The Kake Community Forest Project
Collaborative Land Stewardship for a Healthy Community

A report by the
Southeast Alaska Conservation Council
Bob Christensen (SEAWEAD) and Sarah Campen (SEACC)
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Dear Reader,

Southeast Alaska is our remarkable home. Most of the world’s temperate rainforests have disappeared, but here our forests, oceans, wildlife and communities are still relatively intact. No other place like it exists today. Here wild salmon fill the rivers and streams, bears and wolves roam the forest, and people are intimately tied to the land. Here we depend upon healthy forests and waters for our way of life. Likewise, in order to maintain robust forests and oceans, it is critical that our communities be healthy. The intimate ties between Southeast Alaskans and our natural resources emphasize the importance of place-based land stewardship for the well-being of both local residents and our rainforest home. And as we consider global issues such as climate change and habitat loss, place-based land stewardship offers a hopeful path for protecting both ecosystems and community values.

For Native Alaskan communities, place-based stewardship has been an essential aspect of life in Southeast for generations beyond memory. We respect this cultural heritage and believe that land stewardship plans built upon customary and traditional values make for more meaningful and durable solutions to the modern challenges presented by the interdependence of nature and society.

We have been fortunate to learn a little about the Native sense of place inherent in the customary and traditional values of the Tlingit, Haida and Tsimshian people of Southeast Alaska. Among our great teachers are the people of Kake. Kake is a community of 500 people on Kupreanof Island, many of whom trace their roots to the Kéex’ and Kooyu Kwáans who have inhabited the area for many generations. More recent arrivals to Kake are an important component as well, adding their own cultural traditions to the community. We have had the pleasure of working with Kake’s Tribe and community members for over 15 years. It is clear that Kake is in a challenging transition period following the boom and bust of timber. The community faces some daunting challenges in terms of the health of fish and wildlife populations, local employment opportunities, the cost of energy and workforce capacity.

This report is a response to these challenges and a reference tool for collaborative land stewardship. It is in no way an exhaustive document, but we hope that it will contribute to the development of a stewardship plan for the Kake area. Our goal is that such a plan be built upon customary and traditional values, enhance forest health, create sustainable jobs, and be crafted and implemented by the people of Kake in partnership with the corporations, agencies and organizations connected to the Kake area.

Whether you are a resident of Southeast or a visitor, a tribal leader, a member of the Alaska State legislature, a troller, kayak guide, logger, miner, oyster farmer, boat captain, resource manager, lumber mill worker, hatchery worker, or from any other walk of life, we are eager to work with you on crafting prosperous, durable and ecologically sound solutions for all of those who care for and depend upon Southeast Alaska.

Sincerely,

Bob Christensen (SEAWEAD)  Sarah Campen (SEACC)
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WHY WE STARTED THIS PROJECT
The Kake Community Forest Project (KCF) emerged from conversations with community members immediately after a summer 2009 subsistence hearing conducted by the United States Forest Service (USFS). The subsistence hearing was being held in Kake as part of the public comment process for the Central Kupreanof Timber Sale Final Environmental Impact Statement. During that meeting we were struck by two things:

- the heartfelt expressions of concern from Kake residents on the viability of maintaining customary, traditional, and locally important resource use into the future; and,
- the very limited sense of collaboration exhibited between the USFS and the residents of Kake.

We came away from that meeting feeling that the system was in serious need of repair. The USFS planning process was clearly not giving the residents of Kake the feeling that their interests would be protected and in some ways seemed to ostracize the very people who most immediately depend upon the health of the forest.

After the subsistence hearing we met with local residents and USFS staff to talk about how we might work together to respond to the clear message we all witnessed during the hearing. We were impressed by USFS staff’s commitment to improving relationships with Kake locals and developing projects that are appropriately scaled for Kake. Likewise, we were impressed by local interest in working with the USFS to create land management responsive to Kake’s needs. It was at these meetings we decided to work on the Kake Community Forest project.

WHAT WE HAVE DONE SO FAR
During 2009 and 2010 we worked on the KCF project by talking with Kake residents about their community, meeting with local land managers on resource issues, conducting field surveys of forest and stream habitats and researching collaborative stewardship efforts from other parts of the country.

This document summarizes our efforts on the Kake Community Forest Project to date and is intended to provide concepts, information and tools for collaborative stewardship. It begins by introducing some key concepts and providing a framework for envisioning a pathway to improved social and ecological well-being. The central section provides assessments on some key attributes of KCF land and people. The next section describes tools for collaborative stewardship and a road map for next steps. The final part of the document is an appendix that provides more specifics and actual examples of collaborative stewardship tools that are being used in other areas.
WHAT IS A COMMUNITY FOREST?
Communities have home ranges that sustain them and provide for customary and traditional uses, economics, and recreation. This is often called a “community use area”. The traditional Kake community use area is the Keex’ and Kooyu Kwáans and includes Kupreanof Island, Kuiu Island and surrounding areas (Figure 1). Today, both Kwáans are commonly referred to as the Keex’ Kwáan, and in the rest of this document we refer to them as one territory. We use the term “Community Forest” to represent the portion of a community’s use area in which forest management activities have the most immediate impact on the local community. The Kake Community Forest (KCF) includes Kupreanof and Kuiu Island watersheds that are most accessible to residents of Kake. (Figure 2).

WHAT IS STEWARDSHIP?
A steward is a person who manages and cares for something or someone. Land stewardship is the act of managing and caring for our land in such a way that it provides us with resources long into the future. Land stewardship is a fundamental part of Tlingit, Haida and Tsimshian world views. For example: Families who fished particular creeks were the stewards of those places, making sure that plenty of salmon returned each year. There are still families and individuals who are the stewards of creeks around Southeast.

Our hope is that the Community Forest model can facilitate a collaborative approach to stewardship, one in which the health and sustainability of the Kake people, fish, and wildlife becomes a central theme for all stakeholders, owners and managers.

In the late 1990s Congress created a stewardship contracting program to help federal land managers and their partners to restore...
public lands and provide community benefits. This is a very promising set of tools for collaborative stewardship of the Kake Community Forest and may provide a pathway for the development of a holistic land stewardship plan that benefits both the people of Kake and the environment.

**WHAT IS FOREST STEWARDSHIP WORK?**
Forest stewardship is a body of work that employs people to act as stewards of the forest. It includes:
- forest restoration and enhancement (tree thinning, culvert removal, etc.)
- recreation enhancement (building and maintaining trails and cabins)
- road maintenance and removal
- harvest and cultivation of locally important “alternative” forest products like berries, medicinal plants, animal pelts and roots.

Sustainable timber cutting does not threaten forest health and reduce long-term options like large-scale logging does, and so is often included in discussions of forest stewardship. Additionally, small mill owners often have the skills and interest to do forest restoration work in addition to their wood processing.

Forest stewardship work might also include education and outreach projects. For example, one option could be programs in rural schools to help young people become responsible stewards and imagine entrepreneurial or management occupations which would allow them to work in their home communities.

**WHAT IS RESILIENCE?**
At the heart of this project is developing an understanding and appreciation for resilient people and resilient places.

Resilience is a kind of strength that comes from a combination of firmness and flexibility, a balance of stability and the ability to adjust to new circumstances. Resilient peoples and landscapes are both well-rooted in history and able to adapt to change in such a way that quality of life, ecological function, economic opportunity and options for the future are maintained or improved.

*Signs of traditional cedar bark gathering. This resource is collected in such a way that products like baskets and hats are made without killing the tree. This is a great example of traditional forest stewardship.*

*Signagow Old-Growth Reserve on Kuiu. Old-growth reserves provide strong foundations for ecological resilience by conserving biodiversity and productivity.*
IMPORTANT QUALITIES
We have all had personal experience with resilience. Recuperating from illness, for example, is a testament to the resilience of our bodies. Bouncing back from sickness is a delicate balance of how we live, what we eat, our family history, our attitudes and our social support systems.

Before we discuss specific ingredients that we believe are important to the health of rural communities in Southeast Alaska we want to highlight two important qualities that these ingredients provide to resilient systems:

- Stability (through strong foundations)
- Adaptive Capacity (ability to change)

**Stability** - Stability provides the foundations for communities and environments to thrive. These foundations provide consistency for day to day activities and processes, and the anchors that are needed to weather the occasional storm.

A strong social foundation comes from historical knowledge, traditional practices and the bonds forged over time between people, their neighbors and their homes.

Ecological foundations are formed from biological diversity, productivity and connectivity working in concert as a web of life.

**Adaptive Capacity** - The faster and more dramatically the world changes, the more important the ability to adapt to those changes is. Central to this quality is the ability to learn from the past and practice forward-thinking, to assess risks and to perceive opportunities, to experiment and adjust.

Many adaptations come from slow and steady adjustments. Although these incremental adaptations can build into big changes over time, the experience in the moment is less dramatic or revolutionary.

Sometimes adaptations occur rapidly and at large enough scales to be considered a *transformation*. Transformation is sometimes necessary when people agree that the old system can’t be fixed by a small adjustment and it is time for a fundamental change. Transformation can be difficult but typically is less so when the process is intentional. Intentional transformation takes courage, cooperation, strategic planning and long-term perspectives.

Understanding the importance of stability, strong foundations, adaptive capacity and the power of transformation provides us with a good frame of reference as we consider some of the key ingredients to resilience in the Kake Community Forest.

Restoring the old cannery in Kake would serve to honor this part of Kake’s history, provide an excellent opportunity for establishing a heritage center and provide opportunities for new businesses in this prime location.
KEY INGREDIENTS
The ways in which people shape the land and the land shapes people are countless. The relationships are complex enough that it is safe to say we will never completely understand them. The importance of research, education and restraint in development activities is critical to our survival. At the same time, we must move forward with the incomplete information we have today, to do our best to adapt to a rapidly changing world and to live in harmony with our land and each other.

In that light, we have chosen some specific ingredients that we believe provide a good starting point in a recipe for resilience. These ingredients come from our conversations with the people of Kake and our time studying the ecology of the surrounding landscape. For simplicity we have grouped our list of ingredients into two sections:

• A Healthy and Adaptive People
• A Healthy and Adaptive Land

Our hope is that the reader will join us in an effort to better understand how ingredients to healthy and adaptive peoples and lands can be mixed together to ensure the prosperity and resilience of the entire Community Forest.

A HEALTHY AND ADAPTIVE PEOPLE
In this section we discuss some key components of a healthy community. The themes discussed here come from our own observations in Kake, as well as lessons learned from collaborative groups from the Pacific Northwest. It is by no means an exhaustive list, but includes some important concepts we believe can act as seeds of change.

Customary and Traditional Values
If we imagine a community as a house, cultural heritage and tradition are the foundation of the house, supporting the entire structure. Time passes, the world changes, and the house may be remodeled several times. But the original foundation remains. Similarly, a resilient community has a strong cultural heritage as its foundation. Through the myriad of changes that time brings, the values of that culture remain a constant support for the community, a place to always return to, a means for understanding ourselves and the world around us.

Salmon and seal in the smoker at Kake Culture Camp.

A Place to Call Home
It is not enough for people to have strong traditions and culture to rely on. They must also have a place to exist that can be their physical foundation. Cultural heritage explains our relation to the land. This relationship is restricted if people do not have a land base to practice those values. In order for people to be most healthy and resilient, they need to be able to meaningfully participate in decisions that affect the land where they live.

Steve Rose and his nephew Matthew prepare a traditional meal of halibut baked in the ground.
Empowerment and Engagement
It is individual citizens who lead their community to adapt and grow. This leadership is crucial to the on-going success of a community. Citizen leadership cannot exist if community members feel worthless or disenfranchised. A healthy people know that their voices are important, know that they have power to shape their world, and are actively engaged in doing so. Building a healthy community starts here, with citizen leadership.

Education and Communication
A resilient community needs more than just a solid foundation; it needs to be able to adapt to change. Some changes are small, like building more housing when the local population grows or electing a new local official. Other changes are transformative, like moving an entire community from diesel power to hydroelectric generation.

How do we adapt to change? One of the best ways is through education and communication – through sharing information with each other and learning from others’ experiences. One of the goals of collaborative stewardship is to create more flexible and adaptive land management by getting people to work together and learn from one another.

Sustainable Economic Development
Without a healthy economy, it is impossible for a community to sustain itself. We have also learned that a diverse economy is more resilient than one based around just one industry; the bust caused by the end of industrial scale logging in Southeast is a still fresh example of this idea. Resilient communities offer support for entrepreneurship and innovation that continually adapts and diversifies the local economy. The sustainability of jobs is important for the long-term health of an economy. Rather than a boom and bust cycle, it is better to support jobs that can last for generations.
A HEALTHY AND ADAPTIVE LAND
For this section we include brief descriptions of some of the fundamental components ecologists believe are at the heart of healthy and resilient ecosystems: biodiversity, productivity and habitat connectivity. We also describe a few specific resources that are of particular relevance to the way in which the people of Southeast Alaska are connected to the health of the land: salmon, deer and forest products. After describing the list of selected ingredients we offer some general observations on how to improve overall resilience through watershed conservation, site-specific management guidelines and restoration activities.

**Biodiversity**
Biodiversity is simply a measure of how variable life is. The greater the number of unique plants and animals you have in a location, the more biodiversity you have. The greater the number of different kinds of habitats you have in an area (forest, meadow, wetland, etc.), the more biodiversity you have.

Biodiversity is nature’s way of keeping her options as open as possible. Imagine, for example, there is a bug that is critical to the breaking down of salmon carcasses and helping to transfer those nutrients to the plants and animals that live near the river. What happens if a disease breaks out that kills off all of those bugs? It would be devastating to a whole host of critters. How do you make sure that never happens? Make sure there are two different kinds of bugs that can break down salmon carcasses and transfer those nutrients. Or how about three, four or even 10 different kinds of bugs? The more diversity you have in your bug pool, the more likely that one of them will be able to survive the disease outbreak, and the more options you have when confronted with an unforeseen change. This is one of the many important ways that biodiversity supports resilient ecosystems.

**Productivity Hotspots**
Some areas are much better at producing salmon, deer, trees, etc. than others because they have more of what it takes for these species to survive and reproduce. The places that are the biggest producers for a given species within a landscape are called productivity hotspots. These areas are critical to making sure that fish and wildlife populations are healthy and well distributed throughout the entire landscape, especially after there has been a major stress placed on the ecosystem by things like hard winters, major windstorms, poor berry crops or low salmon returns.

Among the many forms of biodiversity that support resilient ecosystems, very ancient trees like this one on Kuiu Island are perhaps the most ecologically precious. They are incredibly complex, biologically important features that take several hundred years to restore.
Productivity hotspots help repopulate where major die-offs have occurred or where hunting and fishing pressure exceeds the capacity of the local area to repopulate on its own. The power of productivity hotspots to maintain healthy ecosystems is becoming more understood by scientists, managers and harvesters each year. A recent study of marine reserves and their impact on commercial fishing has demonstrated that the protected areas ensure healthy fish stocks both inside and outside the protected areas.

If productivity hotspots are managed carefully they can be the source of natural surpluses of ecological capital and benefit the economic and customary and traditional uses while contributing to broad-scale ecological resilience. This is especially true if we not only protect these areas from overharvest, but also ensure they are functionally connected to the broader landscape.

**Habitat Connectivity**

Connectivity is a term we use to describe how easy it is for deer, salmon and other wildlife to move from place to place. Good connectivity is important because it provides people, plants, fish and wildlife with access to the resources they need to survive and prosper (habitat). For wildlife this generally means access to seasonally available food, cover (places to hide from predators or stay warm in the winter) and mates.

Connectivity is important to seed dispersal and other forms of plant colonization. It is also important to juvenile animal dispersal and the maintenance of a diverse genetic pool. This is an example of how diversity and connectivity collaborate on resilience and keep options open for mother nature to respond to changes in the environment.

Connectivity also greatly influences how useful a productivity hotspot is. Hotspots that are more connected to the broader landscape are more able to share their surplus nutrients and populations. In these ways connectivity is an enhancer of biodiversity and productivity.

**Figure 3** What is Connectivity? Above and below are oblique perspectives on northern Kuiu Island. The low elevation valley that connects Saginaw and Security Bays has good connectivity for winter deer use in the pre-logging scenario (above), poor in the post-logging scenario (below).

Salmon producing flood-plain forest habitats like Saginaw Creek are productivity hotspots. Their productivity and utility to the surrounding landscape can be negatively impacted by logging activities if fish habitat and landscape connectivity are degraded. Saginaw Creek is located on northern Kuiu Island.
Salmon, Deer & Forest Products
In addition to the general ingredients of biodiversity, productivity and connectivity we also wanted to highlight some key resources that can serve as indicators of overall ecological resilience and that are particularly important to rural Southeast Alaskan communities: salmon, deer and forest products.

Salmon are keystone species in Southeast Alaska. Their distribution and abundance have a large impact on a whole host of wildlife species.

Salmon are central to the health and prosperity of Southeast residents and communities by providing traditional food resources and the foundation of Southeast Alaska’s economic prosperity. A 2011 report by Trout Unlimited and TCW Economics estimates the value of Salmon to our regional economy at a whopping 1 billion dollars per year!

Salmon are also indicators of ecosystem health, in particular, water quality and hydrological function.

Salmon productivity is dependent on the quantity and quality of spawning and rearing habitat. Typically the core zones of salmon productivity occur in alluvial channels (gravel rich stream beds) surrounded by floodplain forests. These areas tend to have an abundance of spawning habitat and give rise to large trees. Large trees are especially important for coho salmon because they provide important habitat features like small pools when they fall into salmon streams. If these areas are logged, they can take hundreds of years to recuperate.

Deer are an important species to consider in social and ecological assessments in Southeast Alaska because of their value as a game species in rural economies, their importance to predator populations and because they are indicators of broad-scale ecological conditions for species that are dependent on old-growth forest for survival (especially in areas with moderate to heavy winters).

Biologists generally focus on the availability of winter food and cover when assessing the value of deer habitat because winter conditions are considered the limiting factor in determining how many deer a given area can support. Winter habitat values are determined largely by the availability of woody

High quality salmon habitat including abundant gravels, large wood and deep pools at Saginaw Creek.

Deer in old-growth habitat. Old-growth forest provides critical food and shelter to deer in the winter when snow has buried food sources that are easy to get to in the summer, e.g. clearcuts, alpine meadows, etc.
and evergreen plants like blueberry, bunchberry, trailing raspberry and gold-thread.

High quality winter habitat for deer with staple foods: cornus, coptis, rubus and vaccinium. Note deer pellets indicating winter use of this forest stand.

The highest quality winter habitat patches occur in old-growth forests that are below 800 feet in elevation, on southern slopes, near shore and in wind-exposed sites. Young growth forests are generally considered very low value winter habitat, especially once they reach the stem exclusion phase when little light penetrates to the forest floor. However, many young growth forests have great potential for deer habitat restoration because they often occur on the most productive forest sites on southern slopes and near shore.

Forest products is a term we use to refer to a variety of artistic, medicinal, household, recreational and timber products that originate from healthy landscapes.

The people of Kake have long used forest plants for medicinal purposes, ceremonies, home construction, forms of storage, transportation, fishing gear, clothing, etc. Cedar, devil’s club, labrador tea, blueberries, salmonberries, crow berries, etc. are just a few of the species documented as customary and traditional. Maintaining opportunities for these historical traditions is central to the Kake Community Forest project.

There is potential for local entrepreneurs to take lessons from customary and traditional uses for possible commercial applications (e.g. berry foods, medicinal plants, tourist souvenirs) but it is critical to be respectful of indigenous rights and the pitfalls of overharvest throughout such endeavors.

Recreational opportunities are another kind of “forest product” that indicates the health of social and ecological systems. Trails, cabins and road systems help people access natural resources and foster appreciation for nature. This appreciation can manifest in a wide range of forms important to resilience: from the ability to garner federal funds for habitat restoration to the inspiration of residents to care for and cultivate ecological health.

Recent forest resource use in Southeast has been dominated by timber management. Timber has produced a wide array of products: everything from cellophane and baby diapers to airplane parts, framing lumber and musical instruments. There is still potential for timber products to play a role in a diversified and sustainable economy but we would do well to learn from the past on how to be more economically sustainable and ecologically aware.
A BRIEF CULTURAL HISTORY OF KAKE

Kake has been an established Tlingit Indian village for generations beyond memory. The Kake village itself once held clan houses for a number of different clans, who together made up the Kéex’ Kwáan. These clans spent part of the year in Kake, and the rest of the year dispersed across the middle Tongass, from Kuiu to southern Baranof and Admiralty Islands (there are even stories of Kéex’ Kwáan clans living as far south as Prince of Wales Island).

The neighboring Kooyu Kwáan was once home to its own clans and settlements. There are no longer any permanent settlements on Kuiu – some of the Kooyu people moved to other communities, and the rest of them died out. Many people of Tlingit origin now living in Kake are descended from those first inhabitants of the Kéex’ and Kooyu Kwáans.

When Kake’s cannery opened in 1902, it drew many Filipino people to Kake to work. Some of those cannery workers stayed, started families and integrated their own cultural heritage into the community. Caucasian people moved to Kake – first as fur traders and missionaries, and more recently as hand troll fishermen, school teachers and loggers. They share their cultural influences with the village, as do the small numbers of Haida, Tsimshian, Aleut, Athabascan, Yupik, Inupiaq, and ‘Lower 48’ Native American people who live in Kake as well.

Tlingit and Haida traditions are woven into the fabric of Kake’s community. Many things have changed over the generations - Kake has become a more culturally diverse place, and TV, radio and Internet bring the whole world into the village, but the values of Tlingit and Haida culture remain central to the life of the community. These traditions can be seen in in both residents’ values (respect for Elders, respect for land and sea and the importance of reciprocity) and their activities (smoking fish, gathering seaweed and telling age-old stories).

Culture and tradition orients the human place in relation to the land the sea and all their inhabitants. Oral traditions include may stories that emphasize peoples interconnectedness with nature and the importance that respect for all beings has on the sustainability of human society. In fact, tribal members have made clear to us that conservation and resource use are inseparable in their culture’s traditions. As we try to create more sustainable land management in Kake, these cultural values provide a firm foundation and guidance for moving forward.

Pictograph at Saginaw Bay on Kuiu Island.

Braided Seal intestine.
FRAGMENTED LAND OWNERSHIP

The majority of lands within the Kake Community Forest are managed by the United States Forest Service. The majority of lands in the immediate vicinity of the village are owned by Sealaska Corporation, followed closely by Kake Tribal Corporation (KTC). Other nearby land owners are: the State of Alaska, the City of Kake, and the Organized Village of Kake (OVK).

Lands near Kake are being managed independently from one another with little consideration for holistic planning opportunities. City and OVK land is mostly residential. USFS land is broken into different Land Use Designations (LUDs), though nearly all of the lands immediately accessible from Kake are designated for logging. KTC land has been managed almost entirely for timber values to date, and nearly all of that land has been clearcut. Sealaska land is being managed primarily for timber as well.

We are not aware of any unifying framework for managing mixed ownership landscapes currently in use for the Kake Community Forest. There are some specific cooperative plans that exist, especially for road access and maintenance, but we have yet to see formal agreements that address the needs of salmon who swim through multiple ownerships to spawn and rear, or the deer who move through multiple ownerships in search of quality summer and winter foraging habitat. Nor are we aware of any official collaboration on resource management that would help planners prioritize and maximize ecological and economic benefits while maintaining a steady program of employment.

RECENT DEMOGRAPHIC TRENDS

In the 1980s and mid 1990s, Kake was a booming logging and fishing town. Kake Tribal Logging and Timber was the largest employer, and the local cold storage employed many others while supporting over 30 seine boats. By 2003, Kake Tribal had finished logging all of the old growth timber on their lands surrounding town, the market for Alaskan timber had deteriorated, and the industry was shut down. The fishing industry suffered hardships as well, and the cold storage also shut its doors in 2003. So far, there have been no replacements for the jobs that were lost by the collapse of these industries.

In 2003 the median household income in Kake was $22,600, much lower than the state median of $51,571. Since then, these numbers have undoubtedly dropped even further. The 2000 census reports that the total potential workforce in Kake consisted of 491 residents, 49.5% of whom were unemployed at the time. Today, local estimates of unemployment range from 70-80% of the workforce.

Figure 4) Fragmented land management.

Figure 5) Kake Population Trends - from US Census. 2009 data is estimated.
FOREST STEWARDSHIP CAPACITY ASSESSMENT

In August, SEACC hired Kake resident and Vice-Mayor Paulette Jackson to conduct a Forest Stewardship Capacity Assessment in Kake. The assessment was designed to determine whether there is existing capacity in Kake to do forest stewardship and forest-product related work, how much local interest there is in building that capacity, and what obstacles might need to be overcome.

The capacity assessment revealed that there does indeed exist some local capacity to do forest stewardship work, particularly firewood gathering, tree thinning, road work, culvert work and harvest of alternative forest products, as well as in the value-added wood processing sector. Generally, the number of individuals with skills in any given area greatly exceeded the number of people who are currently employed in that area. For example, Paulette spoke with 15 people who cut firewood for their personal use, only one of whom is employed selling firewood to others. However, in each forest stewardship sector there exists one or two operating local businesses whose owners are looking for a steady stream of work.

Kake has suffered seriously from emigration as residents have left the community to find opportunities elsewhere. Until the severe local economic downturn, the Kake population was approximately 700-800 people. Today, less than 500 people live in Kake. Over 30% of Kake’s population has left the community within the past five years due to the lack of economic opportunity.

The creation of jobs is a critical issue to Kake residents we’ve spoken with. While any work might be considered good work at this point, Kake residents tell us they want to see steady development of long-term, stable jobs, rather than the boom and bust cycle of the past. They want to create reliable jobs with reliable wages so that families who have left the community will be able to return.

There are some of these sustainable jobs in Kake already - through the school district, the Tribal government, the health clinic, a grocery store, an oyster farm, three small mills and through local businesses that sell artwork and medicinal forest products. It is these types of sustainable and diverse jobs that give rise to a resilient economy. It is our hope that collaborative, community-based land management will pave the way for developing sustainable forest stewardship jobs in Kake, and help to create a healthier, more resilient economy for the community.
Kake currently has two young growth tree thinning businesses, one road maintenance business, three small mills, and two businesses selling alternative forest products. Paulette spoke with seven business owners, six of whom expressed interest in expanding and employing more local people, provided that they can locate a steady stream of business opportunities.

![Forest Stewardship Capacity](image)

**Figure 6)** The Kake Forest Stewardship Capacity Assessment asked Kake residents about a variety of forest stewardship work. For each sector residents were asked: ‘Do you have experience working in this field?’ ‘Are you interested in employment in this area?’ ‘Are you currently employed doing this work?’ Responses to some work categories are shown here.

Commercial harvest of alternative forest products is one particularly promising sector. Nearly 75 percent of the 30 residents interviewed have experience picking berries, and over half of those interviewed are interested in employment through commercial berry picking. Kake’s culture is deeply rooted in activities like harvest of berries and medicinal plants. These traditions are important. They connect people with their land, and they keep Kake’s culture strong. As long as the amount of resources taken is kept in step with the ability of the land to provide, these traditions are sustainable and have a very low impact on the forest. Developing entrepreneurship that is based on culturally important ways of interacting with the forest is a key way to create lasting jobs that are relevant to Kake residents.

Wedding in Kake 2009 celebrates new partnerships and the promise of life in the future.

The need for financing and additional equipment are the largest obstacles to local participation in forest stewardship work. Hopefully, identifying a steady stream of work in this area will help individuals receive financing. There may also be possibilities through connection with USDA Rural Development. This agency has been tasked with assisting Southeast communities as the USFS implements its Transition Framework.

The need for training is an obstacle for some as well- there are individuals who would like to do forest stewardship work but do not yet have the skills needed to take advantage of stewardship opportunities. Perhaps partnership with the Alaska Small Business Development Center can help address this issue.

SEACC is interested in helping to connect capacity development organizations with entrepreneurs in Kake whose businesses will help create a sustainable economy featuring forest restoration.

![Future Kake workforce posing by a smokehouse.](image)
We conducted a landscape assessment for key indicators of ecological resilience in the Kake Community Forest. This process involved studying maps of existing data on forest, stream and wildlife habitat, conducting field surveys to verify and build upon interpretations of existing data and talking to locals about their observations.

GIS MAPPING
Geographic Information Systems (GIS) are useful for rough assessments of landscape condition and can help us see broad-scale patterns that are difficult to notice when we are in the field. We also find this approach especially useful for providing before and after snapshots of changes in forest condition and prioritizing the locations of restoration projects.

The power of GIS is limited by the quality of data and the technicians ability to interpret existing information. In order to improve the effectiveness of using GIS tools we conduct extensive ground-truthing surveys.

GROUND-TRUTHING
Ground-truthing is the process of comparing existing data and historical records with what can be measured and seen on the ground. We do this to improve our ability to interpret available information and to answer site specific questions about habitat characteristics. During the ground-truthing visits conducted for this project we visited sites along much of both the Kupreanof and Kuiu Island road systems.

After a pre-field review of existing GIS data for salmon, deer, and connectivity we had several questions about local habitat conditions and identified relevant locations for surveys. We were particularly interested in getting to know the USFS Central Kupreanof project area, surveying the condition of the oldest second growth in the areas near town and looking at potential restoration opportunities on Kuiu Island.

Ground-truthing field surveys provide a useful snapshot for interpreting existing ecological data but are limited in their ability to help us learn about long-term trends. Although scientific research can provide statistically valid information about longer term changes in the environment an additional resource exists in the life experiences of the people who live in the area.

LOCAL KNOWLEDGE
Local knowledge can provide an invaluable window into understanding long-term patterns of change in the environment. Though the information gathered is typically not scientific it is often invaluable in identifying key questions about ecological health and improving interpretations of data from scientific research. For example, we talked to hunters about places the data suggests are likely hotspots for overwintering deer to see if this aligned with their experiences. This kind of question can’t be answered with just a couple seasons of field work and sometimes the answers are common knowledge to people well rooted in their community forest. Integrating local knowledge provides a form of validation for scientists and managers while it simultaneously serves to build trust with local residents.
Insights provided by local people so far:

- Deer populations are down and hunter success is so low on Kupreanof and Kuiu Islands that some residents are willing to boat across Frederick Sound to Admiralty Island to get deer.
- Wolves are more common these days and are believed to have benefited from roads.
- Moose population are up.
- Salmon in little gunnuk were heavily impacted by upstream logging.
- The log transfer facility at Seal Point has impacted access to salmon resources.
- Trails are not currently supportive of customary and traditional use activities.

**RESOURCE ASSESSMENTS**

The assessments below are a combination of GIS analysis, field observations and local knowledge. These assessments are works in progress, and we want to emphasize that the GIS data has limitations and more work should be done to fill in scientific information gaps as well as learn from local residents. Observations on how to stabilize, restore and enhance ecological health and resilience are made at the end of each section.

**Biodiversity**

Biodiversity is typically maintained in two primary ways: in relatively large blocks of pristine habitat called “reserves” and through more site specific standards and guidelines that apply to management practices across the lands between the reserves.

**Biodiversity reserves** in Southeast Alaska come in two primary forms:

- congressionally protected lands, and
- administratively protected lands

**Congressionally Protected** - The highest level of protection for federal lands is for Congress to designate them for conservation permanently. Examples of this type of protection include Wilderness, National Parks, Wild and Scenic Rivers and, on the Tongass National Forest, lands designated as Land Use Designation (LUD) II. Not only is it difficult to enact such conservation designations, but it is difficult to remove them as well. The relatively permanent status of these areas allows them to function as anchors of ecological health and stable sources of customary and traditional use, recreation and economic opportunity for future generations.

**Administratively Protected** - Federal law also gives the USFS and other federal land managers the authority to allocate lands under their management for various purposes, including non-development, through a public land management planning process. For example, old-growth reserves, beach buffers and stream buffers established by the Tongass Land Management Plan (TLMP), can also contribute significantly to the ecological resilience of the Tongass National Forest. Unlike designs enacted by Congress into federal law, such administrative decisions are comparatively easy to change through an amendment or revision to the agency’s land management plan. This lack of permanence makes it more difficult to rely on conservation designations adopted in a land management plan as a long-term contributor to biodiversity conservation.
The map in Figure 7 displays the current land use designations (LUDs) for the Kake Community Forest. The existing reserve system for the KCF include some biologically and socially valuable lands, especially in the Hamilton Bay, Rocky Pass and Kadake watersheds, but it is noteworthy that none of these lands are congressionally protected. In fact, there are no permanent protections in the KCF at all. There are three areas which the USFS has proposed for permanent protection as Wild and Scenic Rivers: Kadake Bay, Security Bay and the Kulaku Lake area (in pink in Figure 7), but these designations have not become law yet.

Biodiversity conservation that takes place across the lands between reserves is described by ecologists and land managers as conservation within the “matrix”. Matrix here simply means: the lands between reserves. As mentioned above, conservation in the matrix is typically achieved through site specific standards and guidelines for land management and is almost always administrative. Examples of the common kinds of conservation that occur in the KCF matrix lands are protected beach buffers, stream buffers and small old-growth reserves (Figure 8). Additionally, there are patches of old-growth forest in the matrix that have proved themselves to be uneconomical to log. These areas are not “protected” as part of a conservation strategy but given the likely trajectory of the timber market these forests will probably not be clearcut and will continue to contribute to the resilience of the forest.

A small percentage of matrix lands (including private lands) were selectively logged and still retain legacy biodiversity features (old-growth trees, snags, etc). Research...
suggests that selective logging could be very effective for balancing economic opportunities with conservation but for that to be the case in KCF matrix lands it would have to become a much more common practice. Over 90% of the lands that have been logged in the KCF were clearcut. Some selective logging was practiced near Kake by the Sealaska Corporation. The USFS has also practiced a small amount of selective logging on the southern end of the Kupreanof road system (photo on page 17).

We believe there is great deal of opportunity to enhance biodiversity conservation in the KCF and that this can occur in a way that does not threaten sustainable economic development opportunities.

The total absence of congressional biodiversity protections in the KCF does not provide a reliable commitment to future generations who will undoubtedly rely upon a healthy environment for their sustenance and well-being. There are many large roadless old-growth areas in the KCF that may be suitable for a more permanent form of protection. These roadless areas have proven themselves to be uneconomical to log and will likely remain so for the foreseeable future so designating them as permanently protected areas is not likely to reduce economic opportunities, especially if these designations include entire watersheds and are crafted to ensure customary and traditional uses and small-scale economic development opportunities can continue.

A good example of a prime candidate area is Rocky Pass; central to the KCF and critical to marine productivity, this area also represents a significant opportunity for recreation and tourist development that could add to the Kake economy. Designating this area as a permanently protected area could insure customary and traditional uses, protect important economic values and provide new economic opportunities while anchoring ecological resilience.

Conservation efforts in matrix lands between reserves are critical to ensuring that biodiversity benefits are well distributed across the landscape. This could be achieved in part by establishing additional small reserves which group patches of uneconomical timber lands with patches of logged forest that are suitable for restoration, as well as a more common application of selective logging techniques.

Black bear seen from the Cathedral Falls trail. This area, currently an Old-Growth Reserve, is a prime candidate for blending permanent conservation protection with customary and traditional use and recreation.
Productivity Hotspots
Productivity is a measure of growth and abundance in ecological systems. Productivity does not by itself convey value but is often associated with assessing the value of an area for producing a desired resource. For example, when we say “productive forest” we typically mean those stands that can grow the greatest volume of timber over the least time. However, these same sites might accurately be described as low productivity for resources that favor open habitats (like berries).

For this section we will focus on general forest productivity because it is relevant to a fairly wide range of resources that contribute to ecological and social resilience. Productivity for salmon and deer are discussed in separate sections.

Forest productivity in Southeast Alaska is largely determined by drainage. Our region receives so much precipitation that the majority of lowland areas become “water-logged” to a degree that tree growth is often severely limited. Elevation influences productivity as well because cooler temperatures and snow affect growth rates.

The most productive forest sites in Southeast Alaska are well-drained landforms like gravel floodplains in valley bottoms, hill and mountain slopes, and karst (Figure 9). As you can see in Figure 10 the vast majority of productive forestland is located on northern Kupreanof (lands owned by Kake Tribal and Sealaska corporations.), and on Kuiu Island. Compare this figure to the landform map in Figure 9 and also note how the relatively flat lowland topography of most of Kupreanof Island is dominated by non-forest plant communities (e.g. muskegs).

The vast majority of productive forest land on Kupreanof Island has been logged (Figure 11). Highly productive forest lands on Kuiu Island have also been logged, especially in the valley bottoms and on colluvial (sediments deposited by gravity) slopes.
Knowing where productivity hotspots are and what kinds of resources they excel at producing is a powerful tool for land stewardship. Whether you are interested in conservation, habitat restoration or economic enhancement the return on investment is generally the greatest in productivity hotspots. The key is being strategic about how you let this natural productivity work for you. With the right design it is possible to blend timber, fish and wildlife values in such a way that maximizes opportunities for local residents and ensures the health and resilience of the broader ecosystem.

It is worth noting that although there is an abundance of roadless land in the KCF very little of it is productive forest. Productive forest hotspots are a special, and on Kupreanof Island, a rare kind of habitat. Protecting and restoring a portion of the productive forest lands would go a long way towards improving ecological resilience and ensuring that there are abundant resources for the long-term.

**Connectivity**

Connectivity is about maintaining functional fish and wildlife habitat across landscapes so that plants and animals can freely move between reserves and productivity hotspots to get all they need to survive and reproduce.

We suggest that two kinds of connectivity be considered for fish and wildlife conservation efforts: landscape connectivity (Figure 12) and elevational connectivity (Figure 13). Landscape connectivity refers to movement across the landscape, typically through valley bottoms and along the coastal fringe. Elevational connectivity refers to movement between high elevations and low elevations.

Within each of these types of connectivity, structural (e.g. topography) and functional

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**Figure 12)** Landscape Connectivity - minimizes “costs” for wildlife when moving across a landscape.

**Figure 13)** Elevational Connectivity - reduces “costs” for wildlife moving between high & low elevations.
(e.g. resource availability) factors are also very important to consider. Functional qualities are particularly important to consider on Kupreanof Island because the abundance of non-forest habitat (e.g. muskegs) result in a forest landscape that is naturally very fragmented and sensitive to disturbance.

We used the USFS digital elevation model and forest data to help us locate key connectivity corridors by identifying low elevation (below 1,500 feet) valleys that cross the Islands between productive estuaries. Based on this rough analysis there are seven “major” landscape corridors in the KCF (Figure 14): On Kupreanof Island - Hamilton and Big John Bay to Upper Duncan Canal (1), Rocky Pass to Castle River/Duncan Canal (2); On Kuiu Island - Saginaw to Kadake Bay (3) Saginaw to Security Bay (4) Security Bay to Bay of Pillars (5), Rowan Bay to Kadake Bay (6) and Bay of Pillars to Port Camden and Three Mile Bays (7). There are several smaller connections that may also be critical to landscape connectivity: Gunnuk Creek through Turn Mountain, Hamilton Bay to Big Creek, Lovelace Creek to Totem Bay, and Port Camden to Three Mile Arm.

These corridors are the circulatory system for the Kake Community Forest, and maintaining this system’s health is vital for the well-being of all who rely upon the forest.

Figure 14) Elevation zones and landscape corridors.

Figure 15) Landscape corridors and reserves.

The conservation strategy in the USFS Tongass Land Management Plan includes administrative protections for landscape connectivity in the form of old-growth reserves (OGRs) and beach and stream buffers. Elevational connectivity is also sometimes managed for in timber sale Environmental Impact Statement (EIS) analysis. All of these protections are administrative and can be removed relatively easily (compared to congressionally protected areas).

Although the OGR system in TLMP 2008 was greatly improved, it still leaves several important corridors partially or wholly unprotected and highly reliant upon stream buffers (Figure 15). Although stream buffers are an important contributor to landscape connectivity their narrow widths have been shown to have negative impacts on wide-ranging species like bears and their food and cover values are often very low for deer in the winter months.

Establishing more robust corridors along valley bottoms that cross Islands, and connecting them through elevational corridors to mountain tops, would go a long way toward ensuring biodiversity reserves and productivity hotspots are able to benefit the broader landscape. Restoration would be highly beneficial in some of these locations to more rapidly improve corridor function in logged areas.
Salmon
We used a tool for assessing salmon habitat values by watershed that was developed by The Nature Conservancy and Audubon Alaska to identify key salmon producing watersheds in the KCF. The two primary factors that influence watershed scores for salmon are the estimated amounts of spawning and rearing habitat. Based on this information, we identified the likely top salmon producing watersheds in the KCF (Figure 16) as: Security (1), Saginaw (2), Rowan (3), Kadake (4), Hamilton (5), Castle (6), Rocky Pass (7), Irish Lakes (8), Totem Bay (9), Kusheelah (10) and Port Camden (11).

In order to get a better handle on the current condition of the salmon habitat in each of these watersheds we calculated the amount of logged floodplain forest, or “salmon forest”. We use the term “salmon forest” to describe the streamside forests that are accessible to salmon for spawning and rearing. In Figure 17 below the color red indicates where “salmon forest” has been most heavily impacted by logging and where instream restoration may be needed.

Salmon habitat values are dependent upon the presence of spawning gravel, large wood and rearing pools in streams. Logging can significantly reduce habitat quality by removing large wood from the system and blocking fish passage with roads. Although logging techniques have improved in recent years the impacts from the past can be very long-term. This photo shows a perched culvert, a.k.a. “a red pipe”, that no longer allows upstream access to fish habitat for coho fry.

Watershed conservation efforts would go a long way towards providing long-term protection to important salmon producing watersheds that are currently very healthy. For example, the Hamilton Bay and Castle River watersheds would be excellent candidates for conservation designation. There are also several watersheds in the KCF that would benefit from finer-scale approaches to habitat conservation and restoration. The Kadake watershed is a great example of such an area. Although it does not score particularly high as a restoration priority based on impacts to salmon forest, there are a very high number of anadromous streams crossed by roads, many of which have dysfunctional culverts known as “red pipes” that do not allow fish passage to rearing habitat. The USFS has developed a restoration plan for this watershed that includes road maintenance and culvert repairs that would provide many fine-scale improvements to salmon habitat integrity.
**Deer**

We used the USFS winter deer habitat model to map habitat values for deer in the KCF (Figure 18). Because of past logging, there are only a few areas with large patches of high quality winter deer habitat that are accessible from the Kake road system. Most of these are a good ways out the road in the Hamilton River (1), Castle River (2) and Irish Lakes watersheds (3). Rocky Pass also has a relatively large portion of quality habitat but it is mostly accessible only by boat.

There are other high value habitat patches on Kupreanof but they are generally too small and fragmented to support high numbers of deer over critical winter stretches.

Kuiu has some large patches of high quality habitat, especially from Rowan Bay south, but it is well known that this Island has yet to recover from the very hard winters of the 1970s and deer populations remain very low.

We spent approximately 45 days in the field in 2009 and 2010 exploring a wide variety of habitats in the KCF. We saw very little deer sign, even in places the USFS model considers moderate and good habitats.

The majority of deer sign we encountered was in the Rocky Pass and Irish Lakes watersheds, within the larger patches of old-growth forest on southwest facing slopes.
Conversations with local hunters suggest that our observations of low deer numbers with isolated populations centered on south facing old-growth is consistent throughout the Kupreanof Island road system.

The past 50 years of logging in the KCF did not leave many high quality winter habitat sites near Kake in an old-growth condition. This is very striking when the original deer winter habitat map is compared to the existing condition map (Figures 18 & 19).

Watershed conservation approaches would certainly be useful for stabilizing deer populations at present levels by providing long-term protections to groups of high quality deer habitat patches (Rocky Pass for example). However, the landscape scale situation is so fragmented at this point that additional conservation efforts will likely be necessary if we want the deer populations to increase from present day levels. The near total loss of winter habitat on south facing slopes near Kake will present a serious challenge to hunter success for many years to come. The effects of habitat loss fragmentation are especially hard on deer when wolves are part of the equation. For example, Alaska Department of Fish and Game research suggests that a significant increase in mortality for does and fawns occurs in habitat patches less than 175 acres. This same research suggests that slopes are not only important for the quality of winter habitat but also improve deers’ ability to evade wolf predation.

Specific guidelines for matrix lands that restore and maintain landscape and elevational connectivity, increase patch sizes of quality habitat on slopes and integrate deer habitat restoration and maintenance into the management of productivity hotspots would go a long way toward increasing populations over the long-term.
Timber

Timber values in Southeast Alaska have traditionally been generated by relatively easy, often federally subsidized access to high volume stands of old-growth forest. The vast majority of highly productive forest land has already been logged and opportunities for large-scale harvest of high volume stands in the Tongass are now a fraction of what they were 50 years ago.

Tree growth in much of the Tongass is relatively slow, especially when compared to plantations in more southerly latitudes. Excluding karst and floodplain forests, it is fair to say that high quality, tight-grained and clear wood will take at least 250 years to regenerate in logged stands. Sustainable management of remaining old-growth wood products opportunities in Southeast requires a very slow rate of logging and significant capital investment in road construction and maintenance.

Timber management in the KCF has varied considerably in the past 50 years. During the height of the pulp mill era (1960s and 1970s), rapid and large-scale clearcutting on both Kuiu and Kupreanof Islands liquidated the majority of highly productive old growth in approximately 20 years. A second boom occurred on Kupreanof Island in areas that were transferred to regional and village corporations around Kake. This boom lasted approximately 15 years and left little easily accessible high quality timber around Kake. The timber that is left is in isolated high elevation patches on Kuiu Island and thinly spread across Kupreanof Island.

Figure 20) National Forest old-growth near KCF roads (blue areas are designated roadless). There is so little old-growth left near the KCF roads that this map scale makes it difficult to see. We zoomed in to a couple key KCF areas below to get a better idea.

Figure 21) Zoom on Kupreanof Island old-growth.

Figure 22) Zoom on Kuiu Island old-growth.

Extensive road systems like those south of Kake were partially dependent on access to larger patches of old-growth timber. These opportunities are rare today.
The large-scale timber industry in Kake is for all practical purposes nonexistent. There are three operators who specialize in small sales of high value wood like yellow cedar and clear, tight-grained spruce and hemlock. Together, these three small mills cut up to 250 thousand board feet per year.

The scarcity of high volume/high value timber stands and the very high costs of road construction in Southeast Alaska limit the scale of logging prospects in the KCF. For these reasons we consider lands within 800 feet of existing roads to represent Kake’s “wood basket” (the area where it is most practical to base a sustainable timber program for the community of Kake). For the purposes of gaining a basic understanding of the timber resource in the “wood basket” we have included some gross statistics and general observations for Tongass National Forest lands below.

Old-growth
- USFS lands are managed for multiple uses and can be generally summarized into Development and Non-development uses. These lands are determined to be either suitable or not suitable for logging based on economic and environmental considerations included in the Tongass Land Management Plan.
- There are approximately 11,000 acres of suitable old-growth forest near the existing Kupreanof road system. A rough estimate of the gross volume from these stands is 210 million board feet (mmbf).
- Recent studies of Tongass forests show that current markets only consider 10-20% of the gross volume as economical, so approximately 21-42 million board feet for the KCF. Economical wood tends to be scattered across the forest so high-grading is often necessary to make timber sales viable.
- High-grade logging at a rate of 20 mmbf per year could liquidate economical old-growth from the Kupreanof road system in just a few years. Logging at a rate of 5 mmbf per year could sustain small mills in town for 4-10 years. Logging at a rate of 250 thousand board feet per year, as the current mills are, would be sustainable in perpetuity.
- Today, cedar trees are the most economical wood resource for timber sales on the Tongass National Forest. Clear wood is also still a valuable resource for niche markets. In both cases, these resources tend to be mixed into forests that are dominated by very low value hemlock and there is a near total lack of data for the distribution and abundance of these rare and prized resources.

Young Growth
- Approximately 8,800 acres of the roaded base has been logged.
- Approximately 2,500 acres of the young growth forest on the roaded base are 40 years or older. Most of these stands have already been pre-commercially thinned but the most productive sites have already reached the closed canopy stage again.
- Approximately 3,750 acres of the young growth on the roaded base are 20-40 years old. 75% of these acres have been thinned and the remainder are ready or will be ready for thinning in the near future.
Approximately 2,200 acres of the young growth on the roaded base are less than 20 years old and will be ready for thinning roughly 5-15 years from now.

Thinning young growth across these acres will create both local jobs and improved deer habitat.

There is a strong desire for sustainable local employment and a demand for old-growth timber suitable for high value-added product manufacturing in Kake.

From the perspective of Kake residents we’ve spoken with, timber supply and sale economics would best be managed in a way that ensures perpetual availability of old-growth near the existing road system and that utilizes the young-growth footprint in a way that blends cultural and traditional uses with habitat restoration, timber production and non-timber product developments.

Residents of Kake have expressed concerns about past and proposed large-scale logging in the KCF. In addition to their concerns about impact to fish and wildlife habitat and subsistence resources, residents are primarily concerned that the community of Kake will not benefit economically from large-scale projects because there is limited capacity for filling timber job opportunities and milling wood in Kake. Past experience has taught residents that large-scale projects lead to outsourcing jobs and rapid and dramatic reductions of the limited “wood basket” that is accessible in the post-timber boom reality.

A return to the traditional model of large-scale old-growth logging, if it were possible, would be unlikely to create long-term economic improvements in Kake. However, a small-scale, high value added timber industry with expansion into thinning, forest restoration and possibly utilization of young growth logs could create more jobs in Kake. As a general rule for sustainable use we believe that logging should be limited to a pace and scale that does not exceed the rate at which old growth resources can be replenished. For the Kake community forest this roughly equates to a 250 year rotation for high quality spruce and hemlock products and 300-500 year rotation for cedar products. As a result, small and microsales of old-growth that utilize selective logging approaches are currently the best fit for the community’s social and ecological health.

We estimate that a cutting rate of 250 thousand board feet per year in the KCF “wood basket” could be sustainable in perpetuity. This scale of logging would meet today’s lo-
cal timber demand and still allow room for expansion of this sector of the economy, especially if product values can justify the costs of transport from Kuiu Island.

It is uncertain whether young growth logging and milling will be economically viable in Southeast Alaska. However, there is an abundance of young-growth near Kake that needs thinning to be healthy and useful in most future scenarios. This provides opportunity for feasibility studies and entrepreneurial ventures to find niche markets for young-growth or blend young-growth with biomass energy production. A feasibility study to heat the Kake school gymnasium with a simple cord wood fired boiler has already been completed; young-growth waste from thinning could be a fuel supply.

**Non-timber forest products**

One of the most exciting opportunities for future stewardship in the KCF is developing a more robust program for non-timber forest products. The residents of Kake have been using forest plants to make a wide variety of products for domestic use and trade for generations beyond memory. Recently there have been some entrepreneurial enterprises in this direction (artwork, medicinals and commercial scale blueberry harvesting). Non-timber forest product cultivation and harvest make significant contributions to economies in Canada and the Lower 48 and it is likely that this approach would also be successful in Southeast.

There is an abundance of productive young-growth forest accessible by road and trail from Kake that has regenerated into a mosaic of dense conifer, sparse conifer, and alder dominated stands. These areas provide a variety of non-timber forest product opportunities to Kake residents, for example:

- sparse conifer stands could be managed for long-term blueberry production;
- alder dominated stands could provide opportunities for firewood, carving wood, berry production and medicinal plant cultivation.

There are many Kake residents who are skilled at harvesting non-timber forest products like berries, medicinal plants, and roots. Developing local jobs through this type of forest stewardship would require little training and relatively little infrastructure. It would also help ensure that traditionally important activities like these remain a vibrant part of life in Kake.

**Recreation and tourism**

Another area that has promise for sustainable economic development in Kake is recreation and tourism. Although Kake as a few nice trails and cabins that are accessible by road and trail it is clear that the KCF has seen very little development in this direction when compared to other rural Southeast communities. Additional trails, cabins, camping areas, and shelters would be useful to the local residents and could be managed to increase visitation by recreationists and tourists.

This summer we spoke with Kake residents about specific recreation enhancements they would appreciate. The most common responses were upgrades to the Hamilton River trail, upgrades to the Cathedral Falls trail, and a covered picnic area at Seal Point. More detailed project ideas are included in the appendix.

Blueberry abundance in clearcut areas can be extremely high and provide customary and traditional and economic uses with minimal maintenance.
RESTORATION AND ENHANCEMENT

Given the current condition of the social and ecological systems of the Kake Community Forest we believe that the area would benefit greatly from a robust and long-term restoration program.

WHAT IS RESTORATION?
The goals of restoration are diverse. In upland forests that have been clearcut, for example, restoration may involve thinning treatments to accelerate the rate of return to commercial viability (thinning for timber), or it may focus on returning a forest to a state in which old-growth characteristics like uneven age, canopy gaps, and evergreen understory are present (thinning for wildlife). In these examples the methods and goals are very different, but we hear both scenarios described as “restoration” in Southeast.

The Society for Ecological Restoration defines ecological restoration as an “intentional activity that initiates or accelerates the recovery of an ecosystem with respect to its health, integrity, and sustainability”.

The three photos below give us some idea about the what, why and how of salmon habitat restoration. The top photo shows how a large piece of wood is working to store spawning gravel and create pool habitat. The second picture shows evidence of “stream cleaning” (log cut from channel on right) and subsequent downcutting of channel, spawning gravel and pool losses. The third photo shows a key wood feature installed by the USFS in the 90s (note cabling) to hold spawning gravels and create pool habitat.
WHAT IS ENHANCEMENT?

Enhancement work may use many of the tools of ecological restoration (thinning, soil disturbance, engineered logjams, etc.) but it may also involve techniques that shape the system to be more productive or diverse for specific outcomes, such as increased deer and salmon productivity, increased berry or medicinal plant availability, etc. Recent enhancement projects have focused on timber and fish production. Today we see additional opportunities in a wide variety of non-timber forest products and providing for traditional and cultural uses as key.
Restoration and enhancement are nothing new to the indigenous people of Southeast Alaska. There is a long history of land stewardship involving restoration and enhancement practices that has been documented by Native scholars and anthropologists. One such resource is a paper by Steven J. Langdon titled: Traditional Knowledge and Harvesting of Salmon by Huna and Hinyaa Tlingit. In this document there are numerous examples of traditional restoration and enhancement practices. Here is an excerpt:

“There are several types of active responses to salmon run failure that can be identified among Tlingit. One widespread Tlingit oral tradition concerns the great flood, its onset, human responses to survive, and subsequent activities in the aftermath of flood. According to an oral tradition of the Kachadi clan, whose ancestral stream Kach (meaning a red and green sockeye salmon [either immediately pre or post-spawning stage]) is found in Kekc Kwáan, Tlingit observed in the aftermath of the flood that salmon were no longer found in many streams. Therefore a procedure was developed to create new salmon runs in empty streams. In order to do this, Tlingit ancestors acquired a number of male and female salmon from an already existing run. A water tight basket was obtained and the eggs and milt from females and males were placed into the basket. The eggs and milt were stirred and swirled together. The basket was then taken with great care from the first stream to the second. A location with good water flow and permeable gravel was selected and the basket was ceremoniously brought to the location. Accompanied by song and physical motion, several excavations were made in the gravel bed. At each one, a Tlingit woman stood crouch with feet placed on either side of the hole as a portion of the mixture was pored into the hole and then covered over with gravel. The oral tradition reports that through this procedure, salmon runs were re-established in a number of streams in the aftermath of the great flood. This oral tradition was provided by personal communication from Mike Jackson of Kake, September 2004.”

This example provides a window into a traditional relationship with the land that is well suited to collaboration on restoring highly impacted ecological systems or enhancing some systems for the mutual benefit of the residents and wildlife of the Kake Community Forest.

SITE SELECTION
Across Southeast, there are a multitude of places that would benefit from restoration. The USFS, The Nature Conservancy (TNC), and Trout Unlimited (TU) have partnered in developing prioritization processes. The best approach we have seen thus far begins by identifying watersheds with heavily impacted fish and wildlife habitat, then ranks their restoration priority using data on importance to local communities for hunting and fishing along with the feasibility of necessary work and economic viability.

This approach dovetails well with the situation in the Kake Community Forest. We have done a mapping exercise to help prioritize watersheds for restoration work on Kuiu and Kupreanof Islands (Figure 24). The method combines forest and stream data that shows the areas that suffered the greatest losses in fish and wildlife habitat during the logging boom. It identifies Turn Mountain-Kake (1), Cathedral Falls (2), Hamilton River (3), Saginaw Bay (4), Rowan Bay (5) and Kadake Bay (6) watersheds as having the most opportunity for improved resilience through fish and wildlife habitat restoration.

Figure 24) Restoration Priorities.
WHAT IS COLLABORATION?
Collaboration is the process of working with others to find a solution to a shared problem. In a collaboration, individuals and organizations with different backgrounds learn to understand each others’ needs, and try to find a solution to the problem that benefits all parties. In Kake, this can mean greater communication between Kake residents and land-owners and eventually land management that better meets the needs of locals and land-owners alike.

For this section we drew heavily from lessons learned by groups which have already put several years into learning about collaboration. We gathered much of this information while on project tours in Washington and Oregon and through workshops with experts in collaborative stewardship.

The appendix includes great resources for collaborative stewardship: “The Collaboration Handbook” by Red Lodge Clearing House, course materials from the BLM’s Partnership Series course on “Principles of Community-based Ecosystem Stewardship”, an Ecosystem Workforce Program Publication called “Stewardship Contracting for Landscape-scale Projects” and “Place-based National Forest Legislation and Agreements” by the Bolle Center for People and Forests from the University of Montana.

The Red Lodge Clearing House “Collaboration Handbook” describes collaboration as:

"Collaboration is simply people working together to try to get something done. There’s no one “right” way to collaborate, but effective collaborations incorporate the following key ingredients:

- The process is open, inclusive, transparent, accessible, and tailored to local needs.
- Meetings are civil and safe. No bullies allowed.
- Deliberations are thoughtful, frank and never rushed.
- There is an agreed-upon way to make decisions.
- Commitments that are made are honored. Trust is built on that confidence.
- It’s a team effort. You win, you lose, you temporize as a team.

Does having a collaborative process guarantee success?
No.
But...
Putting your heads together will feel better than knocking them together. You’ll get to know each other as real people rather than as special interests. You’ll have a much better chance of finding agreement on possible solutions to tough issues.”

Oregon “Peer to Peer” tour including USFS employees, conservation group representatives and contractors. Several Southeast folks participated here to learn about collaboration and contracting in the Lomakatsi Restoration Project.
WHY COLLABORATE?

Land Fragmentation
Human needs, wildlife ranges and ecosystem services exist across whole landscapes. Our system of land ownership, on the other hand, breaks the landscape into sections that are owned and managed by separate entities. Consider again the map in Figure 2 on page 3 and ask: “How do we maximize mutual benefits for road systems, timber and fish and wildlife habitat that is managed by three different land owners if we are not willing to collaborate?” Through collaborative management we have more flexibility, (adaptive capacity) to meet social and ecological needs and enhance opportunities for prosperity.

Large Problems
In many cases resource issues are too big for one entity to solve on its own. Kake’s energy situation is one example. Currently, Kake is run on diesel power and high energy costs are a large burden to the entire village. The community agrees that creating low cost energy is a priority. There are several options, including the Kake-Petersburg intertie, wind power, woody biomass or local hydroelectric development. There is no easy fix- any solution to Kake’s energy crisis will take everyone pulling in the same direction: land owners, agencies and community members. Creating economically viable and sustainable jobs is another good example of a large-scale challenge. Through collaboration we can pool resources and have a better chance to create and sustain employment opportunities.

Sense of Place
Sense of place is a critical part of the foundation of resilient communities, and can be a powerful tool for stewardship. Collaboration can enhance a community’s sense of place by actively engaging and showing respect and appreciation for local knowledge. Land management agencies can benefit greatly from local knowledge by gaining access to a vast reservoir of anecdotal observations and to “the pulse” of the community. Sense of place often comes with a sense of pride and a willingness by the residents to participate in volunteer groups, steering committees, advisory boards and the many other ways that collaborative stewardship functions.
Empowerment
Empowerment and sense of place are closely tied. In many ways empowerment is a feeling that comes from a people’s ability to shape the future of their place. We liked the way the BLM’s Partnership Program put it best: “People need to meaningfully participate in making decisions that affect their lives and surroundings. Without such participation, they tend to resist, or even defy, those decisions. It is through the social and cultural networks of place that people learn to manage and care for their social, cultural, and natural environments. And this knowledge tends to pass from generation to generation among people who live there.”

Adaptive Capacity
Agencies and organizations can be slow to adjust to the rapid changes we see today in our society and environment. Collaboration creates a space for innovation and creativity, which allows groups to adapt more readily. It can also help communities build their own capacity to adapt thoughtfully to changes. Working together through collaboration helps all participants learn from each other and develop a better sense for the future plans of each individual and organization. Sharing visions is an excellent way to create a collaborative future.

Timing
The timing is right for collaboration in Southeast Alaska. Local communities, local conservation organizations, local businesses, and national groups have become more and more vocal in recent years about the need to balance local community health with regional and global interests in environmental health. In response to these collective voices the USFS recently released its Tongass Transition Framework (see appendix). The transition framework outlines a long-term vision of national forest management that has rural communities at its center: “The program will help communities transition to a more diversified economy by providing jobs around renewable energy, forest restoration, timber, tourism, subsistence, and fisheries and mariculture.”

Cultural Absorption
The challenges we face in living sustainably and prosperously in the modern world are complex and demand an interdisciplinary approach and accounting for local, regional and global scales. But when it comes time to implement strategies developed by the collaborative group, success relies on how effective we are at integrating the new ideas into the ways of life of the local people. This local integration is also called cultural absorption. Recognizing the importance of customary and traditional values as

Keex’ Kwáan dancers performing as a greeting to a 2010 Tongass Futures Roundtable (TFR) meeting in Kake. This meeting focused on how the TFR can direct its efforts to best serve the interests of rural communities like Kake. USFS representatives officially announced their Tongass Transition Framework at the Kake TFR meeting.
a stable foundation for resilience, it is also important for tradition to adapt to new understandings of how the world works. This process is most effective when the practices that are to be adopted support the communities’ self-interest, enrich quality of life and include a respect for traditional forms of communication and caretaking.

**Healing**
Collaborative stewardship provides an opportunity for healing. Relationships between individuals and organizations can be healed. The relationship between people and landscapes can be healed. Self-worth can be improved. This is particularly relevant when restoration work and job creation are key elements of collaborative stewardship. Jobs in the woods are healthy, and when they are combined with helping the land recover and become prosperous it is natural that people feel those effects as well.

If we can agree that collaborative stewardship is a worthwhile approach to pursue, the next logical question centers on how we get it done. In the next section we describe a few tools that were common to the successes of collaborations elsewhere.

**TOOLS FOR COLLABORATION**
More complete information on each section, including examples that are working in the real world, can be found in the appendix.

**Memorandums of Understanding**
Memorandums of Understanding (MOUs) are forms of agreement that provide a basic framework for the who, what, where, why and how of a collaboration. These documents usually include information about the purpose of the collaboration, the mutual benefit each party believes will come through working together, a general description of what each party is committing to the effort, guidelines for the meeting process, how decisions are made, measures of success, etc. MOUs are not formalized partnerships and generally do not imply any legal obligation, but can be very effective for “greasing the wheels” of collaboration and provide a very important touchstone as the process develops. The appendix includes a great example of an MOU signed by collaborators who live and work in the Colville National Forest in Washington. It also includes a copy of an existing MOU between the USFS and OVK that could be built upon for the Kake Community Forest project.

**Stewardship Contracts**
Stewardship end-result contracting is a fairly flexible tool that an agency can use to support both local economic development and forest restoration. Similar to current contracting, the agency decides on a body of work that needs to be done and puts the project out to bid. However, when it comes time to award the contract the USFS can evaluate bid proposals with a much broader range of values than strict competitive bid contracting. For example, let’s say the USFS would like to improve forest health through thinning young-growth stands while contributing to local economic development. Although 1/2 of the evaluation criteria for rewarding stewardship contracts must come from the bid price, the other half of the evaluation can come from weighing other values like local hire, or a preference for crews that work with youth, or a preference for crews that are willing to find a use for...
the slash in local bioenergy projects, etc. It is also possible to create stewardship contracts that are relatively long-term, which better supports local contractors’ ability to get bank loans to invest in the tools of their trade. We have included examples of stewardship contracts from projects in the Lower 48, as well as an example of what a contract outline might look like for the Central Kupreanof Project in the appendix.

Residents, USFS staff, business leaders and conservation representatives attending a stewardship contracting workshop in Kake (2010).

**Stewardship Agreements**

Stewardship contracts offer many benefits and are particularly useful in situations where businesses already exist that can perform the needed restoration and service work. Stewardship agreements also serve an important role because they allow the USFS to work with nonprofit organizations, state and local governments, and other entities to fill in capacity gaps and achieve mutual goals. In agreements it is common that all parties provide resources to the projects: traditional ecological knowledge, financial resources, equipment, project management, etc. In addition, agreements often include additional activities such as workforce training or technology and market development for establishing new businesses. Agreements also allow for work on adjacent private lands and collaboration on long-term monitoring efforts (such as tracking deer responses to thinning). Each of these features are particularly well suited to Kake.

**Place-based Legislation**

As a conservation organization, SEACC has always supported strong legislative protection for our forests as a way to maintain the resources that support our way of life here in Southeast- abundant fish, deer, berries and trees. In order for our landscape to stay healthy, our communities need to be healthy. Part of a healthy community is a vibrant economy, and we support sustainable commercial use of our natural resources. Lands protection and economic development have not always gone hand-in-hand, but it is possible for them to do so. Legislation which protects lands can also keep options open for a community’s economic future. In Kake, we are interested in exploring ways that the values the community holds dear (long-term jobs, a vibrant and healthy village, plenty of deer, fish, moose, berries, etc.) can be incorporated into the land management structure. In this way, crafting a new land-use map for the Kake area can be another effective tool for collaborative stewardship. In order for this kind of tool to work we strongly believe that it must be created in collaboration with all interested parties, built conversation by conversation, meeting by meeting with residents of the community, land owners and other interested parties. The goal of such a collaboration would be to create a legislative proposal to submit to Congress in hopes that it would become law.

This summer, we had initial conversations with OVK staff and board to determine how areas around Kake are used and what type of use OVK would like to see in the future. We focused on USFS land, since the agency manages the largest body of land in the Kake area. A draft map was created as part of this effort (see Figure 26 on next page). We hope this can be a starting point for Kake residents to further contribute their insight to a long-term collaborative stewardship plan.
Figure 25) Draft Land Use Map. This map was drafted for Kake Community Forest Place-based Legislation

**Kake Sensitive Use Areas** - The green areas are watersheds which have few or no logging roads that residents expressed an interest in keeping roadless. People we have spoken with so far expressed a desire to maintain the wild nature of these places, while being able to take advantage of them for traditional and cultural activities, recreation and economic development through low-impact tourism, energy and transportation projects. Rocky Pass is a location in this zone that is locally prized for its marine resources and world class scenery. Under this draft proposal, Rocky Pass would be maintained just as it is today so that customary and traditional uses, tourism opportunities and fishing and mariculture resources would remain accessible and abundant. An example of a project that the community would like to see happen in some of these watersheds is the Kake-Petersburg electrical intertie.

**Kake Collective Use Areas** - The yellow areas are, for the most part, watersheds that are accessible by road and have seen varying degrees of industrial logging in the past 50 years. Residents shared the perspective that because roads already exist in these areas they are suited to more intensive resource use, such as sustainable timber development. These areas also tend to have the greatest need for restoration work which creates opportunities to both improve environmental health and create new jobs centered on young-growth management, deer and salmon habitat restoration and road maintenance. There are also many opportunities for recreation and customary and traditional use access to be enhanced through road, trail and cabin construction in these areas. Just south of town the Cathedral Falls area has numerous opportunities along these lines, including salmon habitat restoration at Seal Point and building trail access to important coho producing areas at Jenny Creek and the Cathedral River. The yellow covers a few sub-watersheds areas that have been proposed for Wilderness status by the USFS that the community may support and consider adding to.

Areas that are colored outside of the Kake Community Forest come from a draft regional plan for legislation (see the The Nature Conservancy’s and Audubon Alaska’s “Conservation Assessment” included in the appendix.) These areas are not meant to imply deterrents to future modifications based on community interests.
COMMUNITY ALTERNATIVE FOR THE CENTRAL KUPREANOF PROJECT
As a first step in the process of facilitating the Kake Community Forest Project we took advantage of the opportunity presented by the Central Kupreanof Timber Sale and collaborated with local residents on a community alternative for consideration in the Final Environmental Impact Statement. We saw significant potential for this project to positively benefit the community of Kake through direct employment, indirect employment, maintaining existing roads utilized by community members, enhancing the ability of the landscape to support traditional and cultural uses of forest products and providing opportunities for social and spiritual healing. Please see the appendix for the complete project proposal.

As of January 2011, the Record Of Decision for the Central Kupreanof Timber Sale has not yet been released. However, over the past few months USFS staff have committed to revamping the project to meet local needs in Kake, including: reducing the size of the timber pool, creating small timber sales, creating opportunities for forest restoration work and collaborative planning for project implementation. The new Central Kupreanof Timber Sale is poised for success and could be used in-region as a building block for restructuring the USFS Tongass Timber program. There have also been some good conversations between SEACC, OVK, the USFS and other partners on how to build on the Central Kupreanof Project to dovetail with the broader scope of benefits available through collaborative stewardship.

Petersburg Ranger Chris Savage leading a tour to inform interested parties about some of the opportunities that will be offered in the Central Kupreanof project.

Numerous stands of approximately 40 year old young growth in previously logged areas provide entrepreneurial opportunities in the vicinity of the Central Kupreanof project.
STEPS IN THE RIGHT DIRECTION
Throughout Southeast, we are seeing movement toward collaborative land management. For the past four years the Tongass Futures Roundtable has brought together diverse interests to discuss natural resource issues. And as noted earlier, the USFS Tongass Transition Framework is a remarkable step toward community-based forest management.

In response to this opportunity, we have begun to collaborate around forest stewardship. We have been learning from stewardship experts in Oregon and Washington, and in October 2010 SEACC, OVK, USFS, The Wilderness Society, and The Nature Conservancy sponsored a Forest Stewardship workshop in Kake. These collaborative efforts have been mostly organic so far. Now, the timing seems right to focus on specific next steps.

WHERE DO WE GO FROM HERE?
The following are some specific steps we recommend for creating collaborative forest stewardship in Kake.

• Form a collaborative for the Kake Community Forest with the goal of working together to create ecological and social health in the Kake area. The collaborative should include “stakeholders” – members of the community, City and Tribal government, USFS, land-owning entities, conservation groups and anyone else who has an interest in the future of the KCF. The collaborative should use tools outlined in “The Collaboration Handbook” (see appendix) to agree upon procedure, goals, and mission statement.

• Create a Stewardship Area for the KCF. The Stewardship Area could cover the entire Community Forest, or a smaller or larger tract of land. The benefits

This photo was taken about 20 miles south on the Kake road system looking back on Rocky Pass.
of creating a Stewardship Area are: 1) formal recognition that stewardship will be the focus of management in the area, and 2) on USFS land, the value from any goods removed from a Stewardship Area are used for stewardship projects in that same area, (retained receipts).

- The USFS Central Kupreanof Project provides a great opportunity for the collaborative to get its feet wet. There is a lot of opportunity to use this project to develop better communication between people of Kake and the USFS, and to use the project to address community needs. We recommend the Kake Community Forest Collaborative start its work here.

- The bulk of opportunities for forest restoration work in the Kake area is on Kuiu Island. After the collaborative works on the Central Kupreanof project, we recommend the group develop forest stewardship projects on Kuiu. This will create a larger body of work for the local businesses entering into stewardship jobs. The collaborative should be able to apply lessons learned from the Central Kupreanof project, and develop increasingly successful stewardship projects.

WHAT WILL BE SEACC’S ROLE IN THE KAKE COMMUNITY FOREST?

We are interested in fostering collaborative stewardship for the KCF, with the goal of improving ecological and social health in the Kake area.

We will assist in forming the Kake Community Forest Collaborative, and will be a part of the collaborative group. Because SEACC is an advocacy group, it is not appropriate for us to lead or facilitate the collaborative’s efforts, but we will be at the table. We also will be working to empower Kake residents to take leadership roles in the collaborative and managing their forest lands.

We are also interested in exploring how more traditional forms of environmental advocacy – specifically community-built legislative protections for forest land - can be integrated with community-based land stewardship. In the coming months we will be speaking with members of the Kake Community Forest Collaborative and others about these ideas.

Sunset in Kake
ACKNOWLEDGEMENTS AND AUTHOR INFO

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Sarah Campen was born and raised in Sitka, Alaska. After 4 years studying International Relations and Theatre at Brown University she returned to Southeast and moved to Juneau. As a community organizer with SEACC Sarah has worked in Tongass communities from Gustavus to Wrangell, and facilitated citizen involvement on a wide array of environmental and social issues facing these communities. For comments, questions, or suggestions about this report and the Kake Community Forest Project, contact Sarah at sarah@seacc.org.

Bob Christensen has made his home at a remote Wilderness cabin in Icy Strait since 1997. For the past 15 years he has filled the role as the lead naturalist and ecologist with Southeast Alaska Wilderness Exploration, Analysis and Discovery (SEAWEAD) and has worked with a wide range of state and federal resource agencies, conservation groups, community groups and private developers on fish and wildlife studies and construction projects throughout Southeast Alaska.

The Southeast Alaska Conservation Council (SEACC) is a coalition of 15 volunteer conservation groups based in 13 Southeast Alaskan communities. SEACC’s members include small wood product manufacturers, commercial fishermen, Native Alaskans, sportsmen and women, and others who want to safeguard Southeast Alaska’s world-class environment while providing for the sustainable use of the region’s resources. Call us (907) 586-6942 or visit www.seacc.org.
APPENDIX RESOURCES

We have pulled together a variety of resources we believe will be useful to the collaborative stewardship process and included them in this appendix.

The guide below includes a brief description of each resource. All documents can be downloaded from links at http://www.seawead.org/KCF

Many of these resources come from collaborative stewardship projects that are 10-15 years old. Certainly we have our own unique challenges in Southeast Alaska, but we would be wise to learn from those who have gone before us.

We expect to add to these resources as the collaborative process develops and would appreciate your ideas for additional items that you think should be included. Just email sarah@seacc.org with your ideas.

TONGASS TRANSITION FRAMEWORK

The Tongass Transition Framework is outlined in a USFS document called “Economic Analysis of Southeast Alaska: Envisioning a Sustainable Economy with Thriving Communities”.

This document outlines a new direction for National Forest management in Southeast Alaska. Below is an excerpt from a USFS news release that summarizes the main points of the plan.

"WASHINGTON, May 26, 2010-Agriculture Secretary Tom Vilsack today joined with USDA Forest Service and Rural Development leaders, as well as partners in Southeast Alaska, to chart a new path forward in the region that enhances economic opportunities to communities while conserving the Tongass National Forest.

In a letter to the Tongass Future Roundtable, USDA is proposing a “Transition Framework” to provide jobs and community stability for Southeast Alaskan Communities. The Framework will include a series of potential economic development actions to stabilize communities in Southeast Alaska by providing jobs around forest restoration, renewable energy, tourism and recreation, subsistence, fisheries and mariculture. The letter also proposes a new approach to forest management on the Tongass National Forest that builds from the existing Tongass Land Management plan and will move timber harvesting into roaded, young growth areas and away from old-growth timber in roadless areas.

"The Forest Service, in partnership with USDA Rural Development and the Department of Commerce’s Economic Development Administration, is committed to finding solutions that put Southeast Alaskans back to work,” said Forest Service Chief Tom Tidwell. "As part of the broader transition framework we will work to move away from old-growth harvests, toward young-growth management."

RESILIENCE WORKBOOK

These workbooks are expected to be updated early in 2011. Below is a brief summary excerpted from the Resilience Alliance website. For more details you can visit this website: http://www.resalliance.org/index.php/resilience_assessment
“The Workbook Project is ongoing with workshops, a developing database of examples, translations and new modules.

“The workbooks build on decades of theoretical research and case study comparisons by members of the Resilience Alliance and other researchers who have contributed to a better understanding of the dynamics of complex social-ecological systems. A set of key concepts underlying resilience thinking provide a framework for assessing the resilience of natural resource systems and for considering management options to set the system on a sustainable trajectory. The practitioners workbook has been developed specifically to provide guidance to people engaged in natural resource management, through a set of activities designed to explore system parameters and management options for their own system of interest from a resilience perspective. A companion volume (Vol. 2 - draft) to the workbook for practitioners provides supplementary notes on the key concepts that are included in the assessment.”

TRADITIONAL KNOWLEDGE AND HARVESTING OF SALMON BY HUNA AND HINYAA TLINGIT
This is a great paper written by Steve Langdon that can help the reader to learn about traditional Tlingit stewardship practices. From the Executive Summary:

“This report provides an overview of aspects of Tlingit traditional knowledge and harvesting of salmon derived primarily from interviews of Tlingit elders and scholars. Tlingit language, oral tradition and archeological evidence indicate that their occupation of the region known as southeast Alaska spans a minimum of 6,000 years. Mass harvesting techniques for catching salmon date back to over 4,000 years ago. Over that time, Tlingit have developed concepts and practices for the utilization of salmon that sustained their relationship with the five species (Oncorhynchus sp.) upon which they were primarily dependent for survival and cultural livelihood. Tlingit captured and utilized salmon in a variety of habitats and locations from the ocean to the spawning grounds and from Yakutat Bay in the north to Dixon Entrance in the south.

A comparative approach was taken to this research in that information from Tlingit elders and scholars in the northern and southern portions of Tlingit territory was obtained through formal interviews. Thirty-three elders and scholars in Hoonah (Huna káawu) and Klawock (Hinyaa kwaan) were interviewed; some of the interviewing was conducted in the Tlingit language from interviewees who felt comfortable in using it. By using the Tlingit language where possible, the intent was to identify specific Tlingit concepts and observational frames through which knowledge about salmon was interpreted. A number of specific Tlingit concepts, including the central concept of ish [freshwater pools of slow moving water], were identified through these procedures. Comparison of information from the two areas reveals both strong patterns of similarity as well as notable elements of difference.

While traditional Tlingit knowledge and use of salmon is organized in a different manner than contemporary scientific knowledge and use, there is a considerable pool of knowledge about specific systems and in stream salmon behavior and habitat that could be beneficially applied by managers to current relations with salmon. The best means to accomplish this would be through the establishment of formal relations with tribes.”
COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGIES FOR KAKE AND THE REGION

From the introduction of the Southeast Conference’s CEDS:

“The Comprehensive Economic Development Strategy (CEDS) report is the primary evaluation and planning document for Southeast Alaska’s economy, offering a regional approach to economic evaluation, coordination and implementation for these unique and diverse communities.”

“The purpose of a CEDS is to initiate and sustain a local planning and implementation process to create jobs, foster stable and diversified economies, and to improve living conditions and quality of life.”

“This year’s CEDS update is a joint effort of Southeast Conference (SEC) and the Central Council Tlingit & Haida Indian Tribes of Alaska (CCTHITA). This CEDS document also serves as the foundation of both CCTHITA and SEC’s economic development work plans.”

KAKE FOREST STEWARDSHIP CAPACITY ASSESSMENT

This assessment was conducted by Paulette Jackson of Kake, and designed with support from Sarah Campen (SEACC), Gary Williams (OVK), Robert Atkins (University of Oregon) and Mike Hibbard (University of Oregon). The assessment was conducted in fall 2010, and explores Kake’s current capacity to do forest stewardship and forest-product based work.

NON-TIMBER FOREST PRODUCTS PAPER

This is an annotated bibliography of resources to start learning about how non-timber forest products can make meaningful contributions to economic development and conservation. It was assembled by research professionals at the Pacific Northwest Research Station in 1996. From the abstract:

“This bibliography encompasses literature on the historic and current scope of nontimber forest product industries in the Pacific Northwest and includes references on international markets and trade that bear on these industries. Key themes in the bibliography are biological and socioeconomic aspects of resource management for sustainable production; procedures for identifying, monitoring, and inventorying important resources; means for technical innovation and resource development; and public education about nontimber forest resources. Social policy issues address the role of nontimber forest products in rural development and the spectrum of ethical considerations required for socially acceptable policy formulation. Economics literature covers estimating the contribution of nontimber forest products to a whole ecosystem economy, analyzing and planning for joint production of agroforestry systems, and enhancing the performance of nontimber forest product sectors.”

RESTORATION AND ENHANCEMENT TOOLS

This is a descriptive document that was created for SEACC’s Hoonah Community Forest project in 2008. The intent was to provide a brief overview of common restoration techniques in Southeast Alaska and the information presented is equally relevant to the Kake Community Forest.

KAKE COMMUNITY ALTERNATIVE FOR THE CENTRAL KUPREANOF TIMBER SALE

This document was developed by SEACC staff and Kake residents in spring 2009 for consideration in the Final Environmental Impact Statement of the USFS Central Kupreanof
Timber sale. It was crafted to respond to sentiments voiced by Kake residents at a spring 2009 USFS subsistence hearing on the timber sale.

**RED LODGE CLEARINGHOUSE COLLABORATION HANDBOOK**
The Red Lodge Clearinghouse is an very useful resource for collaborative stewardship. There are many valuable and instructive materials available at their website at:
http://www.rlch.org/content/collaboration-resources

We provide a downloadable version of their collaboration handbook but highly recommend the other resources you can find on their website.

**PRINCIPLES OF COMMUNITY-BASED ECOSYSTEM STEWARDSHIP**
The Bureau of Land Management (BLM) has a program called “The Partnership Series” that is aimed at educating resource professionals and the public on collaborative, community-based ecosystem stewardship. We drew heavily from one of their educational programs and include a link on the resource page to some background information. You can find out more about the partnership series on the BLM website: http://www.ntc.blm.gov/partner/

**ECOSYSTEM WORKFORCE PRIMER ON STEWARDSHIP CONTRACTING**
The Ecosystem Workforce Group from the University of Oregon put together an extremely useful document for learning about stewardship contracting. This document provides several real world examples of stewardship contracts and stewardship agreements. An excerpt from the introduction:

“The purpose of this report is to provide information about various approaches that the Forest Service, BLM, and their partners have used to create large restoration programs using stewardship contracts and agreements. These strategies have allowed for the treatment of large landscapes over long time frames, and have supported local contracting, forest products, and biomass utilization capacity.”

**PLACED-BASED LEGISLATION AND AGREEMENTS REPORT**
This is another tremendously useful report that analyzes the effectiveness of place-based legislation and stewardship agreements at providing certainty to stakeholders while being useful tools for economic and ecological resilience. This document reviews several case studies that are highly relevant to the situation in Southeast. Here is an excerpt:

“This Report assesses trends regarding place-based forest legislation and agreements. The research was requested by the Rocky Mountain Region of the U.S. Forest Service (Director, Strategic Planning). The stated purpose of the cost-share agreement is to: (1) describe and analyze the recent emergence of place-based forest bills and the use of formalized agreements in the management of national forests; and (2) present alternatives to the U.S. Forest Service (USFS) in how it can improve place-based legislation or provide alternatives to such legislation.

Included as part of the Report is a thirty-two page Appendix comparing key provisions of selected place-based bills and agreements. It is included as a separate document. The comparison tables show how these initiatives approach seventeen issues, from landscape-scale restoration to the National Environmental Policy Act (NEPA).”

**EXAMPLE MEMORANDUM OF UNDERSTANDING DOCUMENTS**
We reviewed 3 MOUs while putting together this report, 2 from the Lower 48 and one that
was recently created between the Tongass National Forest and the Organized Village of Kake.

**USFS MASTER STEWARDSHIP AGREEMENT TEMPLATE**
This is a blank template that the USFS starts out with when putting together a stewardship agreement. It provides a good baseline when beginning to work on stewardship projects.

**PROJECT IDEAS FROM KAKE INTERVIEWS**
SEACC and SEAWEAD field personnel for 45 days over three field seasons in Kake to learn about project opportunities in the field and the kinds of projects residents are interested in. We put together a description of these projects for use in adding on to the stewardship work outlined in the Central Kupreanof project. This document does not cover Kuiu island, which arguably has the most potential stewardship employment opportunities outside of tribal corporation lands.

**COLLABORATION THROUGH NEPA HANDBOOK**
The Council on Environmental Quality put together a handbook outlining general principles, useful steps, and methods of collaboration. It is a potentially useful document, especially for managers in the Tongass National Forest. You can download it from the KCF resource page.

**THE NATURE CONSERVANCY & AUDUBON ALASKA CONSERVATION ASSESSMENT**
A conservation assessment and resource synthesis of the costal forests and mountains ecoregion of Southeastern Alaska and the Tongass National Forest. The resources provided in this work were essential to the ecological assessments conducted in the Kake Community Forest project.