

Collaborative Forest Landscape Restoration Program Proposal Region 10 - Tongass National Forest

PROJECT TITLE: Staney Community Forestry Project

PROPOSED TREATMENTS:

The Staney Community Forestry Project Area ("Staney project area") is a 139,000 acre area on the west side of Prince of Wales Island located in southeast Alaska. All of the land within the Staney project area is managed by the USDA Forest Service, Tongass National Forest, Thorne Bay Ranger District. This area is a rich producer of fish, wildlife and other forest products. From rural subsistence to recreation to commercial harvest of timber and fish, the land and water resources surrounding the greater Staney Creek area have historically provided a bounty of goods and services on which people depend. These goods and services have enriched the lives of residents of the region, and in more recent times, the state and the country as well.

In 2004, The Nature Conservancy and the Tongass National Forest entered into a partnership to "...work together to achieve a balance of working forests, habitat reserves and sustainable communities for the benefit of people, fish and wildlife." The Conservancy's Prince of Wales Island Restoration Partnership was formed in 2005 with the goal to maintain functioning freshwater and terrestrial ecosystems within their natural ranges of variability. The Staney Creek landscape ranks among the most biologically productive watersheds in southeast Alaska, and among the highest priorities for restoration on Prince of Wales Island (Albert et al. 2008). From within this diverse and actively managed landscape, there are tremendous opportunities for restoration, enhancement and continued management to produce a variety of goods and services for nearby, resource dependent communities, in addition to a growing tourism industry that serves regional, national and international visitors.

A collaborative stakeholder group formed in 2009 to discuss resource stewardship and restoration opportunities for the Staney project area. This collaborative effort is facilitated by the The Nature Conservancy in cooperation with Wilderness Society and the USDA Forest Service. The objective is to develop a shared desired future condition (DFC) and develop an integrated resource management assessment for the Staney project area. The DFCs and integrated resource management assessment will specifically address five key resource sectors: Terrestrial Habitat, Aquatic Habitat, Subsistence, Timber Supply and Economics.

Within each of these resource sectors, the collaborative group has developed their own DFCs as means of informing the Forest Service of preferred outcomes that would likely improve the ecological function and production of the project area, while enhancing economic benefit from continued management, enhancement and restoration. Simply put – improve watershed condition and natural processes; maintain and/or accelerate the production of natural resources upon which people subsist, and enhance the economic benefits to people from a sustainable and collaboratively managed landscape.

It is intended that these conceptual and collaboratively developed DFC's will achieve these goals through the development and implementation of prescriptive treatments within the aquatic and

terrestrial habitats of the project area. Actions like commercial thinning, in-stream restoration, road storage or decommissioning, fish passage enhancement and small timber sales can all achieve measurable economic benefits while doing the following:

- Enhance deer forage,
- Restore fish habitat and hydrologic processes,
- Reduce road densities and removing road-related impacts to watersheds,
- Improve fish migration to habitat that is currently inaccessible,
- Stabilize a sustainable supply of wood fiber to help Prince of Wales local economy.

The strategic placement of potential treatments will be an amalgamation of the workgroups DFCs and agency direction contained in the Tongass Land Management Plan (2008). Staney collaborative workgroups are currently mapping priority areas for exploring treatment opportunities.

Numerous watershed improvement and habitat restoration needs have already been defined for a portion of the planning area including the Prince of Wales Access and Travel Management EA (USDA 2009b) and the Staney Creek Restoration and Enhancement EA #1 (USDA 2009a). These NEPA documents have identified a wide variety of restoration projects including:, approximately 80 miles of road no longer needed for near-term management can be stored or decommissioned; installation of forest canopy gaps within 4,000 acres of stem excluded young growth; thinning 800 acres of densely stocked young growth forest to enhance future timber production; in-stream restoration treatments on roughly one mile of stream with another 17 stream reaches identified as having riparian and stream habitat improvement opportunities. Watershed and stream habitat condition assessments for an additional four sub-watersheds, comprising roughly two thirds of the greater Staney restoration planning area, will be conducted in fiscal year 2011 to expand the pool of riparian, wildlife and aquatic habitat treatment opportunities.

Specifically in fiscal year 2010, the Thorne Bay Ranger District plans to implement the following restoration activities: 19 miles of road storage, 2 miles of road converted to OHV trail, 6 red pipes removed, 2 miles of in-stream rehabilitation, and 100 acres of wildlife canopy gap thinning. An additional 270 acres of wildlife canopy gap thinning was started in fiscal year 2009. The fourth year of monitoring on the Tongass-wide young growth study will also be accomplished this fiscal year.

The scope and types of further restoration treatments are still being discussed by the collaborative workgroup. These workgroup proposals will be evaluated by agency specialists during the NEPA process to determine a range of reasonable alternatives that can take the project area toward these desired conditions.

The vegetation resource workgroup is evaluating a variety of commercial thinning prescriptions, in addition to canopy gap treatments where the long-term objective is to restore old growth characteristics. Short term objectives of these thinning treatments are to improve landscape function for wildlife utilization, especially deer forage, as well as fiber by-products for utilization by the current wood products industry. The workgroup's desired future conditions and current forest plan direction does allow for some timber harvest in old growth structural stages. A

mixture of structure retention and clear-cut harvesting could be used to achieve economic objectives without reducing the overall restoration benefits of the project area.

CFLR criteria to "maintain or contribute towards the restoration of, the structure and composition of old growth stands according to the pre-fire suppression old growth conditions characteristic of the forest...." appears to challenge some of the timber supply DFC's of this collaborative effort. CFLR direction concerning old-growth and retention of large diameter trees is linked to direction in the Healthy Forests Restoration Act (HFRA), Sections 102(e)(2) and 103(e)(3). HFRA provides that old-growth direction in resource management plans established on or after December 15, 1993 is sufficient to meet the requirements of Section 102(e)(2).

This HFRA direction and the extensive analysis in the 2008 Tongass Land Management Plan (TLMP) regarding old-growth timber management as part of a larger conservation strategy for the Tongass National Forest, provides an approach that can address CFLR old-growth criteria and the economic and timber supply DFC's established by this Staney Community Forestry Project. The 2008 TLMP provides the most current old-growth direction and any proposed old-growth harvesting would meet this direction. **CFLR funds would not be used to implement any old-growth treatments.** However, making this important timber resource available in the context of the Staney Community Forestry Project area is critical to a supply of "bridge timber" over the next 20 years. This project will facilitate the transition of the Tongass National Forest's timber program from old growth management to a program focused on young growth management which meets local economic needs and supports restoration activities.

Landscape treatments will be implemented through service and stewardship contracts to ensure a robust opportunity for local employment among the various natural resource dependent enterprises that already exist within our rural communities. The workgroup and agency desire a mix of small and large contracts to meet local economic objectives. Some portion of the project area may be placed into a 10-year stewardship contract to further enhance the economic efficacy of the work to be completed. Direct and indirect employment associated with Prince of Wales Island restoration industry ranges between 70 and 85 jobs (McDowell Group, 2008). It is anticipated that implementation of the Staney Collaborative Forestry Project will sustain an additional 29 jobs in these small rural communities. Youth conservation groups such as Southeast Alaska Guidance Association and Youth Conservation Corp have been heavily involved for several years in restoration and stewardship projects across the Tongass. Staney restoration work will provide expanded training and employment opportunities for these local youth organizations. Some projects will be completed through force account utilizing both permanent and temporary employees.

Monitoring will be critical component of the project, and has been identified by the workgroup as a key requirement of the Staney Restoration Strategy. To address ecological function, research is underway through the Tongass/Pacific Northwest (PNW) Watershed Restoration Effectiveness Monitoring group to test new monitoring approaches to determine whether integrated watershed restoration plans, including channel wood additions and riparian thinning, are achieving the goals of improved watershed function, improved aquatic habitat, and riparian stand structure and function. Existing metrics of habitat and stand restoration success will be tested using accepted scientific methods. Novel metrics will be tested and evaluated to expand

range of functions considered. See Table 1 for monitoring metrics.

Table 1 – Watershed Restoration Effectiveness Monitoring Metrics

| Ecosystem process/stater | Metric | Scale/Cost factor | | | Most appropriate scale | | | Most appropriate design | | |
|--|--------------------------------|-------------------|----|----|------------------------|----|---|-------------------------|-----|-----|
| | | W | MS | OC | MS | OC | W | RC | UDR | W |
| Primary production | Benthic chlorophyll | H | M | M | MS | OC | | RC | UDR | |
| | PAR reaching channel | H | M | L | | OC | | OC | UDR | |
| | Stream metabolism | I | H | M | MS | OC | | | RC | |
| Nutrient cycling | DOM quality | M | I | I | | W | | | RC | |
| | Seasonal nutrient patterns | L | L | L | W | OC | | | RC | W |
| | Transient storage | H | M | M | MS | OC | | | RC | UDR |
| Food availability | Invertebrate drift | I | H | L | MS | OC | | | RC | UDR |
| Detrital inputs | Litterfall | H | M | M | | OC | | | RC | |
| | Leaf retention | H | L | L | MS | OC | | | UDR | RC |
| | Benthic organic matter | H | M | L | MS | OC | | | UDR | RC |
| Riparian Forest Condition | Increase in riparian tree size | H | M | M | MS | OC | | | RC | UDR |
| | Coarse LWD balance | L | I | I | | W | | | W | |
| Stream habitat | Channel complexity | H | M | L | MS | OC | | | RC | UDR |
| | Pool frequency | H | M | L | MS | OC | | | RC | UDR |
| | Pool quality | H | M | L | MS | OC | | | RC | W |
| | Key wood/cluster frequency | H | M | L | MS | OC | | | RC | UDR |
| | Channel width/depth ratio | H | M | L | MS | OC | | | RC | W |
| Functional salmon habitat | Smolt yield | H | I | I | | W | | | RC | W |
| | Otolith history | M | I | I | | W | | | RC | W |
| | Fry growth rate | H | H | M | | OC | | | RC | |
| | Habitat connectivity | L | I | I | | W | | | W | |
| Functional wildlife habitat | Understory composition | H | M | M | MS | OC | | | RC | UDR |
| Sediment supply & transport | Coarse sediment balance | L | I | I | | W | | | W | |

A number of tributary stream monitoring sites have been located within the greater Staney Creek project area that will serve as either treatment or control streams for this restoration effectiveness monitoring effort. The ongoing results of this monitoring program will inform managers of the success in achieving desired outcomes. Adaptive management will allow for treatments to be continued or changed as monitoring results are evaluated.

The Staney Project will be designed to enhance the development of a robust young growth management program on the Tongass National Forest. At a minimum, this information will be used to guide the Forest’s restoration and young growth management strategies. In particular, if the Staney Project can demonstrate significant benefits from using restoration by-products to convert from heating oil to wood-based heat, land owners may choose to use pre-commercial thinning as a tool to create habitat.

Research on restoration treatments is in conjunction with the PNW Forest Sciences Lab which is performing detailed research as part of the Tongass-wide Young Growth Study (TWYGS), an adaptive management/research program. TWYGS is designed to evaluate the potential benefits of treating young growth stands to increase wildlife habitat and timber production. TWYGS is intended to last a minimum of 30 years, in order to adequately assess long-term responses to silvicultural treatments. One component of the Staney Creek Watershed Restoration is a replicate of the TWYGS research. This is critical scientific research that underpins the hypothesis that wood fiber production and the development of a carbon market will help make young growth management a viable economic option on Prince of Wales.

ECOLOGICAL CONTEXT:

The ecological context for the Staney Community Forestry Project is based on the areas’ history of active management, much of which pre-dated more modern environmental protections for natural resources. This context is further affected by the 2008 Tongass Land Management Plan, which identifies within the project area, a set of Land Use Designations (LUD’s) on which commercial timber harvest will be managed in order to meet Forest Plan direction and the requirements of the Tongass Timber Reform Act. Adding the existing condition to current direction and the high public use of this area for subsistence and recreation, the need for both restoration and management action is clear. Restore areas impacted by the practices of a bygone era and meet market demand for a stable timber supply so that the social, ecological and economical conditions of the greater Staney area can continue to sustain resource dependent communities and their economies. The mixture of past actions, current direction and desired conditions makes the Staney Community Forestry Area a microcosm landscape for good stewardship and the sustainable management of renewable public resources.

Restoration objectives linked to “Desired Future Conditions” are designed to remediate impacts from legacy timber harvest activities, summarized in Table 2, below.

Table 2. Key Indicators of Watershed Condition Associated with Historic Timber Harvest in the Staney Planning Area.

| | |
|--|---------|
| Project Area Acres-- | 139,063 |
| Miles NF System Road-- | 240 |
| Miles Non-System Road (known temp roads)-- | 76 |
| Number of Stream Crossing Structures-- | 898 |
| Culverts Restricting Fish Migration-- | 63 |
| Acres Past Timber Harvest-- | 28,018 |
| Acres Past Harvest in Riparian Mgt Areas-- | 4,639 |
| Acres Harvested in Stem Exclusion Stage-- | 15,103 |

Existing conditions and resource management concerns for major ecosystem components --- Terrestrial, Freshwater, Riparian, and Human Dimension—are outlined below.

Biogeographic Setting: Prince of Wales Island is located within the temperate coastal temperate rainforest (Sitka spruce -western hemlock forest zone) of North America. Under natural conditions, the forest ecosystem is characterized by a diverse mosaic of tree ages and size classes with standing dead trees, trees with dead tops, multiple canopy layers, down woody debris and a diverse and abundant shrub and herb layer. Wind-throw is the primary mechanism of forest disturbance under natural conditions, and patterns of disturbance range from low intensity but high frequency events that create individual tree and small gap disturbances, to high intensity but low frequency catastrophic blowdown events. Moreover, ecological systems are further structured by a dynamic hydrologic regime influenced by characteristics of soils, slope and geology that control how water flows or is retained within a watershed. At its larger scale, upland old-growth forests are inter-mixed with wetland forest types, and non-forest types such as peatland, shrublands, sub-alpine meadows and dwarf-shrub alpine plant communities.

Terrestrial: The Sitka black-tailed deer plays a critical role in both the ecological and human systems of Southeast Alaska. Deer are a primary prey species for the Alexander Archipelago wolf and black bear, playing a vital role in the subsistence economy of local communities. As with most ungulate species in Alaska, winter range appears to be the primary factor limiting population growth. Both old growth timber harvest and young growth management has a direct and long-lasting impact on the quality, availability and distribution of deer winter range. The natural pattern of small scale disturbance within coastal forest ecosystems maintains a structurally complex and diverse canopy that allows both snow interception and understory forage production for deer in the winter. In contrast, the practice of clear-cut logging alters the successional pathway of a stand, and results in predictable changes in forage productivity for deer over time. In years immediately following clear-cut logging, availability and biomass of forage for deer is high during summer months, but availability may be limited during periods of deep snow. Summer forage increases to a maximum at about 20 years post logging. As conifers regain dominance within the young stands, the dense canopy excludes light from the forest floor creating what is termed the stem exclusion stage of stand development. Stem exclusion occurs 30-40 years after logging. During this period, forage biomass diminishes during both summer and winter, and forage remains very low level for at least 120 years. Natural mortality of dominant conifers within the stand may begin the process of recreating old growth characteristics, where higher forage biomass for deer establishes 150-160 years after logging.

Freshwater: Salmon play a critical role in the ecological and social network of Southeast Alaska. On Prince of Wales Island, salmon support virtually all top-level predators including black bear, wolves, eagles and mustelids. Salmon and steelhead also play a vital cultural and economic role providing high quality, fresh food and a source of revenue from commercial fishing, sport fishing, and outfitter and guiding businesses. The 40,000 acre Staney Creek Watershed is the center piece of the 139,000 acre Staney Community Forestry Project Area. Staney Creek is a major salmon producer in the region with historic peak runs of 360,000 pink, 43,000 chum, and 20,000 coho salmon. Streams associated with four additional watersheds within the project area—Gutchi Creek, Shaheen Creek, Naukati Creek and Surku Creek—also support wild salmon runs. Past land management activities on Prince of Wales Island, especially logging of riparian forests and road construction, have impacted salmon as a result of increased rates of sedimentation, destabilization of riparian systems and habitat loss through fish passage blockages.

Riparian: Riparian forests, located along streams and rivers, are characterized by periodic flooding and sediment deposition, and contain distinct flora and fauna depend on proximity to water at some time during their life stage. Moreover, riparian systems provide an important transition between aquatic and terrestrial ecosystems. Ecological function of riparian forests includes maintenance of water quality, flood control, stream bank stability, temperature regulation and reduced erosion and sediment transport.

Riparian forests also provide large woody debris (LWD), which is an important feature of stream habitat structure. Past timber harvest and road construction activities have resulted in a myriad of effects on stream and fish habitat including increased sedimentation, altered sediment and bedload transport regimes, changes in stream temperature, bank destabilization, reduced

streamflow, loss of connectivity, loss of large wood recruitment into streams, and an overall loss of fish habitat.

Human Context: Economic conditions in southeast Alaska rural communities are related to the ecological condition of this vast landscape. Residents often make their living off the land. If not employed directly or indirectly in commercial fishing, tourism or commercial timber harvest operations, many residents supplement their income by practicing subsistence on federal lands. Deer, fish, berries, mushrooms and firewood are all highly important natural resources that are linked to the socioeconomic conditions of the project area. Indirectly, resource-based industries build and maintain capacity in rural communities to sustain schools, libraries, medical facilities and other service industries that make for resilient communities and a stable social infrastructure. The natural resources of the Staney project area were described by a Tlingit Elder from Klawock as the “Fort Knox” of their village.

Subsistence: The Staney Community Forestry Project Area contains one of the highest deer producing Wildlife Analysis Area (WAA) within all of Game Management Unit 2 (Prince of Wales Island) in terms of annual deer harvest by federally designated subsistence hunters. A study of hunter preferences was completed by Todd J. Brinkman with the University of Alaska Fairbanks which has done an excellent job of defining key characteristics of deer hunter preferences by habitat type on Prince of Wales Island. When these characteristics are combined with the high productivity of the project area and the concerns over future loss of productivity, the area becomes a focal point for upland restoration treatments to maintain or enhance deer hunting opportunities for local residents. Subsistence is a way of life for many island residents, but is not limited to just deer hunting. Firewood collection is also very important to most residents considering the high cost of energy on the island. In addition, there is a heavy reliance on fish as well as edible and medicinal plants within the project area.

Timber Jobs: The single greatest impact to timber operators on Prince of Wales Island has been an unreliable wood supply. This lack of supply has slowly eroded the present timber industry and threatens to leave them incapable of transitioning their operations to young growth. Without a capable industry, ecological vegetation treatments costs will skyrocket. Transition from old growth to young growth management has been long planned for the Forest’s timber program, and has become increasingly important as stem excluded young growth stands are beginning to affect deer harvest opportunities for rural residents. During this transition it is important to supply a small steady supply of old growth volume (“bridge timber”) while increasing the supply of young growth volume from sustainable stewardship actions. Managing the continued production of and access to these resources is a key component of subsistence management for the Forest Service in the Alaska Region.

Transportation: Roads create access and at times competition for resources, as well as having some measurable effects on resource abundance and sustainability. This condition compels managers to look carefully at planned actions such as road closures and commercial harvest. These factors can interact to affect the subsistence and recreation values in the project area. Ultimately, the desired future conditions for transportation systems will be delicate balance between adequate access for utilization of resources by all sectors of society, and meeting a minimum transportation system while sustaining ecological values and productivity.

COLLABORATION:

To date, a diverse group of 29 entities and 67 individuals have been participating in a series of workshops focused on the greater Staney area. This group has defined the boundaries in which they wish to work, the criteria they wanted to review and ultimately the desired future conditions they want the Forest Service to consider in all future planning for the project area.

The group began meeting in November 2009, and has since gathered three times to move through the collaborative process. The next meeting is scheduled for July 2010. All meetings are open to the public and active recruitment of new interests and affected parties is pursued between meetings.

The workgroup has functioned as an ad hoc, open membership forum to discuss overlapping and disparate interests in the project area. It has been facilitated by Marcus Kauffman of Marcus Kauffman Associates, who has vast experience in these collaborative, stewardship driven endeavors in Region 6 of the Forest Service.

On May 3-6, 2010 representatives of the Tongass National Forest and the Staney Collaborative Workgroup attended a peer-to-peer learning session in Oregon, organized by the Wilderness Society. Participants from Southeast Alaska were able to meet with Forest Service, industry and community counterparts from Oregon, where they have successfully implemented Integrated Resource Management projects in a collaborative forum, achieving similar objectives as described in the Staney Community Forestry Project. Tour points and professional contacts included National Forest stewardship contract operators and collaborators from the Siuslaw, Rogue River and Siskiyou National Forests, the Grants Pass Bureau of Land Management, various non-profit community and conservation organizations, as well as wood products processing facilities that are utilizing the restoration by-products of these stewardship projects. The Staney Community Forestry Project will further benefit from this information exchange as we contemplate specific implementation measures for the Staney project area.

Two key outcomes of current collaboration will play a strong role in the implementation of the workgroups goals and objectives. First, is the development of a collaborative, community driven process that precedes agency proposed actions, and better defines diverse community values within a given landscape. Second, is the actual DFC's developed by the group, which can be juxtaposed to existing agency direction and procedures for the development of formal proposed actions. These collaborative DFC's will also advise present and future agency implementation activities within the Staney landscape by providing the criteria these stakeholder wish to see used in the management, enhancement and restoration outcomes on the landscape. It helps the agency define the "why here, why now" question and gives us an excellent filter for making decisions on the ground.

There is a strong commitment among many of the participating interests in keeping collaborative process alive throughout the planning and preparation phases that precede implementation. With regard to monitoring, specific protocols are being developed by FS Researchers and will rely on a multi-party implementation approach to ensure the adaptive management is occurring and responding to management actions.

WILDFIRE:

Wildfire is rare in Southeast Alaska and the Staney Creek project area in particular. Wet year-round weather (persistent rains, overcast and fog, high humidity and low evapotranspiration rates) greatly curtails drought and fire, which are prominent disturbance forces in most other ecosystems. Instead, wind disturbance associated with North Pacific storms largely drives forest dynamics along the West Coast. Wind disturbance regimes (exposure to or protection from catastrophic winds) greatly influence landscape patterns of forest structure, stand ages, and levels of live tree decay (heart rot).

The ecology of Southeast Alaska is a product of natural and human disturbances. While wildfire does not play a significant role in the ecosystem dynamics of Southeast Alaska, the cumulative effects of all disturbances across this landscape throughout the past 60-70 years has altered this area enough to warrant a closer look at its current conditions. Where decades of fire suppression in fire-adapted ecosystems of the lower 48 states has been a primary human induced stressor that beckons restoration activities, timber management in the middle 1900's has brought about the need for restoration in some landscapes on the Tongass.

Much like fire adapted communities are responding to years of fire suppression, and the west side forests of Oregon are responding to ecological conditions of legacy timber harvest practices, so is the Tongass National Forest responding to human induced changes in the ecological process of several key watersheds. This collaborative restoration proposal is the result of our analysis of the ecosystem functions within the Staney project area, and the desire to provide restoration activities where ecosystem functions have been adversely altered, while enhancing other resource management opportunities where we can.

UTILIZATION:

Over twenty-eight thousand (28,000) acres of young growth forest exists in the project area. Over 15,500 of these acres are in a stem exclusion phase, in which little deer forage is being produced. The remaining 12,500 acres harvested since 1980 will soon enter stem exclusion. At least 4,000 acres of these young growth stands are located on low elevation, medium to high value deer winter range. These 4,000 acres of valuable habitat is also within Wildlife Analysis Area (WAA) 1422, which is consistently one of the highest deer producing WAA's in all of Game Management Unit 2 (Prince of Wales Island). There is a shared concern among most stakeholders that the ecological affect of these stem excluded stands over time will manifest predominantly in a reduction of deer population and/or availability of deer to humans and other predators.

The average age of these stands is too young to promote economically viable commercial thinning opportunities for conventional timber (sawlog) markets. It is widely recognized among terrestrial habitat biologists that some kind of habitat treatment in the near-term will have a high potential for averting the potentially negative effects of stem exclusion, by increasing stand-level and landscape level biodiversity. Ongoing studies and future monitoring will continue to provide information critical to adaptive management decision-making over time, while near-term treatments may provide opportunities to improve the existing condition, create jobs, and begin testing the utility of young growth thinning byproducts. The effectiveness of these treatments will be monitored over time.

This project assumes there will be a range of treatment types in these 15,500 acres of stem-excluded, pre-commercial aged forest. On Land Use Designations (LUD's) where commercial timber management is not an objective, treatments will be designed to achieve a faster return to old growth character and function. When applicable, and supported by the underlying LUD, restoration by-products such as logs and slash may be removed from the treated stands to achieve ecological benefit. From variable spaced canopy gaps to "thin from below" commercial thinning prescriptions such as "skips and gaps" it is possible that approximately 3 thousand board feet (mbf) per acre on average could be removed as a result of habitat treatments that encourage understory response and large tree development over time. Removal of wood in some situations will be undesirable as a result of potential damage to residual trees, or harvesting system inefficiencies. A conservative estimate of removed material at 3 mbf per acre on average across the project area of small diameter material may yield 84 mmbf over the course of 10 years, with an average diameter at breast height (dbh) of 8-12 inches.

Two recent Integrated Resource Stewardship Contracts (IRSC's) awarded on Prince of Wales Island have promoted the exploration of mechanized harvesting equipment, round log processing equipment (for construction materials and log homes), dimension lumber markets, and biomass utilization (chips, bricks and pellets). One of the IRSC operators has requested and been granted a permit for the export of a portion of the young growth Sitka spruce logs removed under these stewardship contracts. These export endeavors appear to be economically viable at this time, although they do not entirely match the desired condition of increased domestic processing for maximum economic efficacy to local communities. While markets for round-log export may be a viable short term option, the Tongass and our collaborators must find an appropriate scale at

which export will be allowed.

A group of small operators in the Thorne Bay area on Prince of Wales Island have recently developed a Biomass Cooperative, in which they believe their existing old growth sawmill residues, in addition to young growth thinning byproducts, will make for an economically viable brick and pellet facility. Funding for the brick and pellet infrastructure has not been secured and markets for their products must still be cultivated. That said, new markets and equipment renovations will not occur without a stable supply of fiber from both the high-value old growth timber resource for which their mills are presently tooled.

It is anticipated however, that a sizeable percentage of restoration by-product fiber could augment an industry operators fiber supply needs for biomass applications such as chips, bricks and pellets for domestic and commercial heating applications. The potential for woody biomass to replace petroleum is directly proportional to the cost of fuel oil, upon which many households and businesses in Alaska are dependent for their space heating needs. If both old growth and young growth fiber supplies stabilize, and fuel costs continue to rise, the demand for woody biomass will increase, making this locally grown biomass facility much more likely.

Identified in-stream restoration objectives for salmon enhancement within and adjacent the Staney project area will be another source of demand for young growth habitat treatment byproducts. While it is difficult to predict the total volume needed, a recent in-stream restoration project on Prince of Wales required roughly 700 pieces in varying sizes for use as woody debris in streams, and punchon for equipment access trails performing the in-stream restoration activities.

In summary, the utilization of fiber removed from within the project area remains a variable for the industry and agency to further evaluate. Some operators are already beginning to purchase new processing equipment capable of handling this small diameter material. These investments have allowed, at a very small scale, the exploration of new markets for small diameter material from Alaska, and have prompted some independent operators to form a cooperative entity looking to enhance their woody biomass utilization. Significant financial investment in the local industry and stabilization of a federal timber supply for decades to come is required for a successful transition to a young growth industry where woody biomass utilization is part of an integrated and economically viable timber industry.

INVESTMENTS:

Anticipated federal investments into the Staney Community Forestry Landscape includes appropriated funding for the 2010 and 2011 Program of Work. (These investments are summarized in Funding Estimate section below.) Funding beyond 2011 is anticipated to be consistent with 2010 and possibly increase over time as multi-party monitoring efforts validate restoration prescription effectiveness. Additional watershed inventory and planning activities within the project area are also anticipated to identify potential restoration activities, consistent with the Staney Collaborative Workgroup DFC's and the Tongass Land Management Plan.

Since 2005, the Tongass National Forest has enjoyed a successful partnership with The Nature Conservancy and Trout Unlimited, both of whom have brought considerable funding to salmon stream restoration projects in the Sal, Ratz and more recently, Harris River Watersheds, spending an estimated \$600,000 in cash and in-kind contributions for in-stream restoration projects. Since 2007, local forest officials have been discussing project opportunities with the Mule Deer Foundation, though no formal agreements have been established at this time. Other partnering organizations, such as The Wilderness Society have brought personnel and in-kind contributions to the collaborative efforts of the Staney Community Forestry Project area. It is anticipated that some level of funding from non-profit organizations, especially for in-stream restoration will be available in the near future.

As young growth stands mature into commercial products, and the impacts of stem exclusion compel some level of intermediate treatment, the timber industry is slowly investing in new harvesting and processing equipment which will facilitate many of the treatments planned for this project area. This equipment will improve the utilization of restoration by-product developed from treated areas. These investments are substantial, ranging from 15,000 to 20,000 dollars for individual pieces of secondary processing equipment like planers and pole peelers. It can cost between 200,000 and 500,000 dollars for each used/new forwarder/harvester equipment, which is presently being leased by local USFS stewardship contractors.

With these non-federal investments, capacity for restoration activities and commercial wood processing is increased. This increased capacity and industry investment should yield reduced per unit restoration costs, while allowing participating industry operators to develop new markets for restoration by-products, which could further increase the value of small diameter material and further decrease unit costs.

The current timber industry is depressed from significant declines in timber supply from federal lands over the past decade. Work provided by CFLR funding and the Staney Community Forestry Project could assist in the stabilization of some industry operators, which is critical economic objective for small rural communities on Prince of Wales Island. Furthermore, other operators and/or businesses outside the timber industry may also benefit from a more reliable supply of work in the restoration arena. Typical jobs would include road maintenance, reconstruction and/or decommissioning; fish passage maintenance and/or restoration; pre-commercial and commercial thinning; and, young growth wood processing. Ideally, local markets for young growth products will spur further job development in the area.

It is desired that these increased economic opportunities will create nearly-year round, family wage jobs within our depressed rural communities. However, it is recognized without a stable funding source and a stable fiber supply on which the industry can make further investments, most jobs will likely be seasonal in nature, and persist for 3-5 years on average. If a stable fiber supply can be attained through increased collaboration and community based forestry initiatives, many partners believe that a more stable workforce can return to southeast Alaska, thus meeting the desired condition of a stable, year-round, family-wage workforce.

Treatments for Restoration Economic Analysis Tool (TREAT) was used to estimate the number of jobs and labor income created under the CFLRP. An investment of \$8,475,000 over a ten year period will have the annual impact of creating 28.6 part-time and full time jobs, worth an estimated \$1,019,795 of direct, indirect and induce income, annually (Table 3).

| | Average Annual Impacts | |
|---|--|--|
| | Employment (# of part and full-time jobs) | Labor Income (2009 dollars) |
| Commercial Forest Products | 7.2 | \$375,924 |
| Other Project Activities | 11.0 | \$458,195 |
| FS Implementation and Monitoring | 10.5 | \$185,675 |
| Total Project Impacts | 28.6 | \$1,019,795 |

A key ingredient to this long-term objective is job training opportunities for youth in resource and restoration management activities. The Tongass National Forest has a strong history of partnership and cooperation with the Youth Conservation Corps and the Southeast Alaska Guidance Association - both of whom support youth job training opportunities in rural communities. Two local school districts on Prince of Wales Island, are presently pursuing a vocational education program with wood-products facilities (secondary processing mills for wood product development). If either of these ventures is successful, the link to a collaborative community forestry initiative and a healthy wood products industry would be important to both the Forest Service and the School District, as a means to perpetuate a sustainable natural resource based workforce in Southeast Alaska. The Tongass National Forest is also working closely with many Native Alaskan communities, especially those on Prince of Wales, to increase the rate of Native Alaskan employment in natural resource management fields.

The University of Alaska, Cooperative Extension is an active provider of job training for the local wood products industry. The Extension has a half-time position stationed on Prince of Wales that works with local industry operators on their efforts to increase value-added wood products and biomass utilization efforts. The Forest Service has a strong partnership with this position and has consistently supported this program through staff and facilities support to provide relevant training to the wood products industry, as well as innovative supply programs, such as the collaboratively developed Microsale program. The Microsale program has been a mainstay for several micro-mills on Prince of Wales Island. These past endeavors and a persistent relationship are a model of success that will help promote the existing industries involvement and benefit from the projects and concepts being pursued in a transition from an old growth to young growth industry over time.

FUNDING ESTIMATE:

| Fiscal Year 2010 Funding Type | Dollars/Value Planned |
|--|------------------------------|
| FY 2011 Funding for Implementation | \$310,000 |
| FY 2011 Funding for Monitoring | \$100,000 |
| 1. USFS Appropriated Funds | \$410,000 |
| 2. USFS Permanent & Trust Funds | \$0 |
| 3. Partnership Funds | \$0 |
| 4. Partnership In-Kind Services Value | \$0 |
| 5. Estimated Forest Product Value | \$0 |
| 6. Other (specify) | |
| FY 2011 Total (total of 1-6 above for matching CFLRP request) | \$410,000 |
| FY 2011 CFLRP request (must be equal to or less than above total) | \$205,000 |
| Funding off NFS lands associated with proposal in FY 2010 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund) | |
| Fiscal Year 2010 Funding Type | Dollars Planned |
| USDI BLM Funds | |
| USDI (other) Funds | |
| Other Public Funding | |
| Private Funding | |

| Fiscal Year 2011 Funding Type | Dollars/Value Planned |
|--|------------------------------|
| FY 2011 Funding for Implementation | \$347,000 |
| FY 2011 Funding for Monitoring | \$140,000 |
| 1. USFS Appropriated Funds | \$487,000 |
| 2. USFS Permanent & Trust Funds | Unknown |
| 3. Partnership Funds | Unknown |
| 4. Partnership In-Kind Services Value | \$150,000 |
| 5. Estimated Forest Product Value | \$22,500 |
| 6. Other (specify) | |
| FY 2011 Total (total of 1-6 above for matching CFLRP request) | \$659,500 |
| FY 2011 CFLRP request (must be equal to or less than above total) | \$659,500 |
| Funding off NFS lands associated with proposal in FY 2011 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund) | |
| Fiscal Year 2011 Funding Type | Dollars Planned |
| USDI BLM Funds | |
| USDI (other) Funds | |
| Other Public Funding | |
| Private Funding | |

| Fiscal Year 2012 Funding Type | Dollars/Value Planned |
|--|------------------------------|
| FY 2012 Funding for Implementation | \$400,000 |
| FY 2012 Funding for Monitoring | \$240,000 |
| 1. USFS Appropriated Funds | \$640,000 |
| 2. USFS Permanent & Trust Funds | |
| 3. Partnership Funds | |
| 4. Partnership In-Kind Services Value | \$100,000 |
| 5. Estimated Forest Product Value | \$30,500 |
| 6. Other (specify) | |
| FY 2012 Total (total of 1-6 above for matching CFLRP request) | \$770,500 |
| FY 2012 CFLRP request (must be equal to or less than above total) | \$700,500 |
| Funding off NFS lands associated with proposal in FY 2012 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund) | |
| Fiscal Year 2012 Funding Type | Dollars Planned |
| USDI BLM Funds | |
| USDI (other) Funds | |
| Other Public Funding | |
| Private Funding | |

| Fiscal Year 2013 Funding Type | Dollars/Value Planned |
|--|------------------------------|
| FY 2013 Funding for Implementation | \$400,000 |
| FY 2013 Funding for Monitoring | \$240,000 |
| 1. USFS Appropriated Funds | \$640,000 |
| 2. USFS Permanent & Trust Funds | |
| 3. Partnership Funds | Unknown |
| 4. Partnership In-Kind Services Value | \$100,000 |
| 5. Estimated Forest Product Value | \$45,000 |
| 6. Other (specify) | |
| FY 2013 Total (total of 1-6 above for matching CFLRP request) | \$785,000 |
| FY 2013 CFLRP request (must be equal to or less than above total) | \$785,000 |
| Funding off NFS lands associated with proposal in FY 2013 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund) | |
| Fiscal Year 2013 Funding Type | Dollars Planned |
| USDI BLM Funds | |
| USDI (other) Funds | |
| Other Public Funding | |
| Private Funding | |

| Fiscal Year 2014 Funding Type | Dollars/Value Planned |
|--|------------------------------|
| FY 2014 Funding for Implementation | \$400,000 |
| FY 2014 Funding for Monitoring | \$240,000 |
| 1. USFS Appropriated Funds | \$640,000 |
| 2. USFS Permanent & Trust Funds | |
| 3. Partnership Funds | Unknown |
| 4. Partnership In-Kind Services Value | \$75,000 |
| 5. Estimated Forest Product Value | \$75,000 |
| 6. Other (specify) | |
| FY 2014 Total (total of 1-6 above for matching CFLRP request) | \$790,000 |
| FY 2014 CFLRP request (must be equal to or less than above total) | \$790,000 |
| Funding off NFS lands associated with proposal in FY 2014 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund) | |
| Fiscal Year 2014 Funding Type | Dollars Planned |
| USDI BLM Funds | |
| USDI (other) Funds | |
| Other Public Funding | |
| Private Funding | |

| Fiscal Year 2015 Funding Type | Dollars/Value Planned |
|--|------------------------------|
| FY 2015 Funding for Implementation | \$400,000 |
| FY 2015 Funding for Monitoring | \$240,000 |
| 1. USFS Appropriated Funds | \$640,000 |
| 2. USFS Permanent & Trust Funds | |
| 3. Partnership Funds | Unknown |
| 4. Partnership In-Kind Services Value | \$50,000 |
| 5. Estimated Forest Product Value | \$120,000 |
| 6. Other (specify) | |
| FY 2015 Total (total of 1-6 above for matching CFLRP request) | \$710,000 |
| FY 2015 CFLRP request (must be equal to or less than above total) | \$710,000 |
| Funding off NFS lands associated with proposal in FY 2014 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund) | |
| Fiscal Year 2015 Funding Type | Dollars Planned |
| USDI BLM Funds | |
| USDI (other) Funds | |
| Other Public Funding | |
| Private Funding | |

| Fiscal Year 2016 Funding Type | Dollars/Value Planned |
|--|------------------------------|
| FY 2016 Funding for Implementation | \$400,000 |
| FY 2016 Funding for Monitoring | \$240,000 |
| 1. USFS Appropriated Funds | \$640,000 |
| 2. USFS Permanent & Trust Funds | |
| 3. Partnership Funds | Unknown |
| 4. Partnership In-Kind Services Value | \$25,000 |
| 5. Estimated Forest Product Value | \$240,000 |
| 6. Other (specify) | |
| FY 2016 Total (total of 1-6 above for matching CFLRP request) | \$905,000 |
| FY 2016 CFLRP request (must be equal to or less than above total) | \$905,000 |
| Funding off NFS lands associated with proposal in FY 2016(does not count toward funding match from the Collaborative Forested Landscape Restoration Fund) | |
| Fiscal Year 2016 Funding Type | Dollars Planned |
| USDI BLM Funds | |
| USDI (other) Funds | |
| Other Public Funding | |
| Private Funding | |
| Fiscal Year 2017 Funding Type | Dollars/Value Planned |
| FY 2017 Funding for Implementation | \$400,000 |
| FY 2017 Funding for Monitoring | \$240,000 |
| 1. USFS Appropriated Funds | \$640,000 |
| 2. USFS Permanent & Trust Funds | |
| 3. Partnership Funds | Unknown |
| 4. Partnership In-Kind Services Value | \$15,000 |
| 5. Estimated Forest Product Value | \$360,000 |
| 6. Other (specify) | |
| FY 2017 Total (total of 1-6 above for matching CFLRP request) | \$1,015,000 |
| FY 2017 CFLRP request (must be equal to or less than above total) | \$1,015,000 |
| Funding off NFS lands associated with proposal in FY 2017 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund) | |
| Fiscal Year 2017 Funding Type | Dollars Planned |
| USDI BLM Funds | |
| USDI (other) Funds | |
| Other Public Funding | |
| Private Funding | |

| Fiscal Year 2018 Funding Type | Dollars/Value Planned |
|--|------------------------------|
| FY 2018 Funding for Implementation | \$400,000 |
| FY 2018 Funding for Monitoring | \$240,000 |
| 1. USFS Appropriated Funds | \$640,000 |
| 2. USFS Permanent & Trust Funds | |
| 3. Partnership Funds | Unknown |
| 4. Partnership In-Kind Services Value | \$5,000 |
| 5. Estimated Forest Product Value | \$540,000 |
| 6. Other (specify) | |
| FY 2018 Total (total of 1-6 above for matching CFLRP request) | \$1,185,000 |
| FY 2018 CFLRP request (must be equal to or less than above total) | \$1,185,000 |
| Funding off NFS lands associated with proposal in FY 2018 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund) | |
| Fiscal Year 2018 Funding Type | Dollars Planned |
| USDI BLM Funds | |
| USDI (other) Funds | |
| Other Public Funding | |
| Private Funding | |

| Fiscal Year 2019 Funding Type | Dollars/Value Planned |
|--|------------------------------|
| FY 2019 Funding for Implementation | \$400,000 |
| FY 2019 Funding for Monitoring | \$240,000 |
| 1. USFS Appropriated Funds | \$640,000 |
| 2. USFS Permanent & Trust Funds | |
| 3. Partnership Funds | Unknown |
| 4. Partnership In-Kind Services Value | \$5,000 |
| 5. Estimated Forest Product Value | \$600,000 |
| 6. Other (specify) | |
| FY 2019 Total (total of 1-6 above for matching CFLRP request) | \$1,245,000 |
| FY 2019 CFLRP request (must be equal to or less than above total) | \$1,245,000 |
| Funding off NFS lands associated with proposal in FY 2019 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund) | |
| Fiscal Year 2019 Funding Type | Dollars Planned |
| USDI BLM Funds | |
| USDI (other) Funds | |
| Other Public Funding | |
| Private Funding | |

FUNDING PLAN:

The Alaska Region is committed to funding the ecological restoration treatments in the Staney project area. The Region has fiscal year 2010 appropriated monies to implement restoration treatments like in-stream rehabilitation, wildlife habitat enhancement thinning, road storage, red pipe removal and young growth treatment monitoring. In fiscal year 2011, the Region plans to prioritize appropriations to continue similar restoration treatments. The Region and the Tongass National Forest has the capability to use CFLR funds allocated in fiscal year 2010 and 2011 on ecological restoration the same year the funds are transferred.

Monitoring will be led by the Tongass National Forest and Pacific Northwest Research Station with partners such as The Nature Conservancy, Wilderness Society and the local Staney collaborative group. Monitoring research is already underway with such efforts as the Tongass-wide Young Growth Study (TWYGS) and Prince of Wales Commercial Thinning Study. Multiparty monitoring will continue for at least 15 years to assess ecological, social and economic effects.

USDI FUNDING: Not proposed

OTHER FUNDING: Not proposed.

MAPS:

Project Maps for the Staney Community Forestry Project have been posted at www.staneycreek.org.

LANDSCAPE STRATEGY:

The Landscape Strategy for the Staney Community Forestry Project has been posted for review and continuous improvement at www.staneycreek.org.