The Nature Conservancy's General Restoration Priorities for Southeast Alaska

(In order of highest priority)

1. Aquatic

    - Red pipes
    - Instream
    - Riparian thinning

2. Road storage

    - Hydrologic connectivity
    - Water quality
    - Wildlife security

3. Terrestrial

    - Pre-Commercial Thinning (PCT) – non development LUDs with bio diversity goals
        a. Younger (10 – 25 years) YG
        b. Older (25+ years) YG –defer until the treatment by products have value
    - Commercial thinning – A priority at any time that the treatment by products have value to help offset the cost of the treatment

Aquatic restoration is the higher priority because of The Nature Conservancy's (TNC) belief that the Tongass is a salmon forest and because fish are usually more restricted than land animals in accessing appropriate habitat. Red pipes (culverts that do not pass fish) are very numerous on the forest and fixing them is an effective way to re-open lost habitat for salmon. Red pipes can be prioritized by considering the total length of stream habitat that will be made available, the number of fish species that will potentially use the habitat, and the plans (stored, closed, open, etc.) for the section of road where the pipe exists. Instream work such as adding woody debris, fixing unstable banks, and restructuring altered stream courses has limited opportunities, is very expensive, but improves affected salmon habitat. Riparian thinning is relatively inexpensive, has a long payback period, but may accelerate the development of large wood recruitment for future habitat maintenance.

Road storage is expensive but has multiple restoration benefits including re-establishing interrupted hydrologic connectivity when non-functioning stream crossings are removed. Water quality also can be improved when non-maintained roads are removed or fixed. Connectivity and water quality are higher priority because of salmon forest considerations. Road removal and storage can improve wildlife security by restricting access to sensitive areas.

Terrestrial restoration usually involves YG thinning. Restoration thinning objectives remove trees to improve stand diversity and/or promote understory production. Restoration PCT prescriptions can be spaced thinning, gap thinning, variable density with skips and gaps. PCT is inexpensive because small trees (<25 years) are cut. This minimizes slash problems; it wind-firms the stand allowing for more future treatment options. PCT can be accomplished by non-skilled workers with basic equipment. Older pre-commercial thinning (25+ years) is more expensive and problematic. The cut trees are usually larger. This increases the slash loading, and requires skilled workers and more specialized equipment to implement (especially if the slash is treated). These stands can be more prone to blow down and snow loading after treatment. With patience these older stands can begin to pay for their treatment as they attain commercial size. For younger stands (<25 years) variable density thinning with skips is the preferred prescription. Gaps in younger PCT can be short-lived because of in-growth from small seedlings. Gap treatments are better suited for older PCT stands that have post treatment wind and snow concerns. The best landscape plan is to use a variety of PCT treatments (including no treatment areas) across the landscape to create diversity for all resources. All things being equal, restoration thinning in non-development LUDs is a higher priority than in Timber LUDs. This is a result of long-term benefits (won't be logged) and historically more funding has been available for timber production stands.

TNC supports commercial restoration thinning. It is less expensive, produces by products with value, and supports the transition out of old growth. Commercial restoration thinning will happen when there is a market (e.g. wood energy plant, post and pole plant, etc.) for the by products of the treatment and when an economy of scale has been reached to efficiently supply the markets.

Restoration considerations for Native Village Corporations will probably be very similar, but will depend on the priorities of the ownership and the ownership management plan. Once a treatment has been implemented the treated area will then be on a management trajectory dictated by the treatment. An example is: a gap treatment will add diversity and wildlife benefits to a stand, but will not add timber production benefits to the stand, so the stand will become more important for habitat and less important for timber production.