



## **LANDSCAPE CONSERVATION COOPERATIVE NETWORK MESSAGE BUILDING BLOCKS**

### **Key and Supporting Messages**

These messaging building blocks can be assembled for use in communications and outreach products such as presentations, fact sheets, and web copy to help tell the LCC Network story. The “Key Messages” are pulled together on the first page followed by more detailed supporting message building blocks grouped thematically to allow for easier customization to educate and/or motivate the intended target audience based on their interests or concerns. The “for example” paragraphs provide suggestions for framing the message regionally or locally.

### **Key Messages**

Cooperative conservation has been a priority for the Department of the Interior since the early 2000s. LCCs were established to provide science capacity and technical expertise for meeting shared natural and cultural resource priorities. Today, the network of 22 LCCs are changing how we think about, plan, and act upon collaborative conservation issues in a way that goes beyond boundaries to help the places we love and the resources we depend on thrive for generations to come.

LCCs advance innovative partnerships and approaches on an unprecedented scale, finding common ground to address shared conservation priorities. LCC partners include federal, state, provincial, and local government agencies; Tribes and First Nations; non-governmental organizations; academia; and private sector entities.

LCCs partners work together to articulate shared priorities; identify gaps in scientific knowledge and capacity; and complement and build upon each other’s efforts to avoid duplication while maximizing resources.

Conserving natural and cultural resources at a landscape level is about making better-informed decisions and working collaboratively with stakeholders who have interests in and impacts on the same landscapes.

By safeguarding natural and cultural resources to ensure that they are sustainable, we are also taking care of our health, quality of life, and economy.

Through locally driven partnerships, LCCs are increasing their collective science and management capacity to focus on critical conservation issues including water, energy, urbanization, imperiled species, sea level rise, and transportation.

## **ABOUT THE LCC NETWORK**

Cooperative conservation has been a priority for the Department of the Interior since the early 2000s. LCCs were established to provide science capacity and technical expertise for meeting shared natural and cultural resource priorities. Today, the network of 22 LCCs are changing how we think about, plan, and act upon collaborative conservation issues in a way that goes beyond boundaries to help the places we love and the resources we depend on thrive for generations to come.

- Landscape Conservation Cooperatives form a network of 22 science-driven, public-private partnerships across North America and Pacific and Caribbean Islands that are collaboratively tackling some of today's most pressing conservation challenges.
- Today's conservation challenges include, but are not limited to, energy and food security, urban growth, habitat connectivity, sea level rise, drought, wildfire, and invasive species – all compounded by a changing climate.
- These challenges are not just impacting isolated places or a single species, but affecting entire landscapes, multiple resources, and cultural ways of life. The ability to effectively plan for and address these issues transcends jurisdictional and geographic boundaries and is greater than any one agency or organization can meet alone. LCCs provide diverse partner forums for building connections to achieve sustainable landscapes and seascapes for current and future generations.
- LCCs advance a collaborative approach to conserving natural and cultural resources that is adaptive and grounded in science, and they help stimulate coordinated action to effect long-term change.
- LCCs are a responsible, effective, and efficient investment of public and private dollars. These collaborative partnerships leverage resources, share scientific expertise, fill needed science gaps, and prevent duplication of efforts through coordinated conservation planning and design.

## **LCC PARTNERS**

LCCs advance innovative partnerships and approaches on an unprecedented scale, finding common ground to address shared conservation priorities.

- LCC partners include federal, state, provincial, and local government agencies; Tribes and First Nations; non-governmental organizations; academia; and private sector entities.
- LCCs are non-regulatory and respect individual partners' authorities and priorities.
- LCCs generate information that enables partners to work collaboratively to implement on-the-ground actions that balance human and conservation needs. LCCs help partners see the big picture in how their activities fit with those of other partners to achieve larger and more lasting positive impacts.
- Support for LCCs continues to grow with participation from all 50 states, the involvement of more than 30 federal departments or bureaus, and significant representation from at least 45 Tribes. In addition there is engagement by more than 300 academic, nonprofit, local government, and private organizations on LCC steering committees, technical working groups, and/or LCC-funded projects.
- Full and active engagement of state agencies is vitally important to the success of each LCC. State agencies help drive the identification of science needs, and in return, LCCs can provide applied

science resources and support to help agencies uphold their public trust responsibilities within their jurisdictions.

For example, many LCCs work with state fish and wildlife agencies to update and implement their State Wildlife Action Plans by providing forums for collaboration across state lines.

- The LCC Council is a representative body of executive-level leaders from across the LCC Network that serves as a strategic forum for collegial collaboration, coordination, and integration by the 22 LCCs.

## **SHARED CONSERVATION PRIORITIES**

LCCs partners work together to articulate shared priorities; identify gaps in scientific knowledge and capacity; and complement and build upon each other's efforts to avoid duplication while maximizing resources.

Each LCC provides a forum or "shared table" for partners to efficiently and effectively:

- Catalyze large-scale and long-term voluntary conservation of natural and cultural resources beyond the reach or resources of any one organization.
- Coordinate and leverage their science and management investments and actions through collaborative conservation planning.
- Develop tools and strategies to inform landscape-level management decisions and link science to management.
- Agree on collective landscape-scale conservation goals and create a shared vision for a sustainable future that reduces the need to consider conservation by regulation.
- **Landscape Conservation Design:** LCCs are developing Landscape Conservation Designs (LCD) as mechanisms – blueprints for the future – for identifying, designing, and delivering through partners an ecologically connected network of landscapes and seascapes adaptable to global change. LCD is an iterative, collaborative, and holistic process resulting in products that provide information, analytical tools, maps, and strategies to achieve landscape goals collectively held among partners.

For example, the Southeast Conservation Adaptation Strategy (SECAS) is a shared, long-term vision for lands and waters that sustain fish and wildlife populations and improve human quality of life across the southeastern U.S. and Caribbean.

- The SECAS Blueprint stitches together the work of the six southeast-located LCCs into one map of shared conservation and restoration priorities across the Southeast U.S. and Caribbean. The SECAS blueprint can be used to illustrate how local decisions fit into a larger landscape.
- SECAS was initiated by the 15 states of the Southeastern Association of Fish & Wildlife Agencies (SEAFWA) and the federal Southeast Natural Resource Leaders Group.

## DECISION-MAKING

Conserving natural and cultural resources at a landscape level is about making better-informed decisions and working collaboratively with stakeholders who have interests in and impacts on the same landscapes.

- We can balance economic growth and the conservation of natural and cultural resources.
- Decision-makers in the energy, transportation, agriculture, real estate, and other sectors make decisions that impact the same landscapes as the fish and wildlife conservation interests.
- LCCs generate data, risk assessments, models, and other decision support tools that resource managers use to design and deliver efficient conservation actions on the ground. These same tools benefit commercial sectors by helping to identify where development may likely intersect with conservation interests and avoid impacts.
- LCC resources can help companies reduce risk and costs and make better decisions to protect their strategic investments on a longer-term and larger scale.
- It takes long-term vision to plan and develop infrastructure projects. LCC resources can help companies, communities, and government agencies model future risks from landscape-scale change for smarter decision-making.

## SOCIAL & COMMUNITY BENEFITS

By safeguarding natural and cultural resources to ensure they are sustainable, we are also taking care of our health, quality of life, and economy.

- Diverse landscapes provide food, clean air and water, flood protection, jobs, health benefits, and recreation that support people, communities, and economic growth every day.
- By looking at conservation on a landscape scale, LCC partners can balance human needs and development while simultaneously restoring coastlines, rivers, wetlands, deserts, grasslands, forests... each of which is essential to sustaining our health, our quality of life, and our economy.
- We've all got something to lose if we don't take action now to better integrate science and management to conserve natural and cultural resources.
- **Coastal:** LCCs resources are helping coastal and island communities impacted by sea level rise to increase their local resilience; safeguard people, infrastructure, and natural resources from catastrophic damage from extreme weather events; and plan for their future.

For example, the Gulf Coastal Plains and Ozarks LCC supported a flood protection analysis that found coastal communities in the Gulf of Mexico can improve their resilience and save on flood insurance premiums by protecting open spaces or "green infrastructure."

In Alaska where change is rapid, coastal communities and important natural and cultural resources are at risk. Changes in sea level, ice, and weather have resulted in infrastructure damage, risk to human lives, disruption of hunting and fishing, and threats to economic resources. Spearheaded by the Aleutian & Bering Sea Islands, Arctic, and Western Alaska LCCs and the Aleutian & Pribilof Islands Association, a coalition of Alaska Native tribal entities came together with federal and state

agencies to build much-needed partnerships through a series of four Coastal Resilience & Adaptation Workshops in 2016. By bringing together tribal leaders, scientists, planners, and land and resource managers, the workshops served to identify tools and strategies to address the challenges of a rapidly changing coast. Emergency preparedness, mitigation of coastal erosion and flooding, management of subsistence species, community planning tools, and projected future conditions, were among the topics addressed.

- **Urban:** Our nation's cities are built on lands and water systems that connect to larger natural areas. The health and security of that land and water is vital for a city's economy and the well-being of its metropolitan area residents.

For example, LCC-funded efforts such as Ecological Places in Cities (EPIC) in the Midwest and the South Atlantic Conservation Blueprint (also see SECAS) are creating new visions for their landscapes that integrate nature's benefits and natural defenses with planning approaches and civic leadership to grow ecologically resilient urban communities.

- **Military:** LCCs are partnering with Department of Defense military installations to develop proactive strategies that look beyond the boundaries of a single base to conserve surrounding landscapes critical for world-class training and readiness. Cooperative actions include protecting important habitats for imperiled species that could otherwise restrict operations on military sites, and helping landowners sustain working lands to ensure property in training flight paths are not developed.
- **Agricultural:** Cooperative landscape conservation related to farming, ranching, and forestry center around finding balance between conventional agricultural practices and sustainable use of soil, water, and other natural resources. LCC-funded research on working landscapes focuses on landowner motivations and incentives; ecological impacts of agricultural and conservation practices; mapping and modeling conservation activities such as wetland and grassland restoration; reducing hypoxia (oxygen-deplete dead zones) in streams and waters; and conducting social and economic analyses of conservation.
- **Rural:** Many people living in rural areas rely on hunting, fishing, and native plants for food, income, and cultural practice. However, changing conditions are affecting the distributions and availability of traditionally harvested species and impacting food processing and storage options for rural residents.

For example, in Alaska, LCCs are funding resiliency forums to help communities develop their own practical, locally driven strategies. LCCs are also supporting research projects to help subsistence users of wild resources improve their food security against exposure to disease and contaminants, visualize harvest trends, and understand the risks and resiliency of food sources including Pacific lamprey eel, salmon, and berry plants.

- **Tribal & Indigenous Communities:** Traditional Ecological Knowledges (TEKs) are an understanding about the relationships among species and ecosystems acquired by indigenous and local people over hundreds or thousands of years. This knowledge is handed down the generations through traditional stories and beliefs. TEKs can play a fundamental role in preserving natural and cultural resources by bridging human and environmental systems. LCCs support projects that study TEK to inform conservation strategies as a way to increase cultural resiliency and adaptation.

For example, the Great Basin LCC supported a project by the Pyramid Lake Paiute Tribe to gather and translate TEK in order to understand how the Great Basin weathered past droughts and climate variability. The effort offers cultural insights into approaches that could sustainably work in future decades and provides a link between generations to raise awareness about environmental concerns.

Across the North Pacific LCC, more than 150 Tribes and First Nations continue to live, work, and gather resources to support their traditional ways of life. The North Pacific LCC has funded a variety of TEK projects to aid in the conservation of 'first foods.' These projects include the development of a risk model that predicts where subsistence berry plants will be most resistant to harvest-decimating moth attack; Pacific salmon vulnerability assessments; and a study of projected changes to ocean conditions and to freshwater habitat and the effects of these changes on the life cycles of Pacific eulachon and Pacific lamprey.

The Pacific Islands Climate Change Cooperative provided research funding for community members from Ka'ūpūlehu (North Kona, Hawai'i Island) and researchers from the University of Hawai'i at Mānoa to understand how coping strategies and indicators of social resilience have changed over time; the role of TEK in resilience; and the implications for climate change adaptation. The research findings are relevant for the larger Pacific Islands region and other areas that represent a continuum from rural-to-urban and traditional-to-global economies and lifeways.

## **CONSERVATION ISSUES**

Through locally driven partnerships, LCCs are increasing their collective science and management capacity to focus on critical conservation issues.

- **Energy:** Energy development and landscape-scale conservation are not mutually exclusive activities. LCC partners support science and stakeholder forums to help minimize risks to fish and wildlife while improving certainty for energy developers.

For example, the Appalachian LCC has funded studies that provide energy developers in the Appalachian Mountain region with information they need to make informed decisions on how energy development may affect land use change at both regional and local scale. The LCC also funded research to study the impact of hydraulic fracturing on streams in the region.

Additional investments include support for renewable energy collaboration in the South Atlantic LCC landscape; a proof-of-concept study in Northern Missouri funded by the Eastern Tallgrass and Big Rivers LCC to establish the validity of using native grasses and forbs for bioenergy production; and research on wind energy development and Greater sage-grouse to help minimize impacts.

- **Water:** Adequate and safe water supplies are essential to the health, economy, security, and ecology of the country. To achieve sustainable water management and maintain economic productivity in the western U.S., action is required to address current and future water shortages; degraded water quality; increased demands for water from growing populations and energy needs; amplified recognition of environmental water requirements; and the potential for decreased water supply availability due to drought and long-term changes in weather patterns.

**DROUGHT:** As water supply patterns fluctuate, drought resiliency has become a growing focus of local communities, government agencies, watershed groups, and the LCCs. LCCs are investing in

drought-related projects to improve decision making about water supplies, such as conducting vulnerability assessments and scenario planning; predicting drought-related habitat changes and impacts on species' survival; hosting workshops and trainings; and fostering collaboration to design drought-resilient, future landscapes.

- **Urbanization:** Rapid urban growth most often comes at the expense of fish and wildlife habitat, working lands, and the rural character of a region. Mega-city expansion, exacerbated by other land use changes such as sea level rise, can consume ecologically important lands such as wetlands, forests, grasslands, and other ecosystem types. That's why it's more important than ever to develop a shared, long-term vision for the landscape to guide smarter planning and investments.

For example, the American Planning Association has been partnering with the South Atlantic LCC to improve the LCC's Conservation Blueprint design near and within cities; rethink traditional urban planning approaches to urban green infrastructure as well as traditional approaches to conservation and the urban environment; and to identify opportunities for greater collaboration in the future. (Also see SECAS or EPiC.)

- **Imperiled Species:** LCCs support conservation of declining or imperiled species by identifying the best core areas that can provide for the needs of numerous species within the landscape; designing ranking criteria to deliver project funding where it will do the most good toward the species' greatest needs; and by developing efficient monitoring programs to measure species and habitat outcomes across a landscape.
- **Sea Level Rise:** Rising sea levels, coastal erosion, and changing frequency and intensity of storms are impacting landscapes and seascapes and the people, fish, wildlife, and plants that depend upon them. Coastal- and island-oriented LCCs support applied science efforts to model sea level rise and sea level rise scenarios in order to inform adaptation and resiliency strategies.
- **Transportation:** Connectivity is the mission of the nation's transportation system of roadways and waterways. Connectivity is also mission-critical when advancing landscape and seascape scale conservation for fish, wildlife, and their habitats.

**AQUATIC CONNECTIVITY:** For example, tens of thousands of outdated, damaged, and poorly designed road-stream crossings, such as bridges, dams, and culverts, obstruct rivers and streams across the country. These barriers prevent fish and other aquatic species from moving up and downstream, while also increasing flood risk to communities. LCCs in the Northeast, Southeast, and Midwest have funded research, decision support tools, and planning initiatives to facilitate barrier removal for improving aquatic connectivity, which can also help increase water quality as well as the resiliency of infrastructure for transportation and emergency management.

**TERRESTRIAL CONNECTIVITY:** Roadways and bridges are impermeable structures that fragment habitats wildlife and plants need for species movement, genetic connectivity, migration, dispersal, and other biophysical processes that complete their life cycle. LCCs are supporting research and initiatives – such as the Great Northern LCC's Ecological Connectivity Project and work by the Desert LCC in Southwest – to understand where habitat corridors could most effectively connect large landscapes; develop decision support tools for prioritizing conservation actions to diminish road impacts on wildlife corridors; and overlay analyses of spatial modeling to identify

where high-importance terrestrial corridors meet high-impact road segments, which could help reduce wildlife-vehicle collision risk.

**MARINE VESSEL TRAFFIC:** Each year, thousands of deep-draft vessels transit the Aleutians using trans-Pacific and other transportation routes through the Bering Sea. This poses a variety of significant environmental risks to the landscape's natural resources including contaminant spills, disturbance of marine mammals and seabird habitat, invasive species introductions, and direct mortalities resulting from collisions. The Aleutian and Bering Sea Islands (ABSI) LCC supported the first-ever analysis of these shipping routes. This analysis was used by the U.S. Coast Guard to inform establishment of five Areas To Be Avoided (ATBAs) in the Aleutians by the International Maritime Organization. ABSI estimates that the new routes around the ATBAs will significantly reduce the risk to many wildlife species while adding less than 1% to the length of the voyage between the two continents and improving safety for the vessels.

### **MORE INFORMATION**

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