helm we're faced with many issues to sort out. But some things seem abundantly clear:

- Unprecedented threats loom
- We must reach out and organize
- We can't allow ourselves to feel overwhelmed and for that to diminish our resolve
- We all have to do our part.

Our challenge as we begin our second half-century is to weave these into a fabric of action, to take on new threats like the huge quarry proposed for Marblemount, logging and mining in the Skagit headwaters, the epidemic of crumbling forest roads and others you'll read about in this issue. At the same time we face these hot topics, it's time to engage with a new generation, one that will carry the work forward, and one with concerns we share about diversity and inclusion.

So, how can you help? First and foremost be ready by knowing the story. Read this issue and our recent back issues to learn the background, who the players are, and how the system works. These are things not often revealed elsewhere, things that set our reporting in *TWC* apart. Feel free to email us your questions and concerns and we'll try to clarify anything you may be puzzled about. Then—take action, write letters, reach out to others with similar interests and bring them up to speed on what we're working on and how important it is. Review your own skill set and let us know what you're most passionate about. You may be exactly the person we need right now!

And meanwhile, get outside and enjoy the wild Cascades. It's from the landscape that we are inspired.

philf@northcascades.org

Just in time for mining threats on the Skagit River, a forthcoming book looks at Glacier Peak open pit mining battle



Adam Sowards, professor of history at the University of Idaho, contacted N3C while developing his forthcoming book, tentatively titled *An Open Pit Visible from the Moon: Wilderness, Mining, and the Public Interest*.

Materials from *The Wild Cascade* circa 1966 and 1967 will be included in the book, coming in 2020 from the University of Oklahoma as part of its *Environment in Modern America* series.

In 1964, Congress passed the Wilderness Act, but the legislation was born out of compromise and allowed prospecting within Wilderness areas to continue for twenty years and could not prohibit mining on bona fide mining claims indefinitely. On Miners Ridge, a scenic climax in the Glacier Peak Wilderness Area, Kennecott Copper Corporation planned to develop an open-pit mine by 1970. This became the first test case of the Wilderness Act's mining provision—and Wilderness won!

Soward's book narrates the historic struggle. While Kennecott attempted to generate profits for its business, a host of actors crossed history's stage to protect Wilderness and keep it as a place where the corporate calculus of profit simply did not belong. From cabinet secretaries and U.S. Supreme Court justices to local doctors and college students, individuals and organizations including N3C innovated with new arguments and methods of activism. Their collective efforts raised the profile of Miners Ridge to a cause célèbre for the nation's Wilderness movement. As locals testified at public hearings and writers penned profiles in the nation's best magazines and newspapers, the bad press they created for Kennecott and volatile global political economy of copper proved ultimately influential in frustrating Kennecott's plan.

Nothing legally could prevent Kennecott's mine, but the pit never appeared,

and a stunning natural landscape was saved. No single factor or force stopped it, but this history shows how contingent factors converged and coalesced, aided by astute citizen action. N3C's advocacy is fully on display in this historic story of a foiled effort to turn natural beauty into profit—just as it is today as we enter a new round of conflict over mining rights in unprotected areas abutting Wilderness. We're encouraged to see this timely case study of how purposeful, organized citizen action can buy the necessary time for other events to take place and preserve what would otherwise be lost forever. We look forward to reading the new book as soon as it is published!

Image Lake: Open pit mine would have eaten up this area. —Phil Fenner photo

Major Nooksack logging and rec project on hold

The U.S. Forest Service has quietly announced that the Nooksack Integrated Conservation and Enhancement Project, known by its Orwellian acronym NICE, has been temporarily shelved. As reported in the fall 2018 *TWC*, NICE would aggressively upend three decades of ecological recovery in the North Fork Nooksack River basin. Essentially every stand of maturing second-growth forest in the shadow of Mount Baker and Mount Shuksan would be subject to heavy commercial thinning or clearcutting, with all the requisite road construction for resource extraction of such magnitude. This would be paired with industrial-strength recreation development at other sites, including ill-advised parking lot expansions. A peaceful valley would become anything but for years on end.

Mount Baker District Ranger Erin Uloth states, "We are not proceeding forward at the moment because, in part due to the [federal government] furlough, we are laboring under several delays on various

projects. This project we decided to put off for a bit so we could clear the other work. We still intend to proceed forward with the project, so it should be out for scoping later on. Just not imminently, as we were anticipating."

N3C will continue to monitor this frightening carbon bomb of a proposal and inform our membership of all new developments. Active participation and written comments from the concerned public will be essential to limiting the damage. Make no mistake: the Trump administration sees sawlogs on the Mount Baker-Snoqualmie National Forest and, convinced that glossy communication tools and a promise for shopping mall-style convenience at recreation sites will be enough to placate the masses, intends to all but give them away to the likes of Sierra Pacific for lumber. Without effective pushback, an area renowned from Seattle to Vancouver for its scenery and biological richness may become virtually unrecognizable.

Welcome, staff and alums of North Cascades Institute!

A special welcome to those among the staff and alumni of North Cascades Institute who have accepted our recent offer for a free 1-year starter NCCC membership.

As Saul Weisberg, NCI's Executive Director said when he endorsed our offer, "This is a great offer from N3C and even more importantly, they are serious about expanding their membership and activities to engage a younger and multicultural audience and membership. I hope you'll consider taking them up on their offer of engagement. They need YOU."

We hope you enjoy your first issue of *The Wild Cascades* journal. Let us know what you think, we appreciate your feedback and look forward to getting to know you better. And to any of your cohort who may not yet have taken us up on our offer, it still stands—please just email our president at the following address to accept, and thanks!

pbilf@northcascades.org

Motorized suction dredging update

David Fluharty, N3C Board Member

As reported earlier in *TWC*, N3C joined other environmental groups and Tribal co-managers in support of legislation to ban or otherwise restrict unregulated motorized suction dredging for gold in Washington streams and rivers. Despite strong support in the legislature the bills never came up for a vote. In the fallout, N3C and others asked the Washington Fish and Wildlife Commission to take action but it took the item off its agenda for the May monthly meeting. In the meantime, Washington Department of Fish and Wildlife finally completed its extremely drawn out process of rulemaking and adopted a modest restriction on the practice in early June. The WDFW's press release on this action reads as follows:

"Rules for mineral prospecting and placer mining

Mineral prospecting and placer mining activities in or near water qualify

as hydraulic projects and require a permit to protect fish (Chapter 77.55 RCW). The Washington Department of Fish and Wildlife (WDFW) regulates most of these activities through the Gold and Fish pamphlet. Those methods that are not authorized through the pamphlet require an individual Hydraulic Project Approval (HPA).

New suction dredging requirements: individual HPA and annual reporting

Effective November 1, 2019, suction dredging will no longer be approved through the Gold and Fish pamphlet. New rules require that all types of suction dredging may only be conducted after prospectors are issued an individual HPA. Beginning 2021, suction dredgers must submit an annual report to WDFW documenting the previous years' suction dredging activities by February 1st."

While this is a step forward, it is not nearly enough to protect waters holding threatened and endangered species of salmon and bull trout. Presumably the regulations will be the same as for other Hydraulic Project Approvals that are limited to stopping activities when spawning is occurring and juvenile salmonids are present. It does not protect the streambed habitat from the alteration done by motorized suction dredging and it does not deal with what will happen this summer and fall. Various new sources have reported an influx of motorized dredging enthusiasts coming from Oregon, California and Idaho where this practice is banned. Nor does it limit impacts from Washington participants.

N3C plans to be back in the legislature next year with bills to strengthen the state management of motorized suction dredging to protect salmon species and their habitats.

The corvid's eye

From where Lake Creek begins its concealed tumble from Shuksan Lake to the broad Baker River valley below, south as far as where Diobsud Creek charges out of its canyon and Rocky Creek meets the bottom of its staircase for their final meanders across Skagit River bottomland, a good fifty thousand acres of wild country with no legislative protection to speak of persist as Ma Nature sees fit. In between are some of the quietest and most intact places remaining in the Pacific Northwest, where few humans have ever stumbled, including Silver Creek, Welker Peak, the upper reaches of Thunder and Jackman creeks, and the south-facing slopes spreading out below Helen Buttes. Extensive portions of this heterogeneous block of goodness lie below two thousand feet elevation, with true lowland forest dipping as low as just a few hundred feet in some spots. No fire of significance has been witnessed for centuries by the gargantuan trees to the north, whereas a smaller-yet-vigorous Douglas fir stand below Helen Buttes regenerated naturally following a blaze 125 years ago.

Lift thy wings with the corvid now and glide far to the southeast until we've reached another legislatively ignored landscape along the west shore of Lake Chelan. Here is found a natural history of little similarity to the region from which we've come, where fire is a regular feature of hot and dry summer days. To be sure, there is alpine above with Emerald Peak, Cardinal Peak, and Pyramid Mountain all easily clearing eight thousand feet. Yet the seven thousand-foot plunge beneath said prominences to the lakeshore knows few equals in the American West; most ably represented in the courses of Bear, Corral, and Big creeks (with a deserved nod to the place-name poetry of Little Big Creek below Barney Zell Ridge in its southern reach). Near the lake, we're back in the coveted lowlands again, dipping even below twelve hundred feet where the waves lap the rugged shore. Residing here are flora and fauna who know a thing or two about how to respond to a hot fire, both irrupting in the years that follow. And although there is trail near the high peaks and a few water-access campsites along the lake, we'll find no one in between. When did a human last ascend Graham Harbor Creek?

Yes, you've seen plenty already for one outing. The scenery can't be beat, and

the quiet roar of the wilderness has touched your ears and stirred you down to your toes, but there's one other piece of heaven you still need to experience so that the corvid may over-make his point as he is wont to do. Finding aloft the warm current of air cruising up from the sagebrush steppe, we fly west again but stop short of the Cascade crest in the Little Wenatchee River valley. No doubt there are people here, earnestly marching the inviting trails and, for some unknown reason, tending all-day campfires when it's sunny and 85 degrees out. Fret not, for avoid them we can with a quick hop over the upper river and into the utter quietude of Fish Creek's unprotected, trail-free lower valley. Although we're still technically in the eastern half of the state, the old mesic forest here feels positively westside, though with a subtly enhanced floral diversity. Should we choose, we may traverse untouched, low-angled benches to Fall Creek and more big trees to soothe one's head. Our lowest elevation here is a seemingly high 2600 feet, though still none too shabby for so deep in the mountains, especially the east slope.

The nexus among these seemingly disparate swaths of the North Cascades, as implied, is that all are decidedly more than just rock-and-ice parcels. Generally, the lower one goes, the more alive a place will surely be, especially if it has somehow remained free of human development since the arrival of the Europeans. It's a regrettable fact that Washington, like all other states in the lower 48, has an underrepresentation of relative lowlands within its portfolio of designated Wilderness. Thankfully there are exceptions to this rule, including some recent ones (North Fork Skykomish River, Pratt River), though the trend is otherwise clear. As observed by numerous writers preceding the corvid, the potential for future commercial exploitation was the rationale for excluding most deserving areas, including the three described above, from Wilderness designation. But as murmurs of a new Wilderness bill for the Cascades begin to be heard, it's important to assert that it needn't be this way, and that any pending proposal in this regard should be anchored in



these oft-forgotten but still very much real lowlands. Their habitat value and, in some cases, their capacity for carbon sequestration demand it.

Ironically, although one can never lower her guard in the eternal fight to keep extractive industries away from these prized landscapes, the foremost obstacle to a defensible and comprehensive Wilderness bill in this day and age may instead be the recreation lobby, aptly termed the Recreation Industrial Complex (RIC). It has scarcely escaped the notice of observers that modern conservation efforts on federal lands, such as they are, have become increasingly shaped by the RIC. This phenomenon has been evident in the supplication or at least submissive postures of several NGOs in our state to the RIC, all the way up to our own Senator Cantwell. Given that practically everything is up for shameless sale nowadays, up to and including our deepest thoughts and desires, this should probably come as no surprise. It's a problem that there's more than a little resemblance between the miners of precious metals and the miners of Instagram likes and "influencer" status. The notion of Nature possessing inherent self-worth is often lost beneath social media one-upmanship and finding one's own narcissistic bliss. Rather than joy, reverence, and humility in response to stately forests, chattering streams, and the rare creatures that dwell there, we hear more about demands for smooth and wide roads, cell service, and comfortable trailhead toilets. We witness attempts to split the baby among hikers, mountain bikers, equestrians, and motorheads, though the thinkers behind the 1964 Wilderness Act and scholars since that time have repeatedly reminded us that recreation is secondary to the overarching purpose of the act.



Watercolor inspired by the North Cascades peaks —Art by Ellora “Ellie” Duncan, North Cascades Institute artist in residence.

Corvid’s eye, CONTINUED

The fear, then, is that a new Wilderness bill in the North Cascades runs the risk of being more REI advert or Everest-style selfie platform than a means of permanently protecting ecologically irreplaceable landscapes. The likelihood of deleterious horse-trading is similarly very high, as each “stakeholder” contemplates what they’re willing to give up to the folks wearing different yet equally expensive RIC gear across the table. We know from experience, too, that NGOs with stated good intentions on this issue begin by negotiating internally, rather than putting forth and arguing strenuously for an ambitious, meaningful outcome that even if later diluted a tad by external pressures would still amount to a true win. It’s too easy to foresee a misbegotten “consensus” that adds Wilderness designation to a few photo-worthy high spots (of which our state has actually done quite well with protecting already), while consigning the more productive and valuable lands below

to wheels and chainsaws in perpetuity. It would be an understatement to call such an outcome a tragedy.

This is all a longwinded way of saying that a new Wilderness bill for the North Cascades risks doing more harm than good unless grassroots conservationists insist on non-negotiable sideboards. These are not complicated, and the mandatory list is rather short. For starters, every acre of qualifying land, both wild and rewilded (including previously logged areas with old roads since gone to seed where it makes sense on a watershed scale) must be included in the initial package. It’s understood that a few spots may be too overrun by wheels to later make the cut, but Wilderness boundaries should still be nudged as close to those trails as possible. It follows logically that there must be an emphasis on including lowland and middle elevations in such a bill, with the embedded high country ultimately serving the purpose of shielding and providing

clean water to areas below, where the action is. Finally, the proposal’s language must be true to the original Wilderness Act, and it must by all means be free of any quid pro quo provision, such as guaranteed timber production or motorized zones by statute. In other words, it must be a clean bill.

Anything less, and the new proposal will not be something to support. It will be something to fight. The RIC may have most of the money, but it has none of the soul. And in the end, it is soul that powers the fountain of life which we know finds its fullest expression in wilderness. Contemporary times offer no shortage of disagreeable distractions, insularity, and wrongheadedness, though the fountain has not yet run dry. It’ll be a fine day if and when we collectively shake off the fog and see the centrality of those hallowed waters again.



Stopping a quarry in the heart of the Skagit

by Andrea Weiser

There are few places more compelling in Washington than the North Cascades. The jade green glacier-fed Skagit River runs through its heart, feeding the ecosystem all the way to the orca pods. This watershed provides about a third of the freshwater flow into Puget Sound, and supports the nesting and rearing grounds of the largest population of threatened steelhead and Chinook salmon. What else? It is drop-dead beautiful.

And yet this spring, a massive rock-mining quarry was proposed adjacent to the Skagit River near Marblemount—at the gateway to national park and forest lands and designated wilderness. Big Bear Mountain would be demolished by Kiewit Infrastructure to extract Shuksan greenshish—a dense, durable rock that contains asbestos—intended to supply jetty stone for rehabilitation at the mouth

of the Columbia River in Oregon, roughly 300 miles away.

Residents of the Marblemount area were devastated to learn the project scope:

- Heavy equipment activity 12 hours per day, 6 days per week for up to 100 years
- Blasting to build a 60-foot wide road up the steep slope
- Clearcut logging of 90 acres for transport of 2.7 million board feet of timber
- Night shifts for maintenance and periodic night work
- Rock drilling and use of ammonium nitrate fuel oil (ANFO) or other emulsions for multiple blasting operations. Blasting up to six times per day to extract 9.6 million cubic yards of rock volume at full buildout
- Stockpiling waste rock, with chemical residues and asbestos dust, across 28 acres and up to 200 feet high
- 260 truck trips per day, averaging one every three minutes, many 70-80 feet long and carrying loads of up to 105,000 pounds or more from Marblemount to I-5 for decades
- Storage of 13,000 gallons of diesel and 1,500 gallons of gasoline
- Future activities would likely include noisy, dusty, gravel crushing of the waste rock

It was easy to recognize that water and air quality, fish and wildlife were under threat and that the character of this beauti-

Six eagles perched slightly downstream, on the opposite bank, from the proposed quarry. —© Steve Philbrick, philby.com

ful river and setting could be changed forever. This stretch of the Skagit River hosts the largest migratory eagle population in the lower 48 states, is home to five species of anadromous salmon, and is just 800 yards away.

The proposed work site is an unstable rocky ridge with peregrine falcons nesting on its flank. Neighbors have also sighted eagles, marbled murrelets, fishers, red fox and lynx. Mature trees have potential for spotted owl nesting habitat.

People's treasured homes are in the vicinity. The closest is adjacent to the mountain's base, only 600 feet away. Thirty more homes are downslope in the near surroundings.

Nearby residences draw from a shared aquifer, and potential contamination of drinking water is a serious concern. Annual rainfall, 100 inches per year, would give asbestos and other contaminants a vector for spread through on-site streams and natural drainage channels to nearby wells and into the Skagit River.

Hazardous materials could spread far beyond the project site, repeatedly, over a 100-year period. Blasting apart asbestos-bearing rock poses a clear threat to human life and safety. Released dust has potential to cause effects that could not be mitigated. Dust and residues on rock and trucks, during long-haul transport, could spread asbestos and other contaminants, like ANFO, great distances. The proposed haul route follows the Skagit River on Rockport-Cascade Road and SR-20 past Rockport, Concrete, Birdview, Hamilton, Lyman and Sedro-Woolley to the junction with I-5 and continues hundreds of miles into Oregon. Heavy truck traffic and congestion would also overwhelm and put pedestrians, bicyclists, and motorists at risk and diminish quality of life along the entire route.

The prospect of a 100-year permit was met with shocked expressions, expletives, and a sense of panic. Neighbors had just one week to act between discovery of the small Notice of Development sign on a rural county road and the closing date for initial public comments. What happened next was a triage approach to notify residents closest to ground zero and contact others who would be affected. Residents held emergency meetings, compiled email lists, and used social media, news coverage, a website, and word-of-mouth. Key goals were to get the word out as fast as possible and make it easy for others to find permit documents and comment.

Hundreds of individuals, Tribes, agencies and non-profit groups asked for an



extension of the comment period and an environmental impact statement (EIS) to more deeply review all the potential affects. When Skagit County's online comment form crashed due to the large volume of activity, the comment period was extended.

Sometimes it takes many voices to make a difference. Skagit County received 724 comments, including those from N3C, overwhelmingly opposed to the project. Skagit County Planning and Development has determined its intent to go with a DS (Determination of Significance) requiring a full scope EIS (Environmental Impact Statement). At press time, they are meeting with Kiewit to lay out the intended process and see if Kiewit wants to move ahead with the years-long, multi-million dollar process, which would be at Kiewit's cost. Kiewit would also need to apply for a zoning revision to include all the parcels traversed by mining road to be included in the MRO.

Skagit River Alliance (SRA) was formed to protect the Upper Skagit River ecosystem and communities. Recently, SRA implored state legislators to consider broader impacts of rock mining in asbestos-bearing rock. Nine members of U.S. Senate and Congress recently opposed the Imperial Metals-proposed copper and gold mine at the Skagit headwaters in British Columbia. They cited potential for pollution in the Skagit River and devastating effects to fish populations all the way to Puget Sound. SRA has asked them to also consider implications of the Marblemount Quarry and cited two asbestos superfund sites: Libby, Montana and Everson, Washington.

N3C members will be important allies in this effort and we hope you will get involved!

River Otters on an ox-bow slough three miles downstream of the proposed quarry.
—© Steve Philbrick, philby.com

Get involved in the Skagit River Alliance

- Reach out to communities along the transport route
- Attend public meetings and submit comments to the Environmental Impact Statement that Skagit County is requesting.
- Learn more: www.skagitneighbors.com or <https://www.skagitcounty.net/Departments/PlanningAndPermit/MarblemountQuarry.htm>
- Donate to stop the Marblemount Quarry c/o Mike Young, P.O. Box 2, Marblemount, WA 98267 or online at <https://www.gofundme.com/stop-the-marblemount-quarry>
- Attend our July 14 fundraiser! See ad on page 10.
- Take a survey to help the Alliance know more about your interest in the effort to stop the quarry, and share any special knowledge and skills you may have (including just a willingness to learn about a specific topic) at <https://forms.gle/SJfz88KScdbbF8yM6>

Thank you!

Naturalist, archaeologist, and author Andrea L. Weiser lives with her husband and daughter near the edge of North Cascades National Park.

Let the River Sing!



Benefit to stop the Marblemount Quarry
An afternoon of Song featuring

*** Jenny & the Tomcats ***

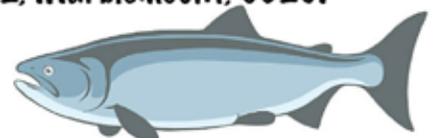
*** Jumbled Pie ***

Sunday July 14th, 2-5pm
Howard Miller Steelhead Park
in Rockport at the old ferry

Bring your lawn chairs or blankets (and pocketbooks!) and watch the Wild and Scenic River flow while listening to these top notch musicians who support our cause. Donations heartily accepted. Refreshments available to purchase. Please no alcohol.

Hosted by Skagit River Alliance, a non-profit formed to stop the proposed massive open pit mining of Big Bear Mountain over the next 100 years. Tax deductible donations will be used for legal costs.

Donations can be sent to: Skagit River Alliance, PO Box 2, Marblemount, 98267
www.skagitneighbors.com



Mining: A problematic legacy



Holden Mine remediation efforts sealed the old mine entrance, moved a part of Railroad Creek and regraded these snow-covered tailings, built an enormous underground barrier to capture seepage from the mine, and a water treatment plant. —ANNE BASYE PHOTO

Historic mess at Holden

The Holden Mine, located on a mountainside above Lake Chelan, was developed by Howe Sound Company from 1938 to 1957 and mined for copper, zinc, gold and silver. The leavings were 300,000 cubic yards of waste rock and 8.5 million tons tailings. Water partially filled the mine tunnels, became contaminated with acid, and drained into Railroad Creek—devastating riparian habitat with toxic waste. EPA declared it a Superfund site

in 1980 and mining company Rio Tinto inherited responsibility and committed to a \$500 million remediation on behalf of Intalco (successor to Howe Sound).

BC company, WA consequences

A copper and gold mine proposed at the headwaters of the Skagit River in British Columbia by Imperial Metals is a key concern to Washington Tribes, legislators, N3C and other environmental groups because of high risk for contaminated water

and decimated fish populations, aquatic life, and habitat. If Imperial Metals and Kiewit both develop mines on the Skagit River, damage to habitat and water quality, Puget Sound fishing economy, and tourist economy would last for generations. As learned at Holden Mine, it is better to anticipate than remediate.

Asbestos

Blasting apart Shuksan greenschist is a bad idea. Breathing or ingesting the asbestos mineral actinolite can be fatal. The EPA identifies that a main source of asbestos in drinking water is “erosions of naturally occurring asbestos deposits into watersheds.” Agency for Toxic Substances Disease Registry (ATSDR) says children and the elderly, not typically exposed in the workplace, may be more susceptible to exposure.

In Montana, naturally occurring asbestos was spread from a vermiculite mine to community members (not all miners) in Libby, roughly four miles away. Over \$425 million dollars have been spent in Superfund clean up. The federal government sued the mining company and more than 800 civil cases have been filed with asbestos poisoning claims. Entire families died (400 fatalities) from both primary and secondary exposures, which lead to lung cancer, mesothelioma, COPD, and asbestosis. Serious long-term health issues have affected 3,000 more.

On the road again: an update of recent N3C actions

Monte Cristo track through Inventoried Roadless Area (IRA)

This is the fourth of five years of monitoring of the hazardous mine waste repository for which this track was built. N3C continues to document its illegal use by property in-holders for motor vehicle access to the town site. N3C and allied groups are reminding the Forest Service of their commitment to decommission and obliterate the track as required when monitoring is completed next year.

Mountain Loop Highway (paving) Feasibility Study

The final report for this study is six months behind schedule. N3C is prepared to submit critical comments when the report is presented to the stakeholders.

Excelsior Mine access road through an IRA

We have supported Washington Wild in its efforts to find a mutually acceptable solution that maintains the Excelsior mine owner's access rights while minimizing damage to the surrounding Roadless area.

And as we have said many times before, the General Mining Law of 1872 is badly in need of reform.

Stillagaumish Vegetation Management (logging) Project

This project involves re-opening 30 miles of closed existing roads and construction of another 30 miles of “temporary” logging roads. N3C will examine the impact of these roads and if the project goes forward we will work to assure the Forest Service decommissions them afterward as planned.

Marveling at the marbled murrelet

by Marwa Mahmoud, Karly Lampard, and Willow Ranisavljevic

As UW undergrads in the Program on the Environment and the School of Environmental and Forestry Sciences we embarked on a birdy journey to foster a greater understanding of marbled murrelets. These mysterious creatures occupy Washington's coasts and remaining stands of inland old-growth forest. They may look cute and cuddly, but it's really hard to cuddle these species even if you manage to spot one at the crack of dawn. However, our team was not interested in finding them. We wanted to get a better sense of why they're endangered, the risks to their recovery, and how to educate municipal landowners on protecting suitable marbled murrelet habitat that may be within their city limits.

Marbled murrelets are sensitive little potato birds. Due to their reliance on varying habitat, their survival is affected by decreasing availability of old-growth forest habitat and healthy marine habitat. The project our group undertook focused on forest-based habitat loss. Marbled murrelets nest in large stands of old-growth trees on pre-established branch platforms. Meanwhile, second-growth forests, which now make up much of their original habitat, lack the structural complexity that only comes when the trees are big, old and gnarly.

The Northwest Forest Plan (1992) was put in place to preserve remaining old-growth forests in the Pacific North-



west. The Plan has completely reworked forestry in the region and worked to protect many endangered species that rely on old-growth ecosystems (think: northern spotted owl era). Although marbled murrelets were listed as threatened under the Endangered Species Act (ESA) at the time, their populations have continued to dwindle. From 2001 to 2016, Washington's marbled murrelet population dropped 44%. The habitat recovery attempts seem to have gotten stuck in the typical bureaucratic slog, as they do. Aiding the marbled murrelet habitat recovery requires thinking outside of the box, while addressing the population's limiting factors, which include habitat loss and fragmentation. We couldn't help but wonder, why can't these birdies just make their own dang nests like normal birds? Or, why do the eggs, which sometimes lie on stand edges due to habitat fragmentation, look so yummy

to predating crows and jays? HGTV would have a heck of a time finding a house for these birds.

Through extensive research, we found that some of Washington's cities west of the Cascades, including Everett, Port Angeles, and Issaquah, may harbor potential marbled murrelet habitat within city limits. Random, but the marbled murrelets know what they want. They want old-growth tree ledges for their fledglings!! So, how were we going to let these cities know that they might have marbled murrelet nest-

ing habitat on their land? We weren't going to scream at them, even if we wanted to... Instead, we decided on a less extreme approach and created educational brochures and appealing stickers (so we think). We highly recommend the sticker, as it features the catchy saying, "Old Growth Trees Protect These." If you're looking for a deeper educational understanding, the brochure offers an abundance of important information and a land inventory that will lead you to a personal land analysis of potential marbled murrelet nesting habitat and specific habitat features that may arise over time.

Besides educating the public about these elusive birds, our team found several options for private landowners if they have (or think that they might have) suitable marbled murrelet habitat on their prop-

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Left to right, Karly Lampard, Willow Ranisavljevic, and Marwa Mahmoud. Above, the marbled murrelet—Nick and Nora Bowers/Vireo photo, retrieved from <https://www.audubon.org/field-guide/bird/marbled-murrelet>

Motorized access isn't everything: the N3C stance on roads

Often, the North Cascades Conservation Council (N3C) is mischaracterized as “wanting to just close all the roads.”

That is not our position. Some roads are necessary and should be maintained and kept open. However, we are wilderness advocates. Ultimately, roads are an intrusion on the natural landscape and are the antithesis of Wilderness, which is defined as “Roadless”. We advocate to keep Roadless areas intact, and when existing roads are damaged, we don't necessarily want to see them rebuilt all the way or in the cheapest and easiest way. We make a cost/benefit determination of the value of reopening the road to the environmental cost.

Much of our work has sought to ameliorate the immense problems caused by the vast, cheaply built and almost unmaintained network of crumbling logging roads crisscrossing much of the Cascade Range.

As we remind people again and again, these roads were built during the “get the cut out” era from roughly 1950 through 1990, when Congressional appropriations for Forest Service roadbuilding often reached into the hundreds of millions of dollars per year, real money in those days. The goal was not to build durable, quality roads, but simply the maximum mileage to facilitate as much logging as possible. Many of these roads were built in flat river valley flood plains. Bulldozers would clear a pathway, dirt and stumps were dumped as fill, with only a thin skin of gravel placed as a surface, designed to last only as long as necessary to haul out logs. Proper drainage structures were seldom included. Now many of these roads have become “grandfathered in”, providing access to various recreationists.

These logging tracks and roadways have been falling apart for years, causing erosion and tremendous silting of streambeds. They are a huge contributor to the decline of Puget Sound salmon, and the dire effects on animals that rely on salmon

as a food source, such as orcas.

Adequate funding for proper decommissioning is highly unlikely. Most of these tracks will have to recover as best they can on their own, a long slow process. The damage they are doing will continue for decades, if not centuries. It is urgent that whatever actions possible be taken, even if less than perfect, to minimize the damage. Culverts need to be pulled and ditches dug to get water to drain off the roadways, even if they cannot be fully recontoured.

When still drivable roads wash out, recreation and other “access” interests often pressure the Forest Service to reopen them to motor vehicles as rapidly as feasible. In many cases, the Forest Service responds with plans to “send in the dozers” to reopen the roadways as quickly and inexpensively as possible. But laws now exist to protect streams, salmon and other marine organisms. Wilderness designations and old-growth forest limit the possibilities for relocating roads out of flood plains, where they are vulnerable to destruction. No longer is it legal for the Forest Service to simply bulldoze a path wherever it is cheap and convenient.

When the upper Suiattle Road washed out several years ago, the Forest Service initially proposed to reopen it as cheaply as possible, giving scant regard to Downey Creek's status as one of the most productive spawning streams in the Suiattle watershed. N3C was able to step in, and forced the Forest Service to follow the law and do a much better, albeit slower and more expensive, job of rebuilding the Suiattle road across Downey Creek. The real winners were the salmon and other fish who depend on this spawning ground.

Environmental laws have been enacted for good reasons. Salmon are being extirpated from Puget Sound. Gripping images of orca mothers unable to properly feed their calves, and mourning them for days on end are bringing that home in a way

that cannot be ignored by anyone with a heart.

150 years of unbridled development have destroyed or severely degraded lower-elevation salmon spawning habitats. Much of what is left is at higher elevations, often on or near Federal lands. It is critically important that these remaining spawning grounds not be degraded and that access for fish via rivers and streams channels be as open as possible.

To save declining salmon populations and keep Puget Sound orcas from going extinct, road rebuilds must be done carefully and correctly. The techniques for minimizing road damage to watersheds and spawning grounds are well known. However the Forest Service and other agencies, under pressure from access groups and with limited resources, often prefer to ignore the well-proven science and reopen roads as cheaply as they can get away with, giving no thought to watershed damage.

It is critical that the Forest Service not be allowed to just bulldoze its way through washouts for the sake of automobile access. N3C places a high priority on protecting watersheds and fish populations. Our stance is sometimes unpopular, but we believe it is critical to minimize, and hopefully even reverse, the damage from the uncountable mileage of crumbling roads.

N3C believes that unmaintained Forest Service roads should be decommissioned and proper drainage restored. But with very limited resources available, perhaps the best we can hope for is better restoration of washed-out roads. N3C's evaluation of washout repairs and travel management plans is guided first and foremost by protection of the ecosystem and adherence to the applicable laws. We also consider the cost, the mileage involved and access to desirable destinations. Cost-benefit evaluations must be made on a case-by-case basis. Road segments historically prone to repeated failures should not be rebuilt, simply to wash out again with the next flood. N3C believes we must maximize the effectiveness of our limited resources to protect the ecosystem and provide access, perhaps on foot in some cases, to popular destinations.

N3C's evaluation of washout repairs and travel management plans is guided first and foremost by protection of the ecosystem and adherence to the applicable laws.

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Crazy Culverts

Old logging roads themselves are only the half of it — at almost every stream crossing the water was funneled through a culvert, usually too small and often ending suspended high above the stream bed after the loose fill eroded away. These nasty pipes end up blocking fish permanently. They can easily plug with silt and rocks at the upstream end causing the stream to cut its way across the roadbed. Of all the damaging side effects of the epidemic of logging roads, culverts are among the worst. Removing them and regrading stream crossings should be top priority, but there are so many it's a daunting problem, and only one among many. —PHIL FENNER PHOTOS



Road success story: Baker Lake Road

A temporary barrier on the Baker Lake road closes a lane where the river took the road away just before the road end. This washout could well have been the “straw that broke the road’s back” and forced the Forest Service to decide whether the road was worth repairing where it is, in the river floodplain. The answer is no, it makes no long-term sense to keep it there, as more washouts are guaranteed. Instead, MBSNF managers wisely designed a hybrid of road-to-trail and new trail routed outside the floodplain as the solution. The road will end just beyond Shannon Creek, while the next couple miles of road along the lakeshore are to be converted to trail. Then new trail will be built from there along the edge of the Baker River delta, away from the floodplain, connecting to near where the trail begins today. All of which we celebrate and encourage public lands administrators throughout the Cascades to emulate. And maybe the FS will finally fill in some of the immense potholes in the remaining road! The only flaw in an otherwise outstanding plan: the new parking lot area the FS proposes to clear at Shannon Creek is much larger, about three times bigger than the current one, meaning a lot more trees will have to be cut than necessary.—PHIL FENNER PHOTO

**Want to get
more engaged
in N3C work?**

If you’re a member who’d like to become more engaged in N3C’s conservation activities, please contact us at nccinfo@northcascades.org or by mail at the address on our membership form. We have lots to do, and we’d like to discuss your interests with you to see how you can help!

Low Ross Lake levels a bad sign for northwest water

by Matt Ferrell

With nearly 50 inches of precipitation falling on the Skagit Valley annually, a lack of moisture is not a problem commonly associated with our region of the world. Yet, after the National Park Service issued a press release stating that summer recreation on Ross Lake will be impacted by this year's low water levels, it's time to talk about water in Western Washington.

Every year Seattle City Light, the dam's administrator, draws down the Ross Lake water level in anticipation of the abundant spring rain and snow melt that typically fills the lake by the start of the summer season. But this year, a combination of low snow pack, above-average temperatures, and very little spring precipitation has led the hydroelectric provider to predict that the lake will not be full this year. The National Park Service rescinded all overnight camping permits for areas accessed by Ross Lake, affecting hundreds of permit holders, including North Cascades Institute's Youth Leadership Adventures.

According to the Park Service:

The typical pool elevation in July and August is between 1600 and 1602.5 feet. Cur-

rently, City Light estimates Ross Lake will be as much as 25 feet below those levels for the entire summer. The Skagit basin received only 4.4 inches of precipitation during February and March 2019, the driest March since 1992, compared to a

30-year average of 15.56 inches. Snow pack in the Skagit basin declined by 18% in March and was only 75% of normal (1992-2019) as of April 15.

Seattle City Light, along with being a hydroelectric provider, also maintains decades-long commitments to balancing energy generation with environmental

quality and recreation in the special ecosystem in which they operate. The reservoir is managed for flood control, recreation, and maintenance of migrating fish populations that require downriver water levels to remain at a certain level.

Former North Cascades Institute C16 graduate student Jihan Grettenberger explains this in her natural history research:

A challenge for Seattle City Light is to maintain Ross Reservoir at certain elevations. First there are flood control regulations set by Army Corps of Engineers stating that Ross Reservoir must be drawn down to have 120,000 acre-feet of storage. The reservoir drawdown begins after Labor Day, must be completed by November and maintained until March 15. Once the mandated flood control period has passed, Seattle City Light has to refill the reservoir to have it full by July 1 for recreation and aes-



Low water levels at Ross Reservoir in early May. —MARTH CAMPBELL PHOTO

thetic purposes, as part of the settlement agreement. Furthermore, the reservoir needs adequate water for migratory fish to access tributaries for spawning and to meet the downriver inflow requirements. Historically inflows peaked in May and June coinciding with the reservoir refill period. However, the shift in earlier snow melt and less runoff may make it difficult to refill the reservoir.

At the start of 2019, Snowtel, the scientific monitoring system for determining and reporting the amount of water stored in winter snow-pack, indicated that the Upper Skagit Basin was on track for a relatively average year. However, as winter transitioned to spring, the snow pack began to decrease dramatically.

The lack of spring moisture this year is a statewide concern as we enter the hotter, drier months of summer. On April 4, Governor Jay Inslee issued a drought emergency declaration for the Okanogan, Methow, and Upper Yakima watersheds. That declaration has now been expanded to include 24 other watersheds including the Upper Skagit and the Nooksack. Currently, 26 Washington counties are facing below 50% of average water levels, and long-range forecasts are predicting continued warm and dry weather through the summer months, and potentially into next fall.

Part of the source of this year's water shortage is likely the persistence of El Niño, an irregular weather pattern that carries warmer Pacific Ocean surface temperatures and dominant high pressure into the northern U.S. El Niño years are characterized by unusually warm and dry weather in the Pacific Northwest and cooler, wetter weather for the Southwest. The current forecasts give El Niño a 70% chance of persisting through summer and 55-60% chance of persisting through fall.

While El Niño and drought years are not unprecedented, the frequency and severity of these events seem to be increasing and linked to larger climate changes in the region. 2015 saw historic drought conditions and record acreage burned by wildfire. Now, just four years later, we seem to be set up for a similar scenario. Looking forward, Washington's water supply will no doubt face more significant impacts as temperatures warm.

Lower snow pack, earlier spring melt, and more frequent and severe droughts are all predicted as we turn up Earth's temperature. In addition, many hydrologists predict more flooding and higher water flow in winter months as more precipitation falls as rain, rather than snow,

and runs off quickly rather than being held in the snowpack for gradual release. Additionally, glaciers, which provide 12-24% of late summer water supply and also bring down nutrient-rich minerals from the mountains, are losing mass at a rapid rate. Glacier mass has declined 19% in the Upper Skagit since 1959. They are unlikely to be a reliable source of water in decades to come.

Watersheds in Washington provide roughly 70% of the state's power through hydroelectricity. Fresh water is also an essential source of irrigation for agriculture, drinking water and habitat for salmon and countless other species that depend on our rivers and lakes. In addition, moisture levels in our forests predict the likelihood of wildfires, which are also increasing in size and frequency, effecting air quality and summer recreation around the state.

While we may not be able to predict future weather or climate events with certainty, we can educate ourselves on the trends that we have already observed, and adapt to the changes and challenges that we face going forward. Seattle City Light is already planning for future changes in water supply and flow that reflect more winter rain, earlier spring melt and lower summer runoff. The Skagit Climate Science Consortium is providing research and education for the community on how observed and predicted changes will impact local residents.

We are lucky to live in a state and region with abundant natural resources, biodiversity, and stunning beauty. However, we should never take these things for granted or assume their limitless bounty. We have an obligation to future generations to work actively to ensure that our resources are managed for the health of all beings, current and future. With increasing human populations, the demand for water will also increase, and as our water supply becomes less predictable, the challenge is on us to continue to strive for balanced use of this essential, life-giving resource. Through education, conservation and commitment to a sustainable future, we can continue to live in abundance with this spectacular land that we call home.

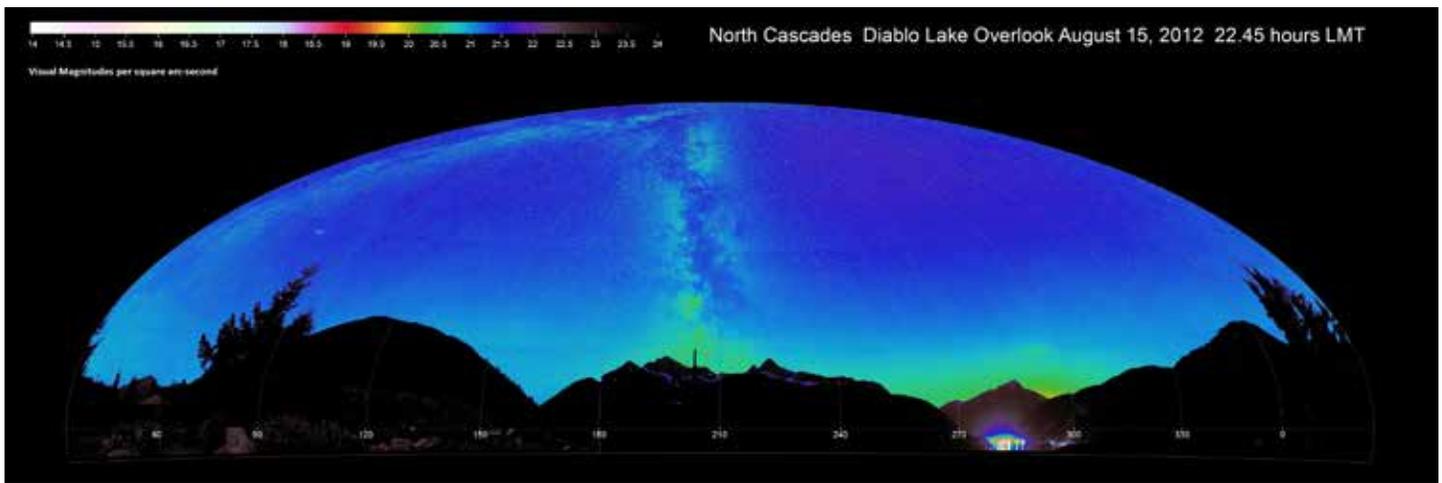
NCI graduate student Matt Ferrell completed this article with the research of fellow student Nicola Follis and former student Jiban Grettenburger. Special thanks for their hard work!

Find more current data on water and climate data from these sources:

- Skagit Climate Science Consortium (<http://www.skagitclimatescience.org/>)
- Climate Normals and Weather Almanac (<https://w2.weather.gov/climate/xmacis.php?wfo=sew>)
- Snow water Equivalent % of Normal: USDA (<https://www.nrcs.usda.gov/wps/portal/nrcs/detail/wa/snow/products/?cid=stelprdb1248202>)
- Skagit River Discharge and Temperature Data: USGS (<https://waterdata.usgs.gov/usa/nwis/uv?12181000>)
- El Niño Southern Oscillation Climate Predictions: NOAA (https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/)

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Things are looking up! *NPS submits dark sky study request to SCL*

Among the scarce resources of wilderness, one is becoming particularly rare these days: a dark night sky. As urbanization, suburbs and “ex-urbs” spread across the landscape, so does artificial light, and too much of it faces or reflects upward, reducing visibility of stars in the night sky. As the star show fades, so does our sense of wonder at the universe.

Until now, N3C has focused on protecting wilderness from the great terrestrial threats. With the opening of the Seattle City Light FERC relicensing process, detailed in previous issues of *TWC*, there is an opportunity to make improvements to the only substantial source of light pollution within the North Cascades core, the Skagit River Hydro Project.

We approached the National Park Service for their support and were delighted

to hear they were submitting their own study request. NPS had already done prior surveys and found the hot spots like Diablo Dam, as seen in the night image above. Those studies will form good background for the new surveys they are asking City Light to conduct.

The June 2019 issue of *Sky and Telescope* magazine describes a big success at reducing light pollution in Glacier-Waterton International Park. That’s a success we’d like to duplicate here, where we are lucky to still have a core area of largely undeveloped, and thus dark, wilderness — thanks to N3C’s historic campaigns over the last half century for National Park and Wilderness designations in the North Cascades.

We’ll keep you informed of progress within the City Light relicensing Steer-

ing Committee that evaluates new Study Requests. If accepted, the NPS Dark Sky Study could form the basis of a larger effort to reduce stray light pollution in the region. But for now, reducing the Hydro Project’s own stray light will greatly improve the experience of visitors to the Park, especially those who travel along the western portion of the North Cascades Highway route.

Night sky and horizon survey image from Diablo overlook showing stray light from Diablo dam in lower-right. – NPS PHOTO.

Murrelets

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erty. One option for private landowners is the Safe Harbor Agreement, an agreement with either the U.S. Fish and Wildlife Service (USFWS) or the National Oceanic and Atmospheric Association (NOAA) in which landowners use their property in a way that contributes to the recovery of a threatened or endangered species. In

exchange for this compliance, the landowner is exempt from additional land-use restrictions that may have been otherwise placed on their land.

The Rivers and Habitat Open Space Program is a DNR-administered program that allows Washington State landowners to sell a permanent conservation easement to

the state given that the property meets certain requirements. The Washington State DNR has acquired 16 easements through this program since its inception in 2002, and has thus been able to protect more than 1,000 acres of important habitat!

Another route that landowners can take to both protect and profit off of their land



**Join our N3C
Facebook page!**

We’re up to 332 friends and growing. Help us build our clout by friending us and then recommending our page to your friends concerned about preserving the North Cascades.

Murrelets

CONTINUED FROM PAGE 18

is called Conservation Banking. Conservation banks offer incentive to landowners in the form of species and habitat credits, in exchange for the land being protected, preserved, or restored for the benefit of threatened or endangered species. These species and habitat credits can then be sold by the landowner to people (or corporations) that may be performing actions which negatively affect a species or habitat. Conservation banking is slightly controversial, as some people see it as a loophole to endangered species protection. However, the practice is not only cost-effective, but also helps landowners to see endangered species on their land as an asset instead of as a liability.

Land Trusts are another way landowners can maintain some of the benefits that they get from their land while also doing their part to protect the habitat of threatened or endangered species. With

a conservation land trust, the landowner maintains some control of the land (the ability to sell it or pass it on to an heir) while an organization, such as the Land Trust Alliance in Washington, imposes regulations that allow its natural resources to remain protected. Land trusts are sort of like getting a nanny for your kids; you are still ultimately responsible for them, but you have someone else there to step in to do some diaper changes and disciplining!

We would like to thank David Fluharty of the N3C for helping us construct this project. We couldn't have done it without his guidance.

We hope we can (murre)let these creatures continue to live and reproduce in Washington's unique marine and forested environment. With the help of an educated public that fosters a greater connection with their natural environment, we can change the way we, and the marbled murrelets, live within this beautiful Gaia.



As advisor to students from the Management of Endangered, Threatened and Sensitive Species class at the UW School of Environmental and Forest Sciences, Dave Fluharty met with students weekly and helped them develop their brochure and sticker. For copies of the brochure and sticker, contact Dave at fluberg@msn.com. Find their full report at www.northcascades.org/wordpress/programs/marbled-murrelet-campaign.



Enjoy The Wild Cascades? Not a member yet? Join NORTH CASCADES CONSERVATION COUNCIL!

Yes! I want to support North Cascades Conservation Council's efforts working on many fronts to establish new wilderness, defend our forests, support wildlife conservation and keystone species, and promote sound conservation recreational use. Be part of a vibrant grassroots network of advocates

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Storm breaking over the confluence of the Cascade and Skagit Rivers. This verdant gateway to the North Cascades is targeted for a huge rock quarry. The slope on the left would be literally blasted away, leaving a scar visible for miles, permanently defacing this unique landscape.—PHIL FENNER PHOTO