

Landscape Conservation Cooperatives: Regional Action for a Changing Planet

In recent years the federal government has launched a multi-pronged effort to respond to the challenges of climate change. That effort has included a variety of programs and legal directives, from clean-energy funding to the Clean Power Plan to raising fuel standards for American-made vehicles. Climate research by government and non-government scientists also continues apace, and a clearinghouse, the Climate Data Initiative, was launched in 2014 to disseminate the latest climate-related knowledge.



A Swinomish tribal member holds a cockle during the shellfish harvest. Photo credit: Jim Gibson, NW Indian Fisheries Commission

All the while, warming and climate-related impacts continue to increase at an alarming rate—a progression that, even with concerted action toward mitigation, will result in notable ecosystem changes throughout the nation and around the planet.

Much remains to be understood about the complex land- and seascape level impacts of atmospheric warming and “landscape-scale stressors” such as urban development and energy production. Landscape Conservation Cooperatives (<https://lccnetwork.org/>), a system of 22 federally supported regional collaborative conservation networks, provide a means to learn more and to develop adaptation and other conservation strategies, with a focus on the wide view of sustaining both our natural and cultural resources.

Each of the 22 LCCs addresses ecological challenges unique to its region. The following are examples of cooperatives and some of their major focuses:

Gulf Coast Prairie LCC:

- Identifying priority grasslands in the region
- Habitat connectivity
- Hydrologic impacts on prime habitats

Appalachian LCC:

- Loss and fragmentation of natural habitats
- Disruptions in natural-disturbance regimes
- Regional energy development

Desert LCC:

- Water management
- Wildlife populations
- Riparian management
- Wildfire regimes

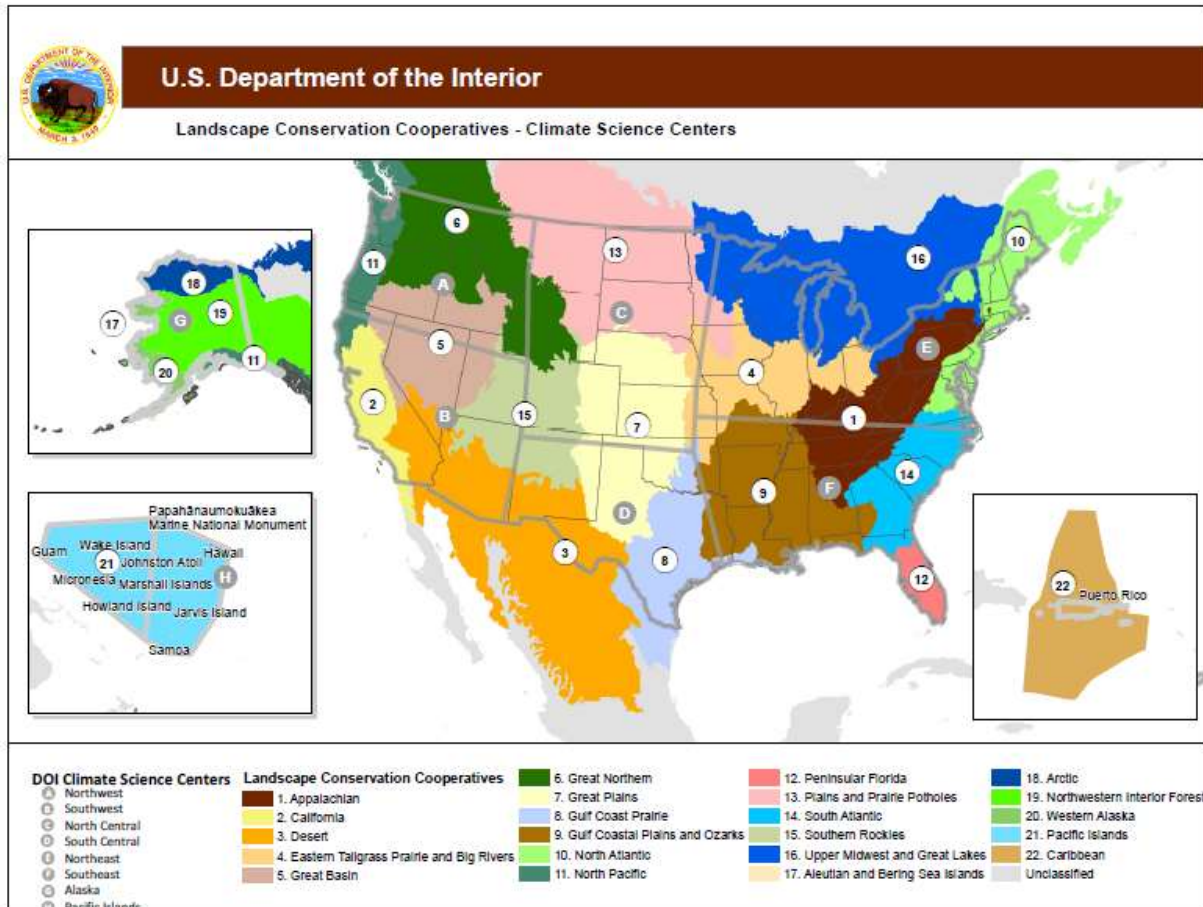
North Atlantic LCC:

- Land and ocean habitat continuity
- Chesapeake fish passages
- Sea Lamprey control
- Aquatic habitats

Launched in 2010, the LCC network extends across North America and out to Pacific and Caribbean islands. Each LCC comprises partnerships between federal, state and local agencies, tribes, nonprofits, university groups and other interested partners. The program was initiated within the Department of Interior and several Interior (DOI) bureaus are involved in the LCC effort, in addition to the USDA Forest Service.

Individual LCCs are self-directed partnerships that focus on regional priorities as determined each year by their steering committees. Because a project sometimes needs to extend beyond an LCC’s geographic borders (e.g., for research on a forest ecosystem that extends eastward from Washington state into neighboring “Great Northern LCC” states), cross-regional

partnerships and resource-sharing are common. Eight “Climate Science Centers,” composed of federal-university partnerships, assist in providing data and fundamental research support for LCC efforts. Nationally, the LCC network is linked by a common vision: Landscapes capable of sustaining natural and cultural resources for current and future generations. The purpose of the LCC Network is to harness the capacities and abilities of all partners in support of common conservation outcomes, and to serve as a strategic forum for collaboration, coordination, and integration.



Albers Equal Area Conic NAD83
Produced by FWS, IRTM, Denver, CO
Map Date: 03/18/2010

Tribes and the NPLCC

Tribes and First Nations are particularly suited to the role of LCC partners, says Joe Hostler, an Environmental Specialist with the Yurok Tribe in northern California. His tribe has been an active partner in the North Pacific LCC

(<http://www.nplcc.org>), which embraces the temperate rainforests and coastal and near-shore reaches of California, Oregon, Washington, Alaska, and the Canadian province of British Columbia. “It’s ecosystem-based,” Hostler says of the LCC concept, “which is fairly consistent with tribal cultures. For example, the Yurok Tribe has a lot of concerns that are similar to Alaskan tribes—a lot of our resources are similar, and with climate change we’ll be facing some of the same problems.” He says the NPLCC is a leader in



terms of including indigenous people and communities as partners. “Other LCCs have tribal stakeholders, but I think this one is probably unique in that the tribes are on equal footing with the federal government.”

Although climate change impacts everyone, indigenous people, particularly those who pursue subsistence lifestyles, are often the most immediately and directly impacted by climate-related changes in fish, wildlife and plant populations; migratory patterns; invasions of exotic species; and other ecosystem alterations, along with the economic and cultural stresses that such changes can bring.

The NPLCC places a high priority on the needs of indigenous communities, an emphasis that is reflected in its structure. Of its 23 Steering Committee seats, five are reserved for tribes and First Nations. The NPLCC also maintains a Tribal-First Nations Committee, which NPLCC Director, John Mankowski, describes as “an independent group, recognizing their sovereignty. They convene as often as they want, and any tribal member is welcome. The group talks about climate impacts on the region, cultural resources, and how Traditional Knowledges can be a benefit. We also have lots of tribal voices on our other subcommittees, such as our Communications Committee and our Science-TEK Committee. And tribes are often principle investigators on many of our projects.”



NPLCC Director, John Mankowski, says of the need for LCCs to form partnerships, “All of us have a little money, but none of us has a lot of money.”



Joe Hostler of the Yurok Tribe in N. California presents on climate change at the National Adaptation Forum in Denver in 2013.

Hostler notes that the NPLCC “isn’t so much a land management decision-making body—we make recommendations for research projects.” LCC steering committees convene at the start of each funding cycle and set priorities, issue general guidance based on those priorities, and put out funding notices. They also give the green light for existing projects to continue, and they seek out and offer recommendations on partnerships among LCC entities to address priorities.

Mankowski says, “We support conservation work and projects that are priorities for our partners. So if our partners are concerned about future availability of Pacific Eulachon (a sardine-like fish culturally important to regional tribes) for example—we fund

work to help address that question.”

For much of the NPLCC’s five-year existence, tribal members have been involved extensively in its projects, notably on efforts that relate directly to tribal resources and culture. In 2012, for example, the majority of the NPLCC’s funding went to projects proposed, managed by, or formed in partnership with regional tribes. Hostler says the projects were meant to “clarify the rules for when nontribal entities partner with tribes and sought to address ways that western and traditional knowledge can be employed together effectively. We created guidelines on the

use of traditional knowledge.”

Hostler’s project that year was one of several in 2012 that focused on TEK. “So when we talked to Yurok elders, we had confidentiality agreements and contracts beforehand. The legal stuff was really the deliverable, in a way. We did a report, but it provided a kind of template for other tribes to do traditional-knowledge research. We wanted to give people ideas on how to plan things out legally beforehand to protect their knowledge—because everything is on the internet now, and in no time at all, it gets out.” Other regional tribes, including the Tulalip Tribe and the Swinomish Tribe, assisted in the effort.

Mary Mahaffy, the NPLCC’s Science Coordinator, describes another example of the NPLCC’s tribally focused work. South Central Alaska’s Chugachmiut, a consortium of seven tribes near Prince William Sound, sought assistance on an issue that was directly impacting their subsistence livelihood.

“They’re heavily reliant on blueberries and salmonberries for subsistence and ceremonial use,” Mahaffy says. “Lately they’ve experienced die-offs due to a moth species that’s more prevalent now than it used to be. They were thinking it might be related to climate change, the lack of colder winters that would kill some of them off. So we funded a scientist to work with the organization to understand where the blueberries were, where they were dying off, and testing some methods to ensure their future existence. Most importantly, they looked at future climate models and where these berries might be propagated so the tribe would have access to them in the future.”



Chugachmiut elder with berry bushes impacted by unusual growth of geometrid moth population. Inset: Larva of the geometrid moth. Both photos by C. Lojewski.

Another NPLCC-funded project, for the Native Village of Kasaan in Southeast Alaska, helped the tribe to develop revisions to their traditional harvest calendar for local resources such as clams and reed grass for basket-weaving. “The calendar shows what time of year different plants and animals might be available to harvest under different climate conditions,” Mankowski says. “This was in response to their concern that climate change would disrupt the old patterns. They interviewed elders on traditional harvest sites and timing, and then looked at some future climate regimes, so they could adjust for and plan calendars that are more reflective of future conditions.”

Recruiting Tribal Members and Partners

The NPLCC maintains an ongoing effort to attract tribes to the LCC process. “We have a working principle of an open door policy; we welcome anyone who wants to be involved, not just current members,” says Mahaffy. “The last steering committee meeting was a perfect example. We were in Juneau, and we had our Alaska tribal steering committee member there at table. And we had someone we had funded on one of the projects—he was there

presenting, and he was sitting at the table with the steering committee members, as opposed to being on the outer edges. We invited him to stay and join in the conversations. He was offering his thoughts and opinions, and he was actively brought into the conversation, even though he was not a steering committee member. We're very open here—for one thing, we recognize that one tribe doesn't necessarily represent another.”

Outreach to tribes, says Mankowski, “is never finished. We participate in monthly calls with the PNW Tribal Climate Change Network at University of Oregon in Eugene, when we talk about LCCs and how we can be of service to tribes. We work closely with ITEP and take advantage of tribally led venues to get the word out about what we do. We also publish a monthly e-newsletter, *Climate Science Digest* (see

<http://www.nplcc.org>), where we have a special section on topics of tribal interest.

We have a special site on our website with information pertaining to tribal interests. We're trying different things all the time, and we network closely with our BIA partners and others.” Mahaffey adds, “We're also working with our Tribal-First Nations Committee to get their help on reaching out to additional tribes and First Nations, and on priorities, as they do work with others, too. So they can bring that information in.”

Mankowski says NPLCC members appreciate the fact that tribal staff face a host of demands on their time and resources, including funding limitations (the NPLCC sometimes funds travel expenses) and small environmental departments responsible for a large number of tasks. “Our approach is first of all to be patient, and persistent, and to ask tribes what works for them. We know tribal staff are being asked by a million people to join a million different committees. So we try to be careful in what we ask of them, and to be judicious in how much time we take. We're always reaching out, finding new ways, dropping old ways that aren't working. The commitment is something you never get done.’



NPLCC Science Director, Mary Mahaffey, speaking at National Tribal Forum

Funding the Future

As with most government environmental-protection activities these days, funding is perennially strained. A proposal to severely slash the NPLCC budget last year, however, was met with widespread protests via calls and comments by stakeholders to regional representatives. That activism, Hostler believes, likely helped reduce the final cut to a more-manageable level. Still, from an opening budget in 2010 of about \$700,000, this fiscal year's NPLCC science budget runs at about \$200,000. Last year no new projects were funded, though some continuing work was supported. This year the picture is looking slightly better, and a fresh call for project proposals was issued and recently closed.

Mahaffey takes the optimistic view on federal support and the NPLCC's mission. She says



Deception Pass, near the Swinomish Indian Tribal Community in Washington State

the funding situation, though challenging, is perhaps less dire than it might have been at the start. “There are other types of work now,” she says, “and partnership opportunities. We can support communication, trainings, and collaboration meetings. At our last steering committee meeting we were discussing the importance of convening people who are working throughout our landscape as it relates to the die-off of yellow cedar, which is a traditional cultural resource. So we don’t necessarily put out a notification of funding for that; rather, we can consult with our partners and figure out how to do that kind of project.

Now we have a Communications Specialist, too, and we’re doing other activities, so the money is no longer just for new science projects.”

Mankowski notes that partnerships among various groups have grown increasingly important for addressing broad-scale problems that impact numerous stakeholders. “All of us have a little money,” he says, “but none of us has a lot of money. If we can address these issues together, things everybody cares about, we can be a lot more successful.” The vocal support of stakeholders, Hostler says, will continue to be crucial in sustaining LCC work to address challenges that will grow much more difficult and more expensive to deal with as climate impacts on our environment increase—as they surely will.

Resources

Landscape Conservation Cooperative Network: <https://lccnetwork.org/>

North Pacific Landscape Conservation Cooperative: <http://www.northpacificlcc.org/>

This profile was developed by Dennis Wall, Institute for Tribal Environmental Professionals, Northern Arizona University. It was first published as an article in ITEP’s *Native Voices* newsletter, Volume XXIII, No. 1, 2016.

The profile is available on the Tribes & Climate Change website:

<http://www7.nau.edu/itep/main/tcc/Home/>. The tribal climate change profiles featured on the website are intended as a pathway to increasing knowledge among tribal and non-tribal organizations about climate change mitigation and adaptation efforts.

For more information about the tribal profiles and the website, please contact ITEP’s Climate Change Program: <http://www7.nau.edu/itep/main/ClimateChange/>