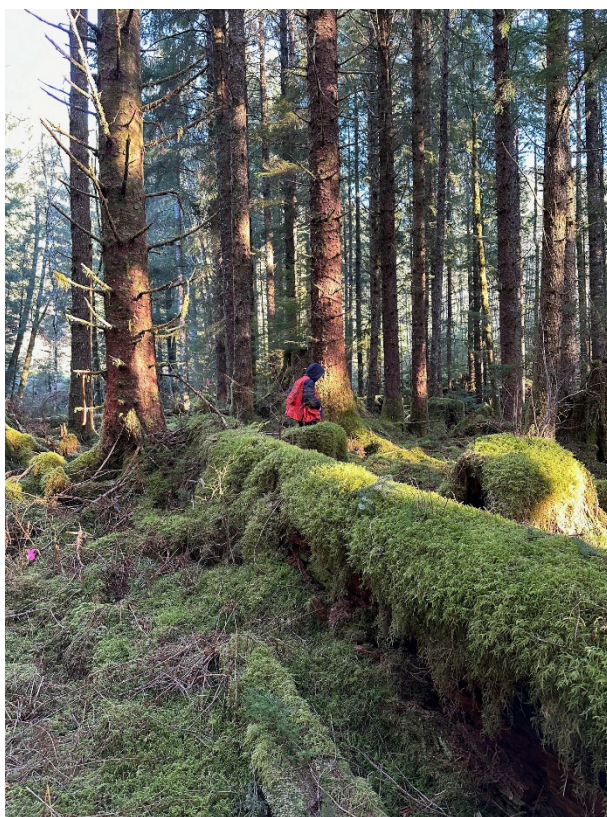


Southeast Alaska Young-Growth Working Forest Analysis: All Ownerships Addendum

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Executive Summary

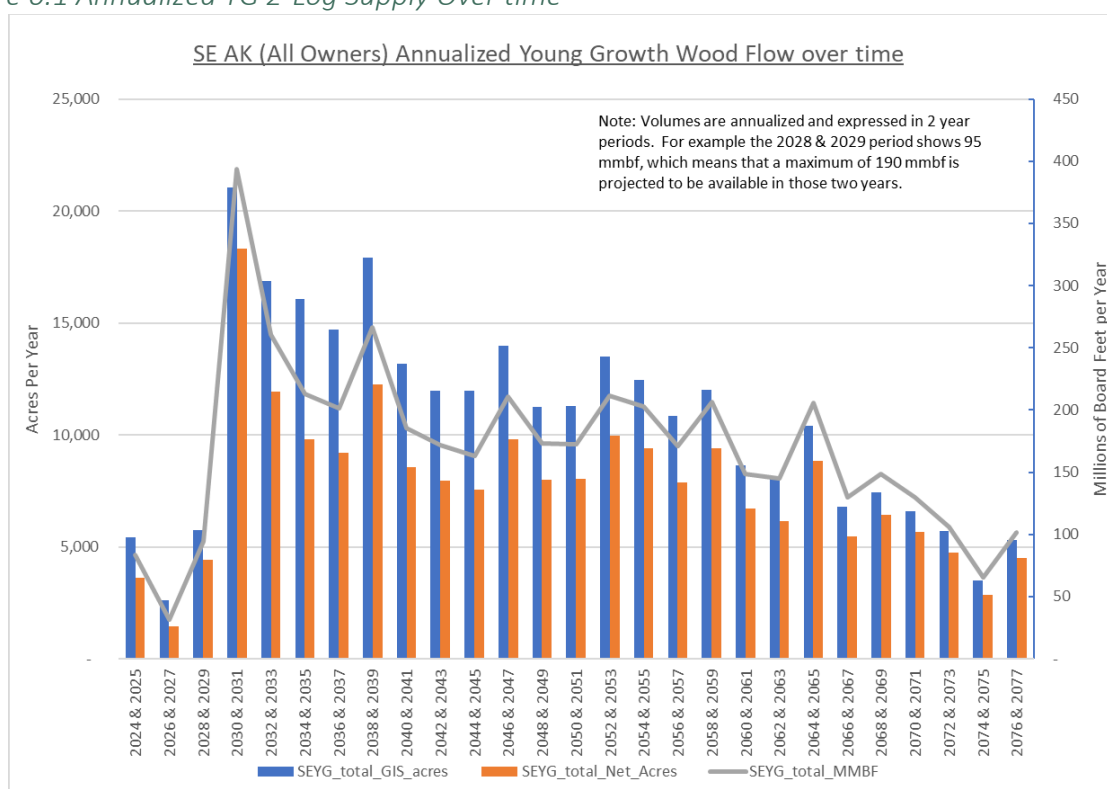
This report expands the 2020 Tongass National Forest young-growth analysis to encompass all forest ownerships in Southeast Alaska, providing a comprehensive assessment of timber availability from 2024 to 2124. The analysis reveals that significant volumes of young-growth timber will become available across all ownerships over the next century, with significant variations in timing and operability between ownership categories.

Key Findings:

- Approximately 495,000 acres net of regulatory restrictions after applying ownership-specific constraints
- Limited volume is available before 2030, but significant supplies emerge 2030-2038.
- ANCSA lands, Sealaska in particular, holds substantial acreages of near-term supply due to advanced age classes on central Prince of Wales Island and in Sea Otter Sound.
- Ownership distribution: USFS (50.2%), ANCSA corporations (37.6%), State of Alaska (8.5%), Others (3.7%)
- Operability (acreage net downs) varies dramatically with federal lands average 59% operable; non-federal lands 96%-98% operable

The stark difference in operability between federal and non-federal lands fundamentally shapes Southeast Alaska's timber supply outlook. While USFS lands contain the largest total volume, their lower operability means actual harvest potential is more evenly distributed across ownerships than gross acres would suggest.

Figure 0.1 Annualized YG 2-Log Supply Over time



1. Introduction

1.1 Project Purpose and Scope Expansion

In 2020, Terra Verde Inc. completed a comprehensive analysis of young-growth timber availability on the Tongass National Forest. That analysis, while thorough, was limited to federal lands and provided only a partial picture of Southeast Alaska's emerging young-growth timber economy. This 2025 addendum addresses that limitation by incorporating all forest ownerships in the region, updating the baseline data, and extending the analysis to reflect current conditions.

The expanded scope includes the following phases:

1. Growth and yield analysis of young-growth stands across all ownerships
2. Time-lapse mapping showing when and where timber becomes economically viable
3. Development of a young-growth harvest timeline identifying operational opportunities
4. Assessment of near-term (20-year) harvest potential with fall-down analysis
5. Account for recent depletions on Kosciusko Island and at Vallenar Bay

This comprehensive approach enables forest managers, industry stakeholders, and policymakers to understand the full scope of Southeast young-growth timber resource.

1.2 Study Area and Ownership Categories

The study area extends from Yakutat to Metlakatla, encompassing the Tongass National Forest and all interspersed and adjacent forest lands. The analysis includes six major ownership categories:

- U.S. Forest Service (Tongass National Forest): 405,234 GIS acres of young-growth
- Alaska Department of Natural Resources (AKDNR): 43,678 GIS acres
- Sealaska Corporation (Regional ANC): 94,780 GIS acres
- Twelve Village Corporations (ANCs): 103,717 GIS acres combined
 - Cape Fox, Goldbelt, Haida Corporation, Huna Totem, Kake Tribal, Kavilco, Klawock-Heenya, Kootznoowoo, Klukwan/Long Island Trust, Shaan-Seet, Shee Atika, Yak-Tat-Kwaan
- Alaska Mental Health Trust: 5,226 GIS acres
- University of Alaska: 2,573 GIS acres
- All Others: 10,937 GIS acres combined
 - Municipal lands, private holding, Reservation/BIA lands and all other categories

2. Methods

2.1 Data Updates and Integration

Building upon the 2020 Tongass analysis, this study integrated multiple data sources to create a comprehensive inventory of young-growth stands across all ownerships:

Inventory Enhancement:

- Added approximately 925 plots through this effort and trained three village-based crews in basic timber inventory methodologies
- Bolstered the sample on younger age classes and non-federal lands



- Integrated non-federal timber mapping that matched the methodology of the federal lands project to create one, seamless map of Southeast Alaska’s young-growth resource
- Updated site index values and added for all ownerships for improved growth projections

2.2 Net-Down Analysis Refinements

The net-down analysis reveals significant variation in operational constraints across ownership categories, with average reductions ranging from 1% to 41% of gross acreage. These differences reflect the distinct regulatory frameworks, management objectives, and physical characteristics associated with each ownership type.

Federal lands under US Forest Service management exhibit the highest net-down percentage at 40.9%, indicating substantial operational limitations due to federal regulations and land management directives. The USFS analysis methodology remains consistent with the 2020 baseline study and incorporates comprehensive evaluation criteria including wilderness designations, roadless area restrictions, slope limitations, wildlife habitat protections, and other federal land management constraints. The USFS net-down analysis, while comprehensive in scope, represents a conservative estimate of actual operational limitations on federal lands. The 41% reduction incorporates only those regulatory constraints that can be systematically tracked and mapped through remote analysis methods. This figure does not account for additional operational limitations discovered during field-level implementation, nor does it reflect constraints associated with silvicultural prescriptions beyond even-aged management systems.

Real-world operational experience demonstrates that actual net-downs substantially exceed the analytical projections. The Kosciusko Good Neighbor Authority project exemplifies this disparity, experiencing an additional 57% reduction in harvestable acreage between the areas identified in the environmental assessment and the areas ultimately laid out and harvested. This additional reduction occurred despite the environmental assessment areas having already undergone the standard net-down analysis, highlighting the significant gap between desktop analysis capabilities and field-level operational realities on federal lands. These findings indicate that the 40.9% USFS net-down should be considered a minimum baseline rather than a definitive operational constraint figure. Actual timber availability on federal lands may be substantially lower than analytical projections suggest, with field-level implementation revealing additional limitations not captured in remote mapping protocols.

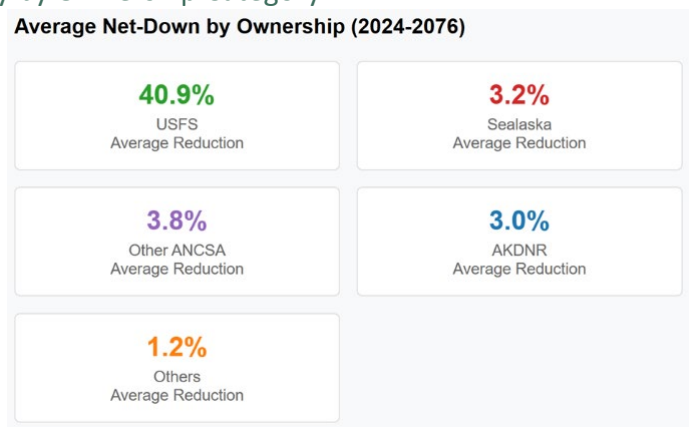
Non-federal ownerships demonstrate considerably lower net-down percentages, with relatively modest variation among categories. ANCSA corporation lands show net-downs of 3.8% (Other ANCSA) and 3.2% (Sealaska), while Alaska Department of Natural Resources lands experience a 3.0% reduction. The "Others" ownership category exhibits the lowest net-down at 1.2%. These reductions reflect application of Alaska Forest Resources and Practices Act standards, with variations primarily attributable to site-specific conditions including fish stream buffer requirements and other regulatory protections. The reader should keep in mind that a substantial amount of non-federal harvest took place after the 1990 amendment of the Alaska



Forest Practices Act (FRPA), which is designed to protect water quality, anadromous fish and forest productivity. This act created a network of riparian buffer areas that remain as old-growth. As a result, many resource buffer areas are already backed out of the working young-growth land base for non-federal forests.

The differential impact of regulatory frameworks across ownership types significantly influences operational planning and timber availability projections. Federal lands face substantially greater constraints than non-federal ownerships, while variations among non-federal categories reflect the complexity of stream buffers, terrain characteristics, and other site-specific limiting factors.

Table 2.1: Operability by Ownership Category



2.3 Growth Projections and 2-Log Analysis

Consistent with the 2020 methodology, we applied the "2-log rule" threshold where stands become economically viable when at least 50% of volume comes from trees with two or more merchantable logs. Growth projections used:

- Localized site index values by stand
- Species-specific growth functions
- Merchantability specifications: 34-foot logs, 6-inch top, 9-inch DBH minimum
- 5% deduction for breakage and defect

Each stand was grown in 2-year increments through 2124, with the first year reaching 2-log criteria recorded as the stand's economic availability date.

3. Results

3.1 Forest-Wide Timber Inventory

The comprehensive inventory across all forest ownerships in Southeast Alaska reveals a substantial young-growth timber resource base that will fundamentally reshape the region's forest economy over the coming century. The analysis identified 666,145 gross acres of young-growth forest distributed across federal, state, and Native corporation lands, representing the

most complete assessment of the region's emerging timber supply to date. Application of ownership-specific net-down factors reduces the operationally available resource to 495,009 acres, representing a 25.7% overall reduction from gross acreage. This net-down varies dramatically by ownership category, with federal lands experiencing a 40.9% reduction compared to just 1.2% to 3.8% for non-federal ownerships. The differential impact of regulatory constraints creates a more balanced distribution of operable timber across ownership categories than gross acreage figures would suggest.

The U.S. Forest Service maintains the largest single ownership block at 242,662 net acres (50.2% of total), but the combined ANCSA corporation holdings of 191,470 net acres (37.6% of total) represent a comparable resource base. This near-parity in operable acreage between federal and Native corporation lands marks a significant shift from historical patterns and establishes ANCSA corporations as major players in Southeast Alaska's timber future. State of Alaska lands contribute 42,362 net acres (8.5%), while other ownerships account for the remaining 18,515 acres (3.7%).

Sealaska Corporation emerges as the single largest non-federal landowner with 91,713 net acres, while the twelve village corporations collectively control 99,757 net acres distributed across the region. This geographic distribution of Native corporation lands creates opportunities for community-based forest management and ensures that timber benefits flow directly to Alaska Native communities throughout Southeast Alaska.

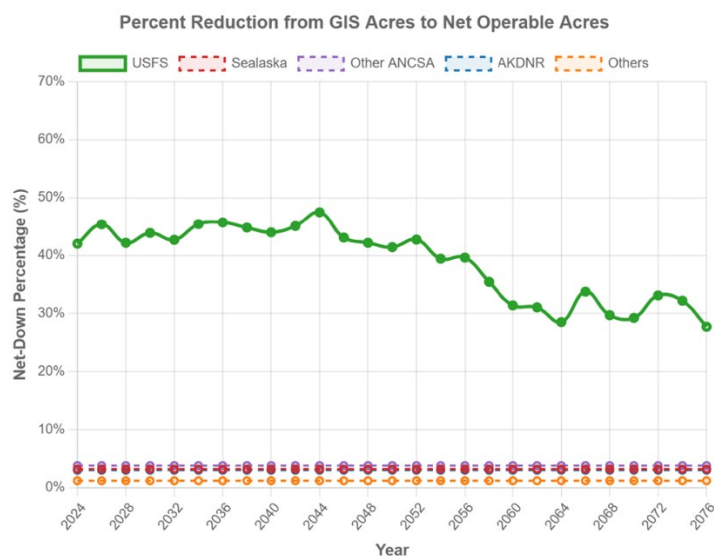
Table 3.1.1: Young-Growth Inventory Summary by Ownership

<u>Ownership</u>	<u>GIS Acres</u>	<u>Net Acres</u>	<u>% of Total</u>
USFS	405,234	242,662	50.2%
Sealaska	94,780	91,713	18.1%
Other ANCSA	103,717	99,757	19.5%
AKDNR	43,678	42,362	8.5%
All Others	18,736	18,515	3.7%
Total	666,145	495,009	100.0%



Figure 3.1.2: Acreage Net down over time

Timber Operability Analysis: Net-Down Percentages by Ownership



3.2 Temporal Distribution and 2-Log Analysis

The application of the 2-log merchantability threshold reveals a distinct temporal progression in timber availability that will define Southeast Alaska's young-growth resource. The analysis demonstrates that young-growth timber becomes viable in three distinct phases, each characterized by different volumes, geographic distributions, and ownership dynamics.

Foundation Building Period (2024-2029)

The immediate six-year period presents limited but strategically important timber volumes totaling 420 million board feet across ~9,500 operable acres. This represents an average annual potential of approximately 60 million board feet, concentrated primarily in scattered stands that achieved advanced age classes due to exceptional site productivity or early establishment dates. Federal lands dominate this period, providing 67% of the available volume, with State of Alaska contributing 18% and ANCSA corporations 15%.

The geographic concentration during this period creates both opportunities and challenges. Eight priority basins contain 85% of the near-term volume, with the Klawock-Hydaburg Roaded area alone providing 60 million board feet. However, the scattered nature of individual stands within these basins requires careful harvest planning to achieve economic viability. The Foundation period also reveals the impact of recent harvest activities, with significant depletion already occurring on Kosciusko Island and at Vallenar Bay.

Expansion Phase (2030-2040)

The decade beginning in 2030 represents a dramatic scaling of timber availability, with total volume increasing to 3.0 billion board feet across 140,106 operable acres. This nearly fifteen-fold increase in annual potential to an average of 276 million board feet marks the true beginning of scalable young-growth operations in Southeast Alaska. The ownership dynamics shift significantly during this period, with ANCSA corporations providing 42% of the volume compared to 47% from federal lands. Geographic clustering becomes pronounced during the Expansion phase, with the top eight basins containing 1.9 billion board feet (63% of total volume). The Klawock-Hydaburg Roaded basin emerges as the region's premier timber area with 309.8 million board feet, requiring complex coordination between multiple ANCSA corporations and federal managers. Kosciusko Island recovers to become the second-largest source at 255.8 million board feet, while new major sources emerge including the Tuxekan-Heceta-Marble Islands complex and expanded operations in the Kake Roaded area.

The Expansion phase also reveals the maturation of transportation-accessible areas, with roaded basins providing 1.6 billion board feet compared to 1.4 billion board feet from remote areas. This shift toward roaded access could reduce operational costs and enables smaller operators to participate in harvest activities, potentially broadening the economic benefits across Southeast Alaska communities.

Sustained Operations Period (2041 and beyond)

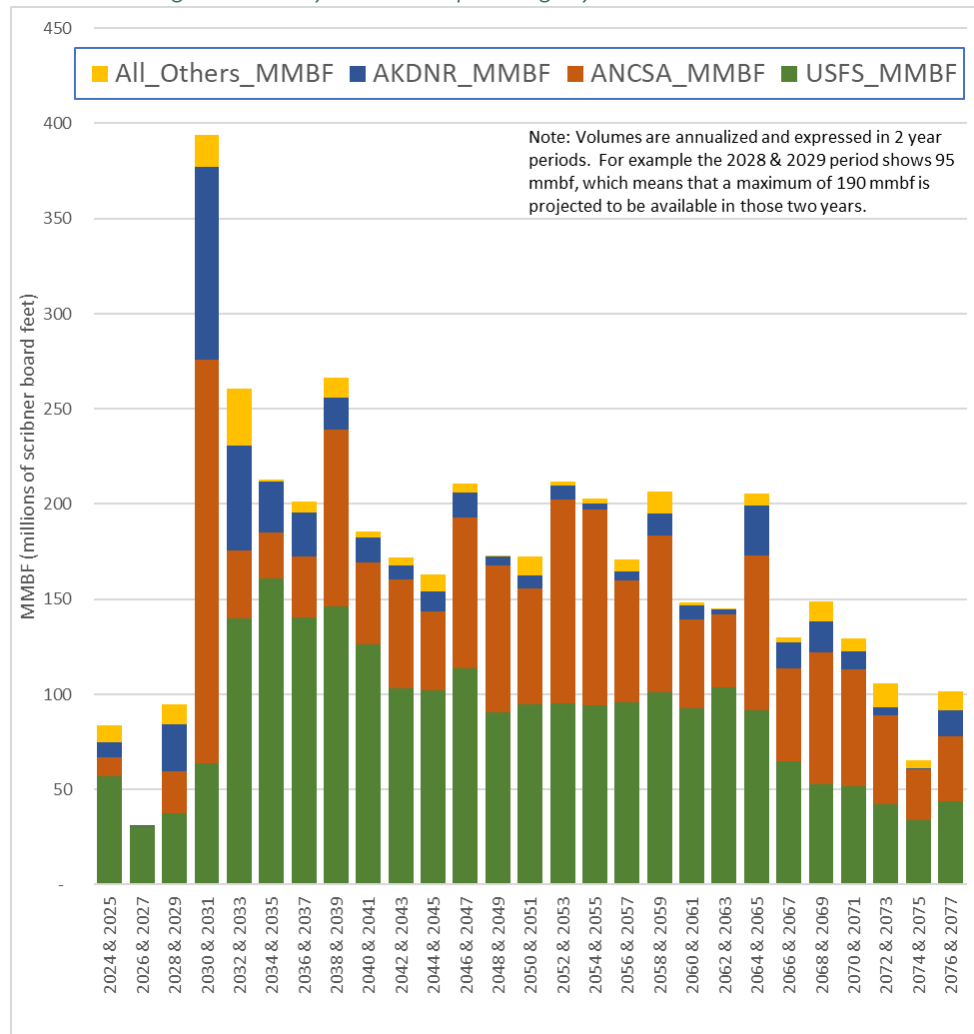
The long-term outlook demonstrates Southeast Alaska's capacity to support sustained yield forestry with 7.4 billion board feet available across 334,526 operable acres. ANCSA corporations achieve clear dominance during this period, controlling 55% of the timber volume compared to 42% for federal lands.

The Sustained period reveals the full geographic scope of the young-growth resource, with significant volumes distributed across 35 operational basins. The Klawock-Hydaburg Roaded area maintains its position as the largest single source with 883 million board feet, while new major sources emerge throughout the region. Notably, the Kake Roaded basin reaches 466.6 million board feet under ANCSA corporation control, and the Hoonah Roaded area provides 366 million board feet primarily on Huna Totem Corporation lands.

It should be noted that as old-growth harvests continue, additional acres will continue to be added to the young-growth land base and over the long term will have the effect of raising long term sustained yield and acres under active management. Future OG harvests may occur on state and federal lands depending on policy direction and market demand.



Figure 3.1: Annual 2-Log Volume by Ownership Category



4. Geographic and Operational Considerations

4.1 Explanation of the Basin-Level Analysis

This analysis was performed using compiled and grown timber inventory data to estimate the 2-log year (when timber would be available for harvest) and 2-log volume (thousand board feet available) for each stand in the Southeast Alaska timber inventory. This information was integrated into a Geographic Information System (GIS) to display the spatial location of each stand across the region. Using professional judgment and regional expertise, the timber stands were organized into operational "basins" - geographic areas with familiar names recognized by land managers throughout Southeast Alaska that represent logical operational units for timber harvest planning. This was done for the purpose of a shorthand explanation and a basis for analysis. There is every reason to redefine, combine and or subset these areas as time goes on. Each of these areas in each period will likely result in many timber sales, each with their own geographic boundaries and operational considerations.

The resulting dataset of 17,892 records was then systematically analyzed using data science techniques to identify patterns and priorities across three distinct time periods: Foundation Building (2024-2029), Expansion Phase (2030-2040), and Sustained Operations (2041 and beyond). The analysis employed statistical grouping methods to aggregate timber volumes by basin and landowner category, calculating percentage ownership stakes within each operational area. Critical thresholds were established to identify significant landowners, with any entity controlling 20% or more of the timber volume in a given basin during a specific time period being flagged as a required partner for successful operations.

The methodology involved systematically examining each time period to rank basins by total timber volume and identify the ownership composition within each priority area. This approach revealed not only which basins would be most productive during each phase, but also which specific landowners - including individual Alaska Native Corporation Settlement Act (ANCSA) corporations, Federal agencies, and State entities - would need to coordinate their efforts to enable large-scale timber operations. The analysis provided both quantitative rankings of operational priorities and qualitative insights into the partnership requirements necessary for successful timber harvest planning across Southeast Alaska's complex multi-ownership landscape.

4.2 Foundation Building Period (2024-2029)

The Foundation Building period represents the critical startup phase for Southeast Alaska's young-growth timber industry, with a maximum of 471 million board feet available across 20,387 operable acres, providing an average annual harvest potential of approximately 79 million board feet. This period is characterized by reliance on Federal lands, with the USDA Forest Service holding majority stakes in six of the eight priority basins, reflecting the near-term availability of Federal timber resources. However, successful operations will require sophisticated multi-party coordination, particularly in the basins where a three-way partnership between State agencies, ANCA corps, and Federal managers will be essential. Sealaska Corporation emerges as the dominant ANCSA player during this phase, holding significant stakes in the two largest basins - Kosciusko and Klawock-Hydaburg Roaded - necessitating early partnership development between Sealaska and Federal land managers. The relatively limited near-term volume compared to later periods demands focused, efficient operations that can establish the infrastructure and relationships necessary for the dramatic scaling that will occur in the expansion phase. State agencies also play a crucial role as a key partner in both Kosciusko and Thomas Bay areas.

Table 4.2.1 Foundation Phase High Priority Basins & Key Landowners (with ≥ 20% volume share)

Rank	Basin	Volume (Million BF)	Key Landowners (≥20%)
1	Kosciusko	10.0 (after depletions)	State ANCSA (30.9%), Fed (29.9%)
2	Klawock-Hydaburg Roaded	60.0	ANCSA (47.7%), Fed (39.5%)
3	N Thorne-Coffman-Naukati Roaded	54.3	Fed (90.3%)
4	Haines	52.7	State (81.8%)



5	Thomas Bay	41.1	Fed (71.5%), State (28.5%)
6	Tuxekan-Heceta-Marble Islands	36.0	Fed (80.9%)
7	Neets and Shrimp Bays	24.8	Fed (98.2%)
8	Staney-Bigsalt Roaded	19.7	Fed (84.8%)

4.3 Expansion Phase (2030-2040)

The Expansion phase (2030-2040) represents the major scaling period for Southeast Alaska's young-growth timber industry, with 3.0 billion board feet available across 140,106 operable acres, enabling a maximum average annual harvest potential of approximately 276 million board feet - more than triple the foundation period capacity. This dramatic increase in scale fundamentally shifts the ownership dynamics, as ANCSA corporations emerge as dominant players, leading four of the eight priority basins and requiring increasingly sophisticated partnership agreements. Klawock-Hydaburg Roaded becomes the mega-basin during this period, containing 309.8 million board feet and requiring complex three-way coordination between Klawock Heenya Corporation (28.4%), Federal managers (24.7%), and Sealaska Corporation (24.1%) with Shaan Seet and Haida Corp playing significant roles as well. Sealaska Corporation's influence expands significantly, holding major stakes in five of the eight top basins, while players like Kake Tribal Corporation emerge with controlling interests in the Kake Roaded basin (57.1% of 204.2 million board feet). The Federal presence remains substantial across seven of eight basins, but increasingly as a partner rather than the dominant landowner, while State agencies maintain important roles in the N Thorne-Coffman-Naukati Roaded and Petersburg-Portage Bay operations. The expanded scale during this phase requires more complex multi-party operations and justifies the infrastructure investments to support the long-term sustained operations that will follow.

Table 4.3.1 Expansion Phase High Priority Basins & Key Landowners (with ≥ 20% volume share)

Rank	Basin	Volume (Million BF)	Key Landowners (≥20%)
1	Klawock-Hydaburg Roaded	309.8	ANCSA (67.6%), Fed (24.7%)
2	Kosciusko	255.8	ANCSA (51.4%), Fed (34.8%)
3	Tuxekan-Heceta-Marble Islands	255.7	ANCSA (42.6%), Fed (39.8%)
4	N Thorne-Coffman-Naukati Roaded	242.3	Fed (75.9%), State (24.1%)
5	Staney-Bigsalt Roaded	226.7	Fed (58.9%), ANCSA (35.1%)
6	North POW Roaded	208.1	Fed (79.5%)
7	Kake Roaded	204.2	ANCSA (83.4%)
8	Petersburg and Portage Bay	194.0	Fed (74.9%), State (25.1%)

4.4 Sustained Operations Period (2041+)

The Sustained Operations period (2041 and beyond) represents the long-term maturation of Southeast Alaska's young-growth timber industry, with 7.4 billion board feet available across 334,526 operable acres, establishing the foundation for sustained yield forestry across the region's most productive landscapes. During this period, ANCSA corporations achieve clear dominance, controlling majority stakes in five of the eight priority basins, while the Federal presence shifts to a supporting but still significant role. Klawock-Hydaburg Roaded emerges as



the region's largest single operation with 883 million board feet, where Sealaska Corporation's 35.5% controlling interest will drive operational decisions for this massive timber resource. The sustained period showcases the full geographic diversity of ANCSA corporation involvement, with regional corporations taking leading roles in their traditional territories: Kake Tribal Corporation controlling 40.5% of the 466.6 million board feet in Kake Roaded basin, Huna Totem Corporation dominating the 366 million board feet Hoonah Roaded operation (40.8%), and Kivilco, Incorporated emerging as a key 20.2% partner in the complex three-way S Thorne-Tolstoi Roaded basin alongside Sealaska Corporation and Federal managers. Sealaska Corporation's influence reaches its peak during this period, maintaining major stakeholder positions across five of the eight top basins and representing the single most critical partnership entity for successful long-term operations. Federal lands continue to play essential roles, particularly in the N Thorne-Coffman-Naukati, North POW Roaded, and Zarembo Shrubby Islands basins where USFS maintains controlling interests, ensuring that Federal-ANCSA coordination remains fundamental to the region's timber future even as ANCSA corporations assume the leading operational roles.

Table 4.4.1 Sustained Phase High Priority Basins & Key Landowners (with ≥ 20% volume share)

Rank	Basin	Volume (Million BF)	Key Landowners (≥20%)
1	Klawock-Hydaburg Roaded	883.0	ANCSA (78.3%)
2	N Thorne-Coffman-Naukati Roaded	516.4	Fed (82.6%)
3	Staney-Bigsalt Roaded	508.0	ANCSA (50.3%), Fed (48.0%)
4	Kake Roaded	466.6	ANCSA (72.2%), Fed (27.8%)
5	S Thorne-Tolstoi Roaded	371.8	ANCSA (50.2%), State (28.8%), Fed (21.0%)
6	Hoonah Roaded	366.0	ANCSA (69.9%), Fed (30.0%)
7	North POW Roaded	334.7	Fed (94.0%)
8	Zarembo Shrubby Islands	299.9	Fed (95.4%)



Table 4.5.0 Summary of Basin Areas

Basin	Foundation (2024-2029)	Expansion (2030-2040)	Sustained (2041+)
Admiralty Legacy	143 acres 3.4 MMBF	9 acres 0.2 MMBF	12 acres 0.3 MMBF
Annette	0 acres 0.0 MMBF	923 acres 20.0 MMBF	4,652 acres 100.8 MMBF
Bradfield Remote	38 acres 0.8 MMBF	1,485 acres 31.6 MMBF	1,469 acres 34.1 MMBF
Chichagof Remote	161 acres 3.5 MMBF	428 acres 9.1 MMBF	1,350 acres 28.7 MMBF
Cholmondeley	28 acres 0.6 MMBF	723 acres 15.5 MMBF	5,286 acres 115.2 MMBF
Cleveland Pen	90 acres 2.5 MMBF	252 acres 5.5 MMBF	2,217 acres 54.6 MMBF
Corner Bay-False Island	17 acres 0.5 MMBF	3,220 acres 68.4 MMBF	7,300 acres 157.0 MMBF
Dall and Long Islands	114 acres 2.6 MMBF	74 acres 1.6 MMBF	13,752 acres 285.4 MMBF
Etolin	51 acres 1.1 MMBF	395 acres 8.4 MMBF	3,832 acres 93.1 MMBF
Haines	2,410 acres 52.7 MMBF	7,344 acres 160.1 MMBF	3,267 acres 69.6 MMBF
Hetta Inlet	11 acres 0.3 MMBF	138 acres 3.0 MMBF	1,081 acres 22.7 MMBF
Hobart Bay	0 acres 0.0 MMBF	1,945 acres 41.6 MMBF	11,978 acres 251.7 MMBF
Hoonah Remote	0 acres 0.0 MMBF	165 acres 3.5 MMBF	8,331 acres 181.6 MMBF
Hoonah Roaded	45 acres 0.9 MMBF	2,139 acres 45.4 MMBF	16,804 acres 366.0 MMBF
Juneau Area	198 acres 4.5 MMBF	49 acres 1.0 MMBF	523 acres 11.2 MMBF
Kake Roaded	703 acres 16.3 MMBF	9,418 acres 204.2 MMBF	21,130 acres 466.6 MMBF
Ketchikan Remote	29 acres 0.6 MMBF	136 acres 2.9 MMBF	1,956 acres 52.6 MMBF
Ketchikan Roaded	--Already Harvested--	2,705 acres 57.9 MMBF	13,130 acres 290.8 MMBF
Klawock-Hydaburg Roaded	2,746 acres 60.0 MMBF	14,388 acres 309.8 MMBF	40,146 acres 883.0 MMBF
Kosciusko	1,190 acres 10.0 MMBF	11,917 acres 255.8 MMBF	2,484 acres 54.5 MMBF
Kuiu Island	688 acres 15.5 MMBF	6,707 acres 144.0 MMBF	11,070 acres 246.0 MMBF
N Thorne-Coffman-Naukati Roaded	2,131 acres 54.3 MMBF	10,960 acres 242.3 MMBF	22,892 acres 516.4 MMBF
Neets and Shrimp Bays	1,094 acres 24.8 MMBF	4,710 acres 100.3 MMBF	8,380 acres 193.4 MMBF
North POW Remote	57 acres 1.3 MMBF	252 acres 5.4 MMBF	280 acres 5.9 MMBF
North POW Roaded	757 acres 17.2 MMBF	9,411 acres 208.1 MMBF	14,907 acres 334.7 MMBF
Petersburg and Portage Bay	358 acres 8.6 MMBF	8,776 acres 194.0 MMBF	11,687 acres 262.4 MMBF
S Thorne-Tolstoi Roaded	374 acres 8.5 MMBF	4,219 acres 91.4 MMBF	16,871 acres 371.8 MMBF
Scattered Remote	26 acres 0.6 MMBF	572 acres 12.6 MMBF	524 acres 11.3 MMBF
Sitka-Peril Strait	167 acres 3.7 MMBF	3,349 acres 71.0 MMBF	8,755 acres 186.9 MMBF
Smith-Kina	109 acres 2.6 MMBF	541 acres 11.6 MMBF	6,675 acres 140.4 MMBF
South Kuiu South Baranof Remote	105 acres 2.2 MMBF	757 acres 16.1 MMBF	719 acres 15.3 MMBF
Staney-Bigsalt Roaded	883 acres 19.7 MMBF	10,249 acres 226.7 MMBF	22,776 acres 508.0 MMBF
Sumez-Trocadero	94 acres 2.0 MMBF	802 acres 17.3 MMBF	5,308 acres 114.7 MMBF
Thomas Bay	1,763 acres 41.1 MMBF	2,656 acres 57.6 MMBF	687 acres 14.5 MMBF
Tuxekan-Heceta-Marble Islands	1,537 acres 36.0 MMBF	11,715 acres 255.7 MMBF	10,633 acres 233.3 MMBF
Wrangell Roaded	31 acres 0.7 MMBF	1,724 acres 37.1 MMBF	6,600 acres 152.9 MMBF
Yakutat	0 acres 0.0 MMBF	978 acres 20.9 MMBF	11,524 acres 243.5 MMBF
Zarembo Shrubby Islands	486 acres 11.7 MMBF	3,875 acres 83.1 MMBF	13,541 acres 299.9 MMBF

5. Discussion and Recommendations

5.1 Key Findings and Their Implications

This analysis reveals fundamental shifts that will reshape Southeast Alaska's forest economy, but the full magnitude of change may be even greater than current projections suggest. Three critical insights emerge from the data and analysis, each carrying profound implications for how forest managers, Native corporations, and state agencies approach the maturity of a substantial young-growth resource.



Volume Projections: Conservative Estimates with Upward Potential

The analytical framework employed in this study may underestimate actual harvest potential across all ownership categories. Recent operational experience demonstrates that actual young-growth sales consistently exceed modeled projections, with USFS, State of Alaska and Sealaska sales averaging 22-32 thousand board feet per acre compared to the 21.5 thousand board feet per acre threshold used by the FPS growth model using stand specific inventory and site index information. This performance gap may reflect the limitations inherent in extending field sampling across such a vast geographic area, where plot density remains insufficient to capture the full variability in site productivity and stand development patterns. Or it may be that early experience in young-growth harvest was all exceptionally productive, high site forestland. It is also possible this may reflect the intent of forest managers charged with implementing timber sales, and a bias towards harvesting only those stands which are closer to CMAI or a larger per acre volume threshold. This tendency may result in deferment of timber harvest a decade or more in practice. Additional field reconnaissance and intensive timber cruising in priority basins could substantially increase volume estimates, particularly in areas where initial sampling was limited by access constraints or budget limitations.

Federal Land Operability: The Double Net-Down Reality

The Kosciusko Good Neighbor Authority project provides a case study in the gap between analytical projections and operational reality on federal lands. The selected alternative in the environmental assessment (EA) identified 1,459 acres as operationally available after applying the same map-based net-down factors used throughout this analysis. However, field-level implementation revealed additional constraints that reduced the actual harvest area to 830 acres – a further 43% reduction. This "double net-down" phenomenon suggests that the 242,662 net acres projected for USFS lands may overestimate actual harvest potential. Field-level constraints including silvicultural prescription requirements, seasonal operating restrictions, equipment limitations on steep terrain, expanded buffer requirements, and site-specific environmental concerns have the potential to reduce harvestable acreage beyond what can be captured through remote mapping protocols. While the Kosciusko project maintained excellent per-acre volumes that offset the acreage reduction, the pattern raises fundamental questions about long-term federal timber contributions.

Carbon Markets and Evolving ANCSA Land Management

The emergence of carbon markets introduces a new economic dynamic that could fundamentally alter ANCSA corporation forest management strategies. While initial carbon market participation has focused primarily on old-growth forests, future carbon markets may be applicable to vigorous growing young forest lands. Several ANCSA corporations have already enrolled significant acreages in carbon programs, establishing precedents that could influence future young-growth management decisions.

Carbon market participation often requires forest certification and adherence to specific management standards that may limit clearcut sizes, mandate specific silvicultural prescriptions, extend rotation lengths, or require retention of forest cover for carbon sequestration purposes.



These requirements could reduce the operational flexibility that currently gives ANCSA lands their competitive advantage in terms of high operability rates. The integration of carbon revenues with timber revenues creates a situation where corporations must balance harvest income against carbon payments, potentially altering the timing and intensity of harvest activities identified in this analysis.

5.2 Strategic Management Implications

For Federal Land Managers

The double net-down reality demands fundamental reconsideration of federal timber planning approaches. Current analytical methods consistently overestimate harvest potential, creating unrealistic expectations and undermining confidence in federal timber supply projections. Federal managers must develop more realistic operability assessment tools that incorporate field-level constraints from the earliest possible planning stages rather than discovering limitations during implementation.

Priority actions for federal managers include establishing demonstration projects that test analytical assumptions against operational reality, developing field-verified operability factors for different terrain and regulatory scenarios, and creating streamlined silvicultural prescriptions that maximize harvestable acreage while meeting environmental objectives. The USFS should also prioritize NEPA planning in multi-ownership basins where federal lands can leverage non-federal infrastructure and operational efficiency to overcome individual constraints. Federal agencies must also acknowledge their evolving role in Southeast Alaska's timber economy. Federal lands may function more effectively as strategic partners that provide operational scale and long-term stability to private and state-led operations. This partnership approach requires new contractual mechanisms, shared infrastructure agreements, and coordinated planning processes that maximize the contribution of federal lands within realistic operational constraints.

For State Land Managers

State of Alaska lands occupy a unique position in Southeast Alaska's young-growth holdings, offering high operability rates, responsive management frameworks, and strategic locations that can catalyze multi-ownership operations. The relatively modest scale of state holdings (8.5% of total net acres) creates opportunities to function as catalyst parcels that enable larger regional operations while maintaining proportional economic benefits.

State managers should prioritize coordination with adjacent landowners to maximize the economic value of state timber resources. Strategic partnerships with ANCSA corporations can leverage state lands' regulatory flexibility with Native corporations' larger landholdings and community connections. Similarly, partnerships with federal managers can provide operational scale while utilizing state lands streamlined permitting processes to accelerate project implementation. Programs such as Good Neighbor Authority can be leveraged to add capacity through the State of Alaska and third party contractors.



For ANCSA Corporations

ANCSA corporations face increasingly complex optimization decisions as they balance traditional timber revenues with emerging carbon market opportunities and evolving community expectations. Successful ANCSA corporation strategies will require sophisticated financial modeling that optimizes across multiple revenue streams while maintaining operational flexibility. ANCSA corporations are also uniquely positioned to lead partnership development in multi-ownership basins. Their community connections, operational flexibility, and substantial landholdings create natural leadership roles in coordinating regional timber operations and maintaining support for local forest partnerships and workforce development.

5.3 Critical Data Gaps and Research Priorities

Inventory Intensification Needs

The conservative nature of current volume projections highlights the urgent need for targeted inventory intensification in priority basins. The Foundation Period provides a narrow window for improving resource characterization before major operational decisions must be made. Priority areas for intensive sampling include the Klawock-Hydaburg Roaded complex, Kosciusko Island following recent depletions, and the Kake Roaded basin where ANCSA corporation leadership could accelerate development. Inventory intensification should focus on validating growth projections, refining site index assignments, and characterizing stand structure variation within operational units. The sampling should also include operational reconnaissance that ground-truths accessibility assumptions and identifies site-specific constraints that could affect harvest planning. This combined inventory and reconnaissance approach can provide the detailed resource information needed to optimize harvest sequencing and partnership arrangements.

Federal Operability Assessment and Pilot Project Development

Future research should focus on developing field-verified net-down factors that incorporate the full range of operational constraints affecting federal timber sales, while simultaneously implementing pilot projects that can bridge the gap between the current limited federal timber supply and the anticipated "wall of wood" beginning in 2030.

The urgent need for pilot project implementation reflects the industry's precarious position with regards to timber supply. With current federal capacity severely limited by heavy workloads and a leaner staff, pilot projects offer the most viable pathway to maintain industry viability while testing collaborative approaches that will be essential for long-term success. Priority pilot projects should focus on multi-ownership basins where federal lands can leverage non-federal infrastructure and operational efficiency to demonstrate viable young-growth harvest systems.

Critical research priorities include systematic comparison of net down projections with actual harvest outcomes across multiple sales and geographic areas, quantifying the impact of silvicultural prescription requirements on harvestable acreage, and developing comprehensive Logging Systems and Transportation Analysis (LSTA) methodologies that can optimize harvest sequencing across ownership boundaries. The research should also evaluate modern cable and



tethered ground-based logging systems on slopes exceeding 35%, as Tongass staff estimates indicate that 70% of suitable young-growth acres occur on terrain requiring these advanced systems. This technology assessment is critical for unlocking the full potential of the young-growth resource base and ensuring that steep terrain limitations do not artificially constrain timber supply.

Infrastructure research should emphasize shared-use systems that can support multi-ownership operations while minimizing individual landowner costs. Priority areas include road construction and reconstruction standards that can accommodate multiple harvest rotations, marine transfer facility design that can efficiently handle diverse log sorts and volumes, and sort yard configurations that optimize operational flexibility across different ownership objectives.

5.4 Partnership Development Framework

The complexity of Southeast Alaska's young-growth resource requires new institutional arrangements that can coordinate activities across ownership boundaries while respecting individual landowner objectives. Successful partnership development must address three critical requirements: volume aggregation to achieve economic scale, infrastructure coordination to minimize development costs, and benefit distribution that ensures equitable participation. Effective partnerships will likely require formal agreements that specify harvest timing, infrastructure sharing, cost allocation, and revenue distribution mechanisms. These agreements must be flexible enough to accommodate different landowner objectives while providing sufficient certainty to support investment decisions. The agreements should also include provisions for adaptive management that can respond to changing market conditions, regulatory requirements, and operational experience. Mechanisms such as local forest partnerships and the existing All-Landowners Group provide working models and effective frameworks that can be built upon.

6. Conclusions

The progression from only old-growth harvest to young-growth dominated timber management in Southeast Alaska is no longer a future possibility, it is an immediate necessity. This analysis demonstrates that sufficient volume exists across all ownerships to support a viable timber industry, but success requires fundamental changes in how the forest sector operates. The total identified resource of approximately 11 billion board feet over the next century, with almost half a million operable acres, provides a solid foundation for active forest management and economic activity. However, the temporal and spatial distribution of this resource demands new approaches:

- Multi-ownership collaboration must become the norm rather than the exception
- Infrastructure investment needs to begin immediately to prepare for the 2030 surge
- Regulatory frameworks must evolve to facilitate cross-ownership operations
- Market development for young-growth products requires coordinated effort



The dramatic differences in operability between ownerships suggest that non-federal lands will play a leading role in the near-term timber availability, while federal lands provide long-term stability. This complementary relationship can work only through deliberate coordination and policy support. Southeast Alaska stands at a pivotal moment. The data clearly show that young-growth timber can sustain forest sector employment and economic activity. Whether this potential is realized depends on the collective actions of landowners, agencies, industry, and communities over the next several years. The window for preparation is narrow—but the opportunity is real.



Appendices

Appendix A: Statistical Reports

Stats for SEYG by VegLbl (all acres/all ownerships)

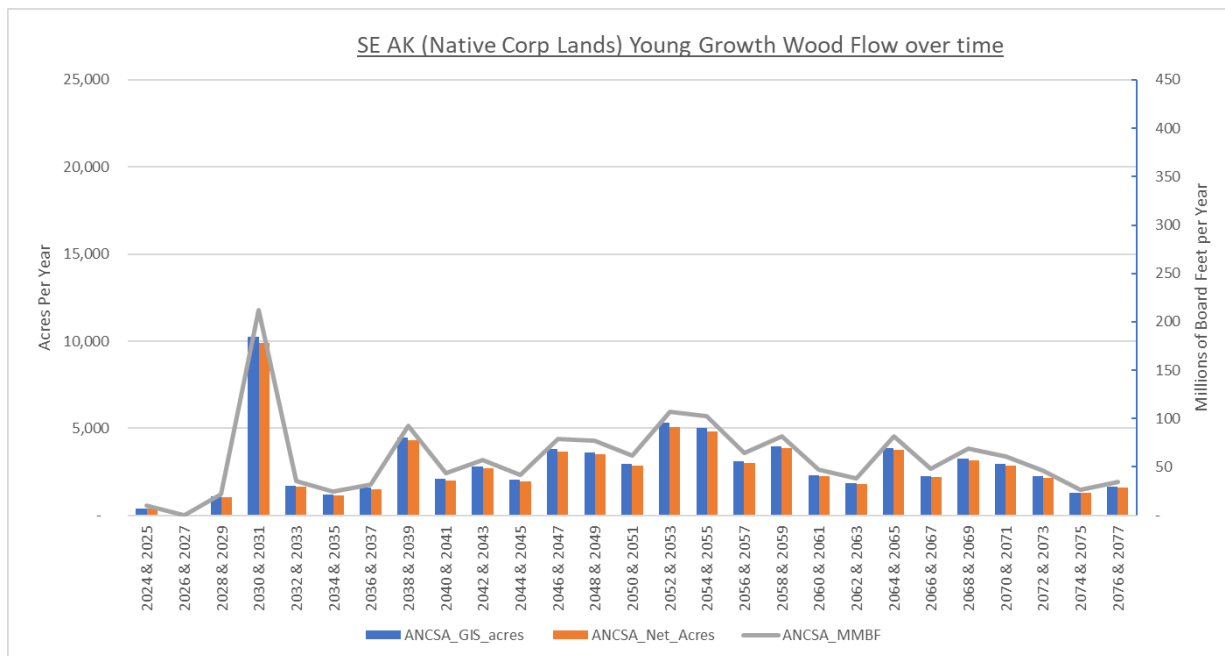
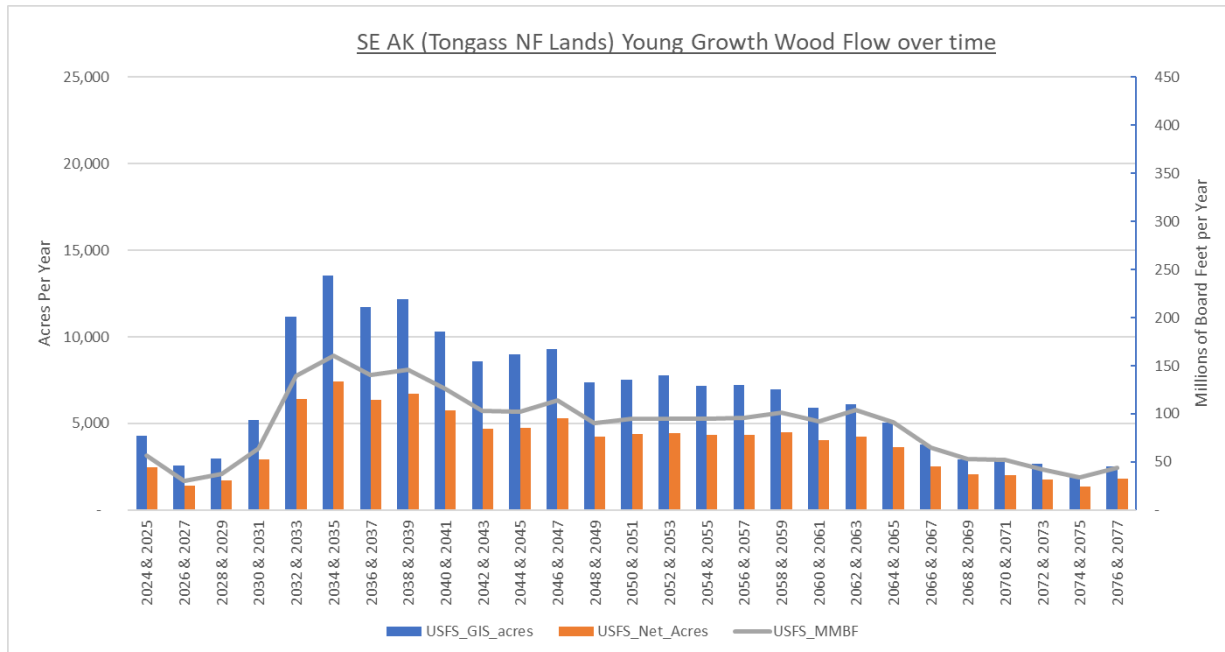
VegLbl	NumPlots	NumStds	Acres	TPA_Err	BA_Err	CU_Err	Brd_Err
CD01	13.00	1.00	78.00	22.90	80.40	92.70	100.00
CD13	193.00	22.00	925.00	8.70	4.70	6.90	12.50
CD22	15.00	2.00	52.00	42.00	9.30	10.20	18.90
CD23	207.00	21.00	763.00	19.20	3.90	5.60	9.90
CD33	161.00	10.00	410.00	5.30	4.00	5.00	7.10
CX01	34.00	3.00	227.00	12.60	14.90	16.30	29.20
CX11	21.00	3.00	150.00	41.70	16.70	19.60	42.50
CX12	333.00	43.00	2,164.00	5.90	4.40	7.80	13.90
CX13	584.00	74.00	4,424.00	4.50	3.00	3.90	9.10
CX22	227.00	27.00	1,193.00	6.60	4.10	5.40	10.60
CX23	1,935.00	177.00	9,918.00	4.10	1.60	2.00	3.10
CX32	91.00	12.00	430.00	14.40	6.70	6.20	7.40
CX33	1,294.00	95.00	4,099.00	3.40	1.80	2.50	3.30
CX42	186.00	13.00	445.00	7.10	5.90	6.70	7.70
CX43	519.00	24.00	1,265.00	3.30	2.50	2.90	3.50
HS12	34.00	2.00	222.00	12.10	14.00	22.20	49.90
HS13	347.00	44.00	2,385.00	6.70	2.70	3.30	7.00
HS21	7.00	1.00	34.00	30.00	16.80	17.30	47.90
HS22	66.00	11.00	464.00	12.70	8.60	8.60	16.70
HS23	3,648.00	305.00	20,523.00	2.30	0.90	1.10	2.00
HS32	31.00	6.00	163.00	29.20	11.00	11.40	16.60
HS33	2,614.00	172.00	9,494.00	3.80	1.10	1.20	1.70
HS43	188.00	12.00	443.00	5.80	4.10	4.60	5.20
RA22	8.00	1.00	36.00	22.80	25.50	31.50	45.00
RA23	417.00	44.00	2,043.00	10.30	2.80	3.10	5.10
RA32	7.00	2.00	19.00	28.20	22.50	28.10	30.70
RA33	765.00	60.00	2,644.00	3.10	2.00	2.00	2.70
SS12	21.00	5.00	201.00	29.30	11.30	15.60	24.20
SS13	4.00	1.00	18.00	60.70	38.60	43.70	59.30
SS22	8.00	1.00	48.00	19.10	19.90	24.50	40.50
SS23	582.00	66.00	3,450.00	6.50	2.20	2.80	4.30
SS32	10.00	2.00	64.00	49.00	15.40	14.40	21.60
SS33	1,051.00	71.00	4,021.00	6.70	1.60	2.00	2.90
SS43	155.00	12.00	507.00	5.60	3.80	5.20	5.80
WH13	34.00	5.00	285.00	23.90	9.50	17.70	30.00
WH23	49.00	8.00	302.00	15.70	5.80	6.80	12.00
WH33	15.00	1.00	41.00	17.40	11.80	12.30	14.60

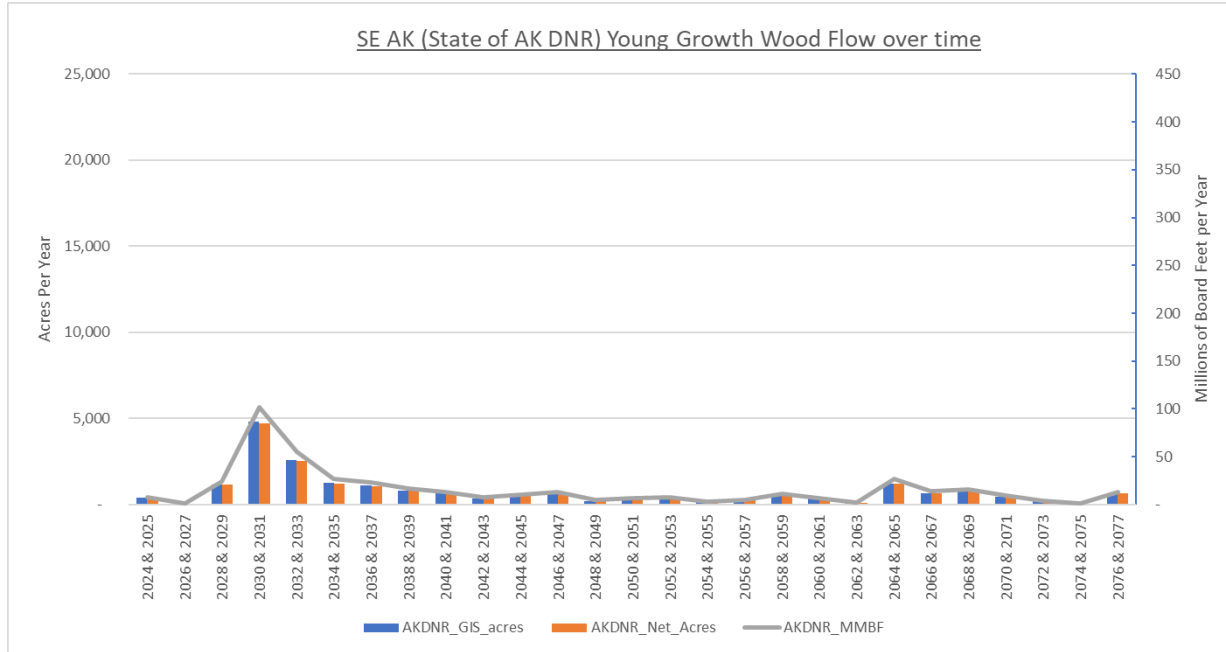
SEYG Stats by Ownership

Ownership	NumPlots	NumStds	Acres	TpaErr	BAErr	BrdErr
USFS	15,777.00	1,365.00	73,368.40	1.40	0.50	1.00
AKDNR	49.00	9.00	321.70	11.90	9.20	16.60
Other	18.00	2.00	148.70	29.70	11.40	19.70
ANCSA	259.00	44.00	1,741.80	6.50	4.90	14.20



Appendix B: Ownership-Specific Inventory Summaries





Appendix C: Basin Overview Maps

