



Trust
Land Office



RESOURCE MANAGEMENT STRATEGY

MARCH 2016

Resource Management Strategy

Pursuant to 11 AAC 99.090(c), the Trust Land Office (TLO) is required to adopt and maintain a long-term asset management strategy that establishes goals for managing Trust land assets to execute the overall Trust management principles of 11 AAC 99.020. To that end, on July 15, 2003, the TLO adopted the “Long Term Asset Management Strategy (LTAMS).”

The document, “Resource Management Strategy,” was originally published and adopted in 2013, officially replacing the “LTAMS July 15, 2003.” The adoption of this “Resource Management Strategy, 3rd Edition” fulfills the obligation of 11 AAC 99.090(c), replaces all previously adopted strategies and provides guidance to the TLO for management of the Trust’s non-cash asset base.

Strategies will be reviewed annually to ensure that they are relevant with respect to a variety of factors, including the desired allocation of non-cash assets within the Trust’s portfolio, the financial requirements of the Trust for both operational and programmatic purposes, and economic and market conditions in the areas where the Trust has made investments and where it is considering investments. As changes to these strategies are proposed, they will go through the consultation process.

Background

In 1956, the Territory of Alaska was granted an entitlement of one million acres from vacant, unappropriated and unreserved federal public lands for the purpose of providing income for mental health programs. Under the Alaska Mental Health Enabling Act, all lands and related income were to be “administered by the Territory of Alaska as a public trust and such proceeds and income shall first be applied to meet the necessary expenses of the mental health program of Alaska.” A public trust, called the Alaska Mental Health Trust Authority (the Trust), was subsequently established to provide Alaska with the resources to provide comprehensive, integrated mental health services. Prior to the establishment of this trust, there were few mental health services available to individuals who experienced mental illness or developmental disabilities (i.e. Trust beneficiaries).

The Alaska State Legislature was charged with the fiduciary responsibility to manage Trust lands, but gross mismanagement resulted in a class action lawsuit, filed in 1982. At that time, 65 percent of the Trust’s real property portfolio had been disposed of by the state. The Alaska Supreme Court ordered the restoration of the original land in 1984, but it wasn’t until 1994 that a final settlement reconstructed the Trust with 500,000 acres of original Trust land, 500,000 acres of replacement land and \$200 million in cash. Together, these assets formed the original corpus (Principal) of the newly reconstituted Trust.

The settlement segregated management of Trust assets across multiple state agencies. The Alaska Mental Health Trust Authority was established to administer the state’s mental health programs. The management of land and other non-cash assets - primarily composed of land, real estate, timber, materials and subsurface oil, gas, coal and minerals — fell to the newly created TLO within the Alaska Department of Natural Resources (DNR). The TLO was created as an office within DNR in order to effectively manage non-cash Trust assets as separate from those under general state ownership. The Alaska Permanent Fund Corporation was assigned management of the cash corpus as a commingled percentage of the Permanent Fund, upon a contribution of such funds by the Trustees.

Legal Framework

The Alaska Mental Health Enabling Act (Public Law 830) provides the basis for all subsequent statutes, regulations, and policies that the TLO must follow in performing its obligations. Section 202 (e) of the Act states the following:

(e) All lands granted to the Territory of Alaska under this section ... together with any property acquired in exchange therefore, or acquired out of the income or proceeds there from, may be sold, leased, mortgaged,

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exchanged or otherwise disposed of in such a manner as the Legislature of Alaska may provide, in order to obtain funds or other property to be invested, expended or used by the Territory of Alaska.

With the adoption of AS 38.05.801, the Alaska Legislature agreed to apply the principles set forth in P.L. 830 to the lands. Further, it directed the Department of Natural Resources to adopt regulations that would address:

1. Maintenance of the Trust land base;
2. Management for the benefit of the Trust;
3. Management for long-term sustained yield from the land; and
4. Management for multiple uses of the land.

The TLO must always act in the best interest of the Trust and its beneficiaries. Alaska Administrative Code (11 AAC 99.020) provides a framework through which land management decisions can be vetted and provides a force of law behind those decisions.

11 AAC 99.020

(c) In determining the best interest of the trust and its beneficiaries, and in determining consistency between state law and the Alaska Mental Health Enabling Act (P.L. 84-830, 70 Stat. 709 (1956)), the executive director shall, at a minimum, consider the following trust management principles:

- (1) *maximization of long-term revenue from trust land;*
- (2) *protection of the corpus;*
- (3) *protection and enhancement of the long-term productivity of trust land;*
- (4) *encouragement of a diversity of revenue-producing uses of trust land; and*
- (5) *management of trust land prudently, efficiently, and with accountability to the trust and its beneficiaries.*

Alaska Administrative Code (20 ACC 40.700) further clarifies the Trust's responsibility with respect to Trust asset development and investments. That section of the code states:

(a) From time to time, the board may determine that it is in the best interest of the trust and its beneficiaries to use receipts from the management of trust land to:

- (1) *Acquire for the trust new land; or*
- (2) *Improve or develop existing trust land.*

(b) If the board decides under (a) of this section to acquire new land or improve or develop existing trust land, the authority will establish a development account for the purpose of monitoring and accounting for receipts used and the costs incurred by the trust to carry out that acquisition, improvement, or development project.

Under the provisions of the above referenced statutes and codes, the TLO is required to protect and enhance the value of the Trust's holdings. Under federal and state law, the TLO is authorized to use, manage, lease, develop, and sell the Trust's non-cash assets in order to generate revenue. The TLO may then reinvest proceeds generated from Trust land. This includes the possibility of developing Trust land and/or acquiring real estate for the Trust. There is no differentiation in this regulation over the use of income or principal revenue for these purposes. The legal ability to engage in such activities gives the TLO broad management authority. In addition to the strict adherence to the Trust management principles stated above, this authority requires:

1. Compliance with state laws and regulations pertaining to transactions;
2. Consultation with and/or approval of the board of trustees with respect to the TLO's activities associated with disposal and acquisition of assets;
3. Reporting to the Trust of its ongoing activities; and
4. Appropriate planning, budgeting and forecasting efforts to keep the Trust informed of its planned activities.

Trust Funds

Revenue generated from the disposal of Trust assets (i.e. sale of land or royalties from resource extraction) must be reinvested, either with the Permanent Fund or through investment by the Trust in other principal assets that will safeguard the value of the asset and/or produce income for the Trust. This ensures that the principal will continue to generate income to the fund in perpetuity. Only income revenue (i.e. leases, fees, bonus bids, interest, etc.) that is generated from investing or managing the assets can be used by the Trust for programs and operating costs. Through its management of the non-cash assets, the TLO is responsible for obtaining the maximum return on non-cash assets through revenue generation, both income and principal, and increasing value of Trust corpus. This may also involve reinvestment of principal in other assets.

Maintaining the value of Trust assets requires the funding of stewardship and management of Trust land and resource rights. This includes a broad range of activities, from managing trespass issues to developing inventory and asset management systems to participating in public process regarding regulation of land use and resource activities. Although these activities may not generate revenue directly or immediately, they are required as a duty of the Trust to protect the assets and generate revenue in perpetuity.

The Resource Management Strategy (RMS) is designed to provide broad guidance to help the TLO pursue development activities and revenue-producing projects that will preserve and enhance the value of Trust assets and increase the revenue generation of the portfolio. Where necessary or appropriate, it will also propose specific investment criteria for the board of trustees to use in evaluating investment and development opportunities.

Resource Management Strategy — 3rd Edition

Although overall land management principles remain constant, each update of the RMS must consider changes in the respective asset or commodity markets, the economy, as well as the funding needs of the Trust. As of this edition, the long-term economic forecast for Alaska is significantly impacted by decreasing revenues from North Slope crude oil production, and the challenges posed by unpredictable commodity markets. As the decline in state revenue predictably continues, there will be less income available from both public and private sources to provide programs and services for beneficiaries of the Trust. Simultaneously, the number of beneficiaries is increasing, along with demand for Trust-supported services. In the long term, this combination of trends will likely create pressure on all sources of funding for mental health programs and highlight the need to find new methods of generating program funds. This plan has been developed to address these trends, providing a pathway for the Trust to increase the balance of its principal fund while maximizing the revenue-producing capabilities of its non-cash assets. This will allow the Trust to address the widening gap between available funding and program needs.

While the Trust has taken steps to accommodate variations in its income stream from the Permanent Fund, further diversity among its income sources is desirable. As a method of diversification, by adoption of this plan, the trustees have directed the TLO to configure a portion of the non-cash assets of the Trust's fund into income-producing investments separate from the Permanent Fund. This plan will guide those investments and acquisitions. That function is becoming increasingly important as the TLO pursues more and varied resource

development and extraction activities on Trust land.

How to use this document

The RMS is segregated into seven asset classes:

1. Land
2. Minerals and materials
3. Program-related real estate
4. Forestry
5. Real estate
6. Energy
7. Mitigation marketing

Each of the Trust's specific non-cash assets is placed into the category that best fits its most significant and beneficial use. It is important to note that each asset may move from one category to another as more information is obtained or as external factors affect its highest and best use.

Each non-cash asset is managed under a resource plan that may include up to three primary components: a narrative plan, investment and resource management criteria and goals and objectives. The narrative plan reviews the current assessment of the resource in all aspects, including accessibility, marketability, environmental feasibility and other external factors. Investment and resource management criteria will be established and recommendations will be made concerning potential characteristics that will help balance risk factors and asset return potential. The investment criteria component summarizes and restates the investment principles found in the narrative.

In addition to following the Trust land management principles set forth in 11 AAC 99.020 (page 2 of this document), the TLO will, in general, consider the following in the strategies developed for each asset class:

1. Allocation of investments
2. Management of risk profile
3. Establishing diversity guidelines that address:
 - a. Asset allocation among land use types
 - b. Geographic distribution
 - c. Partnership opportunities
 - d. Recommended levels of debt, when appropriate
4. Consider leveraging Trust resources through development partners, both public and private, when appropriate.

LAND RESOURCE MANAGEMENT STRATEGY



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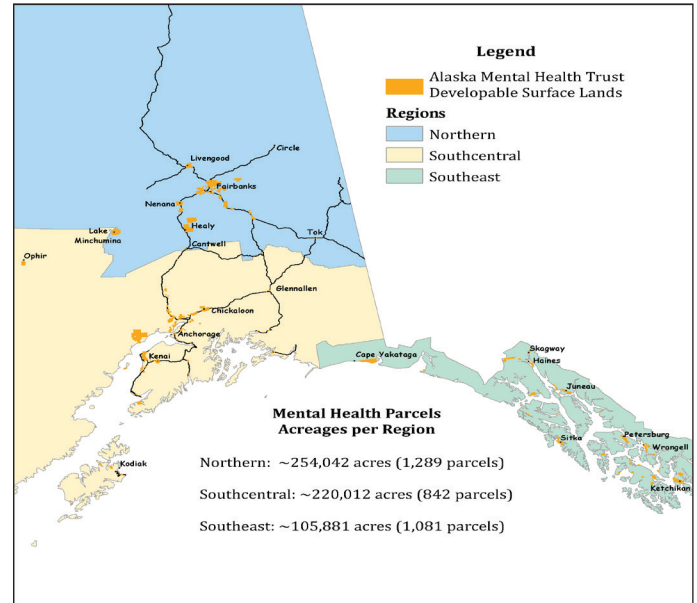
Introduction

The Lands Section works on behalf of the Trust to identify and enhance lands for economic development and mitigate risk liabilities of the land estate held by the Trust. Management actions must be consistent with Trust principles as established by the Alaska Mental Health Enabling Act of 1956.

The Lands Section uses a dynamic and versatile approach to encourage principal and income revenue streams while maintaining the long-term value of the land corpus. As new technologies demand greater land-based infrastructure needs, the TLO has delivered solutions with greater efficiency than many other private and government sectors.

The Trust's land estate is divided into three regional areas (Northern, Southcentral and Southeast), each comprised of organized and unorganized boroughs. The Lands Section's regional managers offer professional expertise to focus on business transactions, ecosystem management, and the economic and political climate of their respective regions. A lands specialist assists the regional managers with adjudication of title issues, encumbrance research, and the replacement lands program strategy with the State of Alaska.

operating expectations and focus on resources at the high end of their market values best markets and then on land or resources with best market potential within the next two to ten years.



Inventory of Land Resources

The surface lands are made up of approximately 579,526 acres and segregated into asset classes as described below.

Stewardship

The Lands Section manages the perpetual Trust land prudently, efficiently, and with accountability to the Trust. Best management practices ensure Trust lands are maintained, assets inventoried, liability exposure minimized, and value is retained for the present and future. A strong field presence ensures protection of the surface resources and continues to be sustained through a working knowledge of the portfolio, identifying and resolving liabilities, and effective working relationships with customers, public, agencies, and governments.

Performing Assets

A performing asset provides a positive cash flow on a parcel or a selection of parcels. The Lands Section manages land use through various authorizations that generate revenue from fees, licenses, leases, easements, and land sales. As of this publication, the Lands Section actively manages more than 400 land use authorizations. These authorizations grant individuals, corporations, government agencies and other entities limited or full property rights for the use of Trust land.

Revenue Generation

This plan provides guidelines for management and development of the surface lands to generate a predictable stream of income and principal funds. Through FY15, the Lands Section has contributed \$86.4 million or 47.64% of all TLO revenue. New opportunities to generate revenue must meet

Projects authorized on the surface lands are often diverse and require Lands Section staff to possess complex land management skills and knowledge. Project types may include easements for utilities, fiber optics, and roads; land sales either competitive or negotiated; land leases for short- or long-term development with infrastructure, such as cellular/communication sites; licenses for exploration or analysis; and letters of authorization for community

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events or other minor projects.

Nonperforming Assets

A nonperforming asset is defined as a parcel that is not producing revenue. The Lands Section proactively explores business opportunities to generate a wider range of authorizations, such as cottage industries, roads, utilities, and communications infrastructure. In addition, the Lands Section focuses on new, land-based needs for technology and communication industries or acts in response to regulatory requirements to promote authorizations on remote, rural, or undesirable parcels to reduce the number of nonperforming assets.

Values

Throughout the Trust's history, valuation of the real property portfolio has been difficult to quantify. In the settlement of the class action suit that reorganized the Trust in 1994, the fair market value of Trust lands could not be agreed upon due to valuation issues related to the original Trust lands compared to the substitute lands awarded in the 1994 settlement agreement. The Trust has made a conscious decision to not specifically attempt to value the land or non-cash portfolio that has been held by the Trust from inception. An important consideration in making that decision was the difficulty and expense associated with establishing those values and in maintaining accurate values. Each parcel may contain numerous monetization possibilities, and identifying every possibility would be impractical. The TLO does, however, appraise and evaluate parcels in the course of doing business.

The TLO utilizes multiple evaluation tools to determine valuation. The valuation process entails a wide range of analysis methods based on the proposed type of authorization. Current parcel values are determined by either an internal review process that may include historical values, review of tax assessment records, analysis of comparable sales transactions, and/or external reviews such as a broker opinion of value or an appraisal.

The 1994 settlement established a mechanism to replace parcels from other state lands under a Replacement Land Program whose values from encumbrances or other restrictions significantly hindered its economic value. The first round of the replacement land program was closed in 2015. Future

parcels that are encumbered by DNR authorizations or physical characteristics, such as submerged lands rendering the parcel value as de minimis, may be negotiated in a future land replacement program.

Values Inventory Tools

The Lands Section is entrusted with the responsibility of protecting or enhancing the future value of the surface lands. This includes developing stewardship policies, procedures, and guidelines to assess current parcel conditions, alleviate and mitigate unauthorized land use and trespass, and develop restoration and reclamation projects. To facilitate this process, the TLO developed a Parcel Attribute Library (PAL), an electronic database that documents each parcel's known condition, attributes, use history, known values and authorizations. PAL is an important management tool for the continuity of future transactions and the current demands for management decisions.

The RED Team (Review, Encourage, and Develop) is an important dynamic communication tool that has yielded authorizations of higher revenue value and efficiencies. This is an internal working group among various TLO resource groups was established to promote and facilitate the development of the surface estate to achieve the highest and best use of a parcel and to reduce the conflict of uses related to a specific parcel.

Focus Area Plans (FAP) are an additional tool to increase higher revenue values. A FAP is similar to comprehensive plans but will define future uses in respect to land use development and asset preservation for a smaller geographic area within a region. They are intended to forecast an area's economic trends and land resource potential as well as identify preservation opportunities and needs. The process may include the evaluation of site characteristics, history of land use, analysis of local zoning regulations, evaluation of market potential, identification of appropriate management policies, and coordination with other resource sections. The FAP will target strategic areas for development at the optimum market conditions. These plans will be reviewed and approved by the TLO executive director.

Authorization Contracts

Land resource management generates revenue through a variety of transactional authorizations that

grant permissions or rights for compensation. The basis of an authorization type is predicated on:

1. The amount of risk to the Trust associated with the proposed activity;
2. The term or extent of the authorization; and
3. Infrastructure added or modification of the property.

Authorizations types are described below.

Income-Generating Authorizations

Letter of authorization: A revocable and non-exclusive land use for a short period of time, with low risk and low impact to the surface lands. Often, these are used for community-supported events and may provide opportunities for positive public relations for the Trust.

Revocable license for land use: A license allows non-exclusive use of the surface lands and is revocable without cause and infrastructure is temporary.

Land lease: A lease allows exclusive use of the property and typically will add more infrastructure associated with its use. At the end of the lease term, the infrastructure may be removed, sold to another party or retained by the Trust. It is considered a disposal and requires consultation with trustees.

Non-perpetual easement: A long-term easement for land use development that may include communication towers, roads, trails, or utilities. Co-locations require a separate authorization by TLO. A master easement agreement was created for applicants that required multiple easements over time.

Interest from land sales: The contract interest rate is set by statute and determined by the prime rate as reported in the Wall Street Journal on the first business day of the month plus 3 percent.

Principal-Generating Authorizations

Perpetual easement: A disposal of the surface land in which the mineral rights are usually retained by the Trust. Perpetual easements are negotiated on a limited basis because of the potential for lost economic opportunity in the future. Perpetual easements are treated as a negotiated sale and the value is determined by an appraisal plus a 25 to 35 percent surcharge to compensate for not selling through a

competitive process.

Competitive land sales: The program is designed to dispose of subdivided lots and small parcels that do not lend themselves to resource development. The competitive nature of the program is derived from the directive to maximize revenue from Trust land.

TLO regulations require the disposal of the surface lands on a competitive basis, unless the executive director determines a negotiated sale is in the best interest of the Trust. The land sale program since 1998 has contributed revenue above appraised values and historically, has averaged 26 percent over appraised values. Generally, the appraised value establishes the minimum bid.

An outgrowth of the competitive land sale program is the Outcry Auction. Since 2006, properties with unique characteristics (waterfront, scenic view sheds and islands) are offered for sale in the Outcry Auction. Although the number of parcels offered in the Outcry Auction is usually low, the competitiveness of auction dynamics often increases revenues compared with other methods.

Negotiated land sales: From time to time, private parties, communities, conservation groups, nonprofits and local governments approach the TLO, interested in acquiring Trust land. Each request is carefully evaluated and subjected to a stringent adjudication process. If pursued, each sale requires consultation with trustees, a written finding of a best interest decision and publication of a public notice under 11 AAC 99.050. A negotiated sale is based on a current appraisal plus a 25 to 35 percent surcharge to compensate for not selling the parcel through a competitive process.

Risk Management

Risk management is the mitigation of the Trust's liability through a process that identifies and assesses the risk associated with a resource management decision and establishes a method to minimize, monitor and control the risk within the parameters of land resource management criteria. Best policies include:

1. Use of contract stipulations requiring indemnification and insurance in all land use contracts issued by the TLO. Boilerplate language for risk mitigation has been recommended by the State of Alaska risk

management group.¹ On a case by-case basis, specific authorizations may include input from the Department of Law for prudent environmental or transactional stipulations or conditions.

2. Performance guarantees used to protect the Trust if an applicant defaults on the terms and conditions of a land use contract.
3. An applicant must provide a performance guarantee before being authorized to use Trust land, unless the perceived level of risk associated with the activity is de minimis.

Development Issues

Surface lands are managed for the economic benefit of the Trust — not for the public at large. Consequently, TLO management practices may conflict with the priorities of various public or private user groups. This conflict between the public's interest in Trust land versus the interest of the Trust has at times led to confusion and tension between the Trust or the TLO and user groups, government agencies, and individuals.

The Lands Section may receive pressure to limit the development of surface lands through the public process: public relation campaigns, agencies, or zoning laws. Often the public process inadvertently devalues the property and does not compensate the Trust for its limitation of parcel development opportunities from the full market potential. This action is inconsistent with AS 38.05.801 and 11 AAC 99.

Public Rights of Access and Compensation

The burden of section line easements,² RS2477 rights of way,³ and 'to and along'⁴ easements on Trust lands may, on a case-by-case basis, be in conflict with the TLO's mission as well as inter-agency agreements. Generally, these are public rights of access created without compensation to the Trust prior to the settlement. There are instances when these rights augment the development of Trust resources. At the same time, there may be instances when these

easements diminish the value of Trust land or create a risk or liability to the Trust from trespass or other unauthorized activities. The 1994 settlement allows the Trust to challenge the validity of any encumbrance or interest. Existing case law supports compensation for public takings, such as access easements.

Land Management Strategy

The Lands Section has a three-pronged business strategy to continue to build upon past successes, develop new markets, and use innovation to make each authorization more efficient and less costly to produce. The competitive land sale program has been extremely successful for the Trust; as of FY15 \$69 million or approximately 38 percent of all TLO revenue is attributable to land sales. It is important to note that less than 2.5 percent of the land corpus has been sold. Historically, DNR conveyed small lot subdivisions to the Trust as a result of the 1994 settlement. Almost all of the DNR small lot subdivisions have been sold and the future of the competitive land sale program is dependent on subdividing smaller parcels into recreation or marketable residential lots. The Lands Section continues to select small parcels requiring minimal infrastructure for subdivision development that will generate maximum revenues. Revenues from land sales contribute both principal and income if sold under a land sale contract.

Emerging markets from various new technologies are required to satisfy the Alaskan population's need for access to internet and communication technology for personal and business demands. As utility companies expand in these markets, the demand for fiber optics easements or cellular tower sites continues to grow. The Lands Section created an innovative long-term master agreement that allows those businesses with multiple easements or leases to do so efficiently and at a predictable cost over time. The efficiency of the agreement dramatically lowered cost and reduced permitting times for both the TLO and its customer.

As long-held federal and state easements issued to utilities in the 1950's and 1960's begin to expire, the TLO is able to capitalize on this existing infrastructure that has previously been a low revenue producer. The utility companies do not plan to remove their infrastructure and are in the process of negotiating with the Lands Section for future long-term agreements affording legal access. The master agreement is a particularly effective tool to meet the

1 Division of Risk Management <http://doa.alaska.gov>.

2 AS 19.10.010

3 AS 19.30.400

4 AS 38.05.127

utility's needs.

Another exciting emerging market is Unmanned Aircraft Systems (UAS) or drone technology that requires a small land lease with easy access but large airspace. The unmanned aerial systems sector is the fastest-growing segment of the global, aerospace and defense industry, and has the potential for high-tech job growth and significant economic impact. By entering the market in the early stage of authorized, commercial operations, the TLO can partner with a UAS provider to establish and operate training ranges. As the Federal Aviation Administration (FAA) develops rules to address commercial uses, the demand for qualified pilots and observers will increase proportionately. Another application for drones is the acquisition of multi-spectral aerial imagery. Trust parcels can be selected where there is a need for high resolution imagery, in the case of trespass, development projects, or new programs. The next five years will bring other new innovative technologies to Alaska that the Trust lands are well poised to meet.

Financial Reporting and Information Management

The State's financial management system does not adequately report on operational and profit measurement standards for the Trust's for-profit business model. The Lands Section is aggressively working with TLO administration to address its ongoing need to develop financial accountability tools to report on transactional measurements related to operational, contractual, and administrative costs. With determination of the cost-benefit analysis of projects and authorizations, the Lands Section has been able to focus on authorizations that yield strong profits to the Trust with greater labor efficiency.

Presently, the Lands Section is continuing its efforts at developing business efficiencies to its daily work processes through the planning and implementation of automated systems. Currently in development are electronic submittals and routing of electronic applications, enhanced document production and management tools, and enhanced integration with state systems such as LAS. Pre-population of data into electronic records will streamline and create greater accuracy of the business process.

Key Performance Indicators

Key performance indicators are based on achieving profit in both principal and income funds, as well as revenue maximization by type of authorization and parcel. A key component of establishing performance measures is the statistical financial information derived from marketing analysis and returns from prior authorizations or developments. Authorizations for land use that have low returns will be denied unless they fulfill a stewardship obligation by increasing the inherent or potential value of a parcel.

Stewardship typically does not have revenue performance measures because its focus is the preservation of the parcel; however, revenue potential may be created through lease opportunities for nondevelopment easements to keep lands pristine and undeveloped.

Profitability in Comparison with Other Land Trusts

The Western States Land Commissioners Association (WSLCA) covers 23 states, and its membership oversees 447 million acres of state land, of which most are managed for school trusts. Due to the lack of a standard reporting system, the WSLCA developed a reporting standard (Return on Asset to compare asset or authorization types) to measure asset performance across multiple states. Although the TLO is a WSLCA member, it does not yet have the ability to measure itself in comparison to other state trusts, except by revenue per acre, until similar financial reporting functions are developed. The advances of cost-benefit analysis reporting are one step closer to producing comparison reports with other similar land trusts.

Goals and Objectives

Goal 1: Maximize long-term revenue by increasing development opportunities over time.

Objective 1: Encourage lease programs for nondevelopment on nonperforming assets that will employ sound economic and environmental practices while providing income/revenue.

Objective 2: Promote income producing authorizations for commercial opportunities related to industry drivers in tourism, pipelines, roads, utilities, and communication sites.

Objective 3: Maintain a three-year inventory of lots through subdivision developments in support of the competitive land sale program.

Objective 4: The Lands Section will contribute a total of \$3 million in revenue per fiscal year through the development of goals during fiscal years 2017-2020.

Goal 2: Manage Trust land prudently, efficiently, and with accountability to the Trust and its beneficiaries.

Objective 1: Develop Focus Area Plans and market analysis reports that will make recommendations for future land use that will encourage a diversity of revenue-producing uses and generate strong returns.

Objective 2: Continue to develop new business processes that will increase efficiency of operations and reduce operational costs.

Objective 3: Develop management reports to measure revenue over expenses and track costs including labor time by authorization type.

Objective 4: Develop analysis tools to provide a basis for comparison of profits and other financial matrices with other trusts.

Goal 3: Protect and enhance the inherent value of the surface lands through stewardship obligations.

Objective 1: Establish or increase collaborative relationships with local governments, NGOs,⁵ communities, and state and federal agencies to advance the TLO's mission and land management decisions.

Objective 2: Actively engage in monitoring and abating proposed actions of governments and agencies related to zoning, regulatory changes, plans, operations, and projects that may adversely affect value of Trust land.

Objective 3: Identify and resolve issues that negatively impact Trust land related to access, trespass, environmental degradation, or contamination.

Objective 4: Resolve long-term pre-1994 settlement DNR actions that negatively affect the value of Trust land such as inter/agency management agreements.

5 Non-government organizations

MINERALS AND MATERIALS RESOURCE MANAGEMENT STRATEGY

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Introduction

Resource development decisions made today will impact the Trust and its beneficiaries for generations to come. Accordingly, a profound mineral and materials resource management strategy and a sound resource policy are required to enable economic growth on Trust lands. Establishing these policies requires an understanding of the quantity and quality of the Trust's mineral endowment, the commercial viability of that endowment, and expectations for future mineral production and its economic benefits.

Trust lands have significant potential for mineral and materials resources (including base and precious metals and industrial metals). Some production has already been realized, primarily from the Fort Knox gold mine and various small placer mining operations in the Fairbanks mining district.

New discoveries are essential for the continuing growth in Trust land mine production. Such growth is critical to retain the Trust's capacity to generate revenue to fund Trust beneficiary programs. While extensions to existing resources will continue to support production volumes, exploration for new discoveries are urgently required to ensure that an ongoing pipeline of mineral resource projects are available to meet future demands.

Authorities and Responsibilities

The Alaska Mental Health Enabling Act of 1956 provided the Trust with a land endowment of one million acres. Specific to that grant is the statement that "all grants made or confirmed under this section shall include mineral deposits"¹ subject to prior existing rights. It is inherent in the Act that the minerals were to be conveyed with the land in order to be utilized by the Trust. Today, the Trust finds itself with a mixture of lands, some of which are owned fee simple (meaning the Trust owns both surface and subsurface rights), while other holdings are mineral rights only, hydrocarbon rights only, or surface rights only.

Management of Trust lands is guided by Title 11, Chapter 99 of the Alaska Administrative Code (11 AAC 99). These regulations outline mining rights on Trust land as follows:

11 AAC 99.100. Mining rights

(a) Rights to locatable minerals on trust land are available only as provided in this section. To the extent that a statute or regulation applicable to other state land, including AS 38.05.185, 38.05.195, 38.05.205, and 38.05.245, contains a requirement that provides for or permits the acquisition of mineral rights, rights to prospect, or rights that open land to claim staking, mineral location, or leasehold location, that provision of law is considered inconsistent with 11 AAC 99.020, and does not apply to trust land.

(b) The executive director, in consultation with the trust authority, shall open areas of Trust land under one or more of the following methods, or under (c) of this section, which the executive director determines to be consistent with 11 AAC 99.020: (1) competitive lease; (2) exploration license; (3) negotiated agreement; (4) prospecting permit; (5) mineral entry; or (6) by other methods that the executive director considered appropriate.

(c) If an area is not opened for the disposal of rights to locatable minerals under (b) of this section, a person may apply under 11 AAC 99.030 for an authorization to explore and prospect for or lease locatable minerals in that area.

(d) Terms and conditions of an authorization under (b) of this section, applicable to mining rights on trust land, shall be developed in consultation with the trust authority.

(e) The rent, royalty, and assessment work credit provisions of law applicable to other state land, including AS 38.05.211 and 38.05.212, do not apply to trust land unless determined by the executive director, on a case-by-case basis, to be consistent with 11 AAC 99.020. The determination shall be stated in a written finding.

(f) Nothing in this chapter affects valid mineral rights on trust land that existed at the time the land was designated as trust land.

Under this code, the normal methods of acquiring mining rights on state land do not apply to Trust land. Instead, the TLO executive director will open land for mineral development as dictated under (b) above.

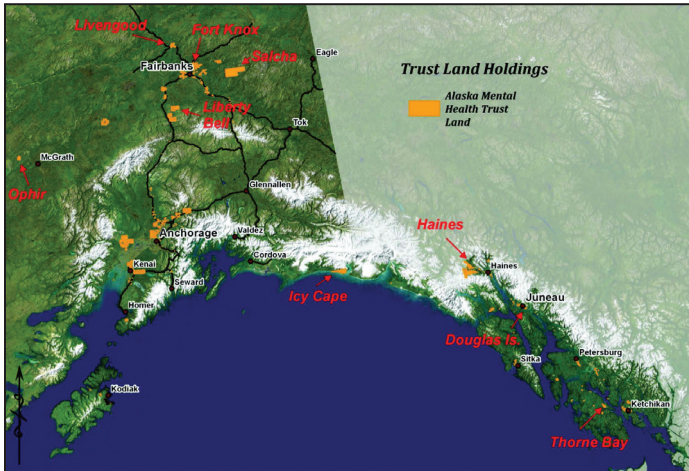
The development of minerals must be consistent with the overall general management of Trust lands as outlined in 11 AAC 99.020, which states that

¹ Sec. 2.2 (c)

MINERALS AND MATERIALS RESOURCE MANAGEMENT STRATEGY

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"management shall be conducted solely in the best interest of the Alaska mental health trust and its beneficiaries," that land be managed for "maximization of long-term revenue" and that a "best interest" decision consider only the interests of the Trust and the beneficiaries. Such a best interest decision, made on a case-by-case basis, is in fact required to be written and made public before a disposal of interest is finalized.



Trust Land Holdings Showing Select Areas with Metals Resource

Disposal of Trust Mineral Resources

Trust lands generate revenue through disposal of mineral and material resources. ("Disposal" here means the issuance of a lease or sales contract that grants the lessee the right to explore for, develop, remove, and market a particular resource on Trust land.)

Note that land use licenses are not considered a disposal of interest in Trust land because they do not allow for the acquisition of an interest in Trust land or resources. A license is issued to authorize a particular use of Trust land.

Regulation 11 AAC 99.020 describes the management responsibilities that are consistent with Trust principles accepted by the Territory and State of Alaska under the Alaska Mental Health Enabling Act. When taking land management actions, including disposal of resources, the executive director must make a number of considerations to be consistent with these principles. These considerations are:

1. *Maximization of long-term revenue from trust land;*

2. *Protection of the corpus of the Trust;*

3. *Protection and enhancement of the long-term productivity of the land;*

4. *Encouragement of a diversity of revenue-producing uses of trust land; and*

5. *Management of trust land prudently, efficiently and with accountability to the trust and its beneficiaries.*

11 AAC 99.020(d) reads:

The disposal of trust land shall be on a competitive basis unless (1) the executive director, in consultation with the trust authority, determined in a written decision required by 11 AAC 99.040 that a non-competitive disposal is in the best interest of the trust and its beneficiaries; or (2) an existing law that is applicable to other state land and that is consistent with (a)-(c) of this section allows for a negotiated transaction.

This is the key regulation that determines how an interest in Trust land can be disposed. Disposal of resources on Trust land can be initiated in several ways, such as the expression of interest from a prospective purchaser, the acceptance of an application, or the opening of an area by the executive director for leasing, but the actual disposal is conducted based on 11 AAC 99.020(d).

Regulation 11 AAC 99.100 gives the executive director great latitude in determining the best method of making Trust land available for mineral development. The preferred method of encouraging mineral development on Trust land is issuance of a lease, either on a competitive basis or, if consistent with 11 AAC 99.020, on a negotiated basis.

For certain deposit types such as precious metal and base metal deposits where there is healthy competition for leasing Trust lands, especially in times of high commodity prices, a competitive land lease offering would be the preferred method. However, in times of low commodity prices and therefore a downsizing industry a direct negotiated lease is the best way to guarantee success in attracting a competent partner for mineral development. Specialized materials such as heavy mineral sands are a different category. The heavy mineral sands industry is relatively small compared to the hardrock mining industry with only a handful of major mining companies operating

worldwide. The flexibility of entering directly into an exploration license or a negotiated lease significantly increases the chance of attracting key industry partners for mineral development.

The disposal of industrial minerals such as sand, gravel and rock is governed by the principles outlined in 11 AAC.99.020 and 11 AAC 99.030, with one important exception: the sale of up to 100,000 cubic yards of material is not considered to be a disposal.²

Inventory and Mineral Potential Evaluation of Mineral and Material Assets

The TLO maintains a portfolio of multiple mineral projects and seeks to create partnerships with mining companies that fund major exploration work and mineral development on Trust land.

Proper inventory and mineral potential evaluation of Trust lands is critical. The TLO is using Geographic Information System (GIS) technology to develop a Minerals and Material Information System and to evaluate the mineral potential of its mineral properties. This task has already been completed for the large Ophir, Salcha, Liberty Bell, Icy Cape, Thorne Bay, Haines and Douglas Island land blocks. The developed comprehensive GIS databases are comprised of geological, structural geological, geochemical and geophysical exploration datasets accommodating spatial and nonspatial information and allow for quick access and easy comparison of complex datasets, and aid the stimulation of mineral exploration concepts.

Mineral potential evaluation for various mineral deposit types on Trust land is conducted by either using “classic” evaluation methods or more modern approaches such as data, or knowledge-driven GIS-based mineral potential modeling. Mineral potential evaluation leads to the delineation of highly prospective areas within individual land blocks and allows for ranking of individual mineral exploration targets.

As of the printing of this plan, the only metal deposits on Trust land with calculated reserves/resources are at the Fort Knox gold mine and Livengood gold project.

Deposit	Fort Knox	Livengood
Potential Trust Value	\$24 million	\$436 million
Proven/ Measured	115,116,000 tons 0.013 opt 1,510,000 oz.	817,684,000 tons 0.016 opt 12,893,000 oz.
Probable/ Indicated	122,629,000 tons 0.017 opt 2,099,000 oz.	354,844,000 tons 0.013 opt 4,870,000 oz.
Possible/ Inferred	99,824,000 tons 0.014 opt 1,375,000 oz.	492,594,000 tons 0.012 opt 6,041,000 oz.

Minerals and Materials Management Strategy

Strategic initiatives are required to maintain the Trust land’s competitiveness, address the exploration challenges, ensure a long-term resources pipeline is filled to prepare for the next cycle of investment in mineral resource projects, and secure the longevity of the resource industry operating on Trust land.

The major objective of the Minerals and Materials Resource Strategy is to attract industry partners to develop the mineral potential of Trust lands with the sole purpose of generating revenue for the Trust for generations to come. Industry partners need to possess both significant financial capacity and the necessary technical and managerial skills to explore and develop the Trust’s mineral resources. Attracting such partners while still securing full value for the Trust’s resources requires carefully designed leasing policies and contractual terms. The TLO follows well established and transparent procedures for leasing and seeks to establish financial terms that are competitive with the private marketplace (while recognizing that each property has its own set of merits dependent upon location, access, geology, available information and commodities).

Commodity markets and industry conditions are subject to change, and therefore, the TLO faces the challenge of quickly adopting to new situations and business opportunities. For instance, if the TLO believes that a particular commodity’s demand will be rising, but Trust lands don’t have the potential for this particular commodity, the TLO might acquire mineral properties outside Trust lands that have the particular potential and market these properties to the industry

² 11 AAC 99.990(8)(b)

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for mineral development for the sole purpose of generating revenue for the Trust.

The TLO operates as a project generator by maintaining a portfolio of multiple projects that get explored and developed by creating partnerships with competent mining companies, generally mid-tier or major mining companies. By maintaining multiple projects partnered with multiple partners at any given time increases the chances of exploration success and possible mine development.

The TLO's mineral resources management strategy is very dynamic and aggressive in nature. It describes the conceptual approach to estimating the quality and quantity of the Trust land's underlying mineral resources, the economic potential of these resources in consideration of alternative economic development planning, the aggressive marketing strategy, and the land leasing strategy for mineral development to generate revenue. This approach is comprehensive in nature and requires the ability to quickly adapt to changing industry market conditions.

Minerals and Materials Management

The Trust's Mineral and Materials Resource Management Strategy consist of the following integral components:

1. Mineral Property Evaluation Plan

The evaluation of the mineral potential on Trust lands is based on interpretation of available geological information, geophysical and geochemical exploration data using GIS technology. This leads to the delineation of highly prospective areas for mineral exploration and mine development.

For Trusts lands where the amount of technical information and data available is too limited to allow for a comprehensive mineral potential analysis, the TLO conducts field reconnaissance surveys to collect the relevant information for the purpose of increasing the land parcel or block's marketability to the mineral industries.

This undertaking requires some investment from the TLO's own financial resources, however, in order to offset some of the costs the TLO has endeavored a new unconventional path to help finance its own first pass exploration campaigns by partnering with key players in the mining industry that financially

contribute to the TLO's programs for the benefit of having a first glance at the exploration data. This new way of leveraging has been very successful at evaluating the valuable heavy mineral sands potential at Icy Cape where a major heavy mineral sands mining company made significant financial investment to the mineral potential evaluation project.

2. Product Development and Marketing Plan

Product development for marketing is a major component of the Mineral and Materials Resource Management Strategy. Developing state of the art marketing products to attract strategic partners for the exploration and development of minerals resources on Trust lands is critical. The TLO is in constant dialog with the industry and promotes and markets the mineral potential of Trust land directly to the key players in the international mining industry through participating in national and international mining conventions. The TLO listens to the industry to design and tailor its marketing and technical products specifically to the industry needs. A flexible and proactive approach is key; therefore the TLO constantly explores new and unconventional ways to generate revenue for the Trust.

3. Land Lease Offering Plan

The TLO's ongoing aggressive marketing campaigns, as well as ongoing exploration and mining activities by industry partners on Trust lands, have resulted in increasing interest in Trust land by the mining industry, whether it is for precious metal or base metal exploration, placer mining, heavy mineral sands exploration or material sales. Trust lands were selected in some cases for their significant mineral potential. There is growing acknowledgement by industry of the Trust land mineral potential and the benefit of working with the Trust to create strategic partnerships. The ultimate goal for the mineral program is to encourage mineral exploration and development on its lands to generate maximum revenue for the Trust.

4. Revenue Generation Plan

There are a number of options regarding financial return to the Trust in resource extraction. These are usually in the form of royalties, but also annual rental lease fees, and cash bonus payments from competitive lease offerings. Royalties are typically agreed upon as a percentage of either a net proceeds-type royalty or a gross revenue-type royalty. Gross revenue is typically

assessed as a percentage of the value of the mineral extracted and does not allow for deductions of mining costs. A net proceeds royalty on the other hand is assessed as a percentage of the net proceeds (or net profit) of the sale of the mineral with deductions for a broad set of mining costs. For leases of Trust land that originate from the TLO, a gross-type royalty is preferred so a steady revenue stream is available from the outset of production and continues whether the operator's profits are high or non-existent. In addition, this form of agreement is easier to administer, eliminating consideration of the grantees operations. This minimizes risk to the Trust's income stream. For example, Trust leases for placer gold vary between 10 and 20 percent of the adjusted gross value; and hard rock mineral royalties commonly vary somewhat but generally is competitive at a 3 to 3.5 percent gross royalty for base metals. The Trust has a sliding scale net royalty ranging from 1 percent to 4.5 percent depending on the price of gold. Heavy mineral sands contain several product streams, predominantly ilmenite, rutile, zircon and garnet. The weighting of each of these minerals (referred to as the assemblage of the deposit) varies significantly by deposit. Therefore, a gross-type royalty with a percentage determined based on the assemblage of the deposit is preferred for valuable heavy mineral sands.

Royalty terms are subject to change based on commodity market conditions and industry practices.

Development Issues

Addressing Resource Conflicts

Resource conflicts on fee simple Trust lands are rare, largely because the marketplace usually resolves the relative value of resources on a merit basis. For instance, most parcels in an urban or suburban setting have high real estate values and little chance of being developed for mineable resources due to their location in densely populated areas — and thus the mineral resources are not pursued. For those areas where resource conflicts do occur, such as timber and mineral resources at Icy Bay, active management is required by the TLO to ensure both resources' value can be realized without sacrificing either.

More common are conflicts on lands with a split estate — where the Trust owns the subsurface mineral estate and another entity, like the State of Alaska, owns the surface estate. In such cases, the public has become

habituated to using the land as if it were typical state-owned land and is not aware that the Trust has a need and a right to eventually develop the subsurface resources. In addition, in some instances the state has contributed to conflicts by selling the surface estate for residential use and thus has severely compromised the Trust's ability to develop its resources. In these instances, the Trust should aggressively seek to return these lands to the state and receive replacement lands that have a reasonable chance to be developed, thus meeting the original intent of Congress in granting minerals to the Trust.

Political and Regulatory Environment Effects

Alaska's economy is almost totally dependent upon the extractive resource industries, petroleum and mining. As revenue from the oil industry continues to decline due to decreasing production on Alaska's North Slope, the state will become more dependent upon other sources — especially mining — to help offset the loss of oil revenue.

Mining activity in Alaska as a whole will likely increase, and mining development of Trust land may become an even more important source of funding for the Trust. The TLO and the Trust have a role to play in these developments, particularly in supporting business partners and investors in their efforts of responsible development of resources on Trust land and defending the Trust's responsibility to develop its resources. The TLO and the Trust also need to monitor proposed legislative or regulatory changes that could add impediments to resource development.

Mine development proposals usually spark significant opposition efforts. These are driven by a combination of local groups, citizens, Alaskan conservation organizations, and national involvement. Concerns primarily focus on local environmental degradation, effects on subsistence harvesting, health effects, property values and the negative economic result of these impacts.

Risk Management

Natural resource projects are subject to many risks: future commodity prices; uncertainties about the quality and quantity of the resource base; developing technology; input prices; and external or domestic political developments.

Such risks must be assessed and classified. Typically,

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investors bear operational or market risk since they can better manage or control it. The Trust shares in bearing certain political risks since natural resource development projects often have some measure of controversy.

Capital Risk

The Trust has the potential to make much more profit on a large-scale mining operation if it were to successfully explore its land, discover a deposit, prove the deposit capable of being profitably extracted, successfully permit the facility, construct the facility, operate it until exhaustion of the resource, and conduct reclamation. However, each step is fraught with risk and requires expertise and personnel that would have to be acquired on a large scale.

While first pass reconnaissance exploration work is funded by the Trust, a full commitment to explore Trust lands would reasonably require millions of dollars per year with no assurance of successful development.

Thus, risk is reduced by not investing substantial Trust capital in resource exploration and development, but rather by marketing the properties to attract others to invest in this high-risk segment of the minerals business.

Diversification

Another method for reducing risk is to diversify the commodity portfolio as much as possible. Most commodities have price cycles that are difficult to predict but nonetheless are cyclical with established trading ranges. Commodity prices seldom rise and fall together, so it is advantageous to be involved with a wide selection of resources. Since some commodity prices fall as others rise, the TLO seeks to be involved with as many commodities as are available on Trust land — precious metals, base metals, materials, industrial rocks and minerals, etc.

Goals and Objectives

Trust lands have a significant but undetermined amount of valuable mineral resources, predominantly in the form of gold, base metals and mineral sands. The current program of aggressively leasing land for mineral development is already returning substantial revenue. The TLO's goal is to manage these resources to provide a relatively steady and increasing stream of revenue until such time as they are exhausted. Annual minerals and materials revenues have risen over the past two decades.

General Goal: Develop a diversified portfolio of mineral projects that can contribute significant revenue to the Trust.

Objective 1: Attract industry partners to develop the Trust lands' mineral potential to generate revenue.

Objective 2: Conduct leasing programs utilizing the plan guidelines for resource development on lands permissive of minerals and materials.

Mineral Resource Evaluation Goal: Develop and maintain a systematic Minerals and Materials Information System for mineral potential evaluation and land block inventory.

Objective 1: Using GIS technology, conduct mineral potential evaluation of Trust.

Objective 2: To delineate prospective areas for marketing purposes.

Product Development and Marketing Goal: Develop marketing products to attract strategic partners and expand marketing campaigns of Trust lands beyond the typical U.S./Canadian marketplace.

Objective 1: Develop state of the art marketing products specifically designed to the industry needs to attract strategic partners for the exploration and development of mineral resources on Trust land.

Objective 2: Attend substantive and applicable events to market Trust assets.

Replacement Land Goal: Seek replacement land for those mineral-estate-only lands where development cannot take place due to surface conflicts.

Objective 1: Identify and compile a list of these impaired lands.

Objective 2: Identify potential replacement lands; seek a remedy through administrative, legislative or legal proceedings so that the intent of Congress can be met.

PROGRAM-RELATED REAL ESTATE RESOURCE MANAGEMENT STRATEGY

PROGRAM-RELATED REAL ESTATE
RESOURCE MANAGEMENT STRATEGY

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Introduction

The use of Trust land for a Trust beneficiary or organization acting on behalf of Trust beneficiaries to directly benefit persons is consistent with Congress' intention to create a mental health trust for the State of Alaska. The Alaska Mental Health Enabling Act (1956) obligated the Territory of Alaska to administer the lands granted as a public trust. Congress further declared that proceeds and income from the land shall "first be applied to meet the necessary expense of the mental health program of Alaska." It is consistent with the formation of the Trust to use its lands to directly benefit beneficiaries. This potential direct use is anticipated in the TLO regulations:

11 AAC 99.110 Direct use by beneficiaries.

A Trust beneficiary, or an organization acting on behalf of a Trust beneficiary wanting to use Trust land to directly benefit persons as part of, or to fulfill, the Trust Authority's purpose to ensure a plan for an integrated, comprehensive mental health program prepared under AS 47.30.660 (a)(1), may be granted use of Trust land. Trust land use to be granted under this section must be approved by the Authority before consideration by the executive director.

The above provision is interpreted to also allow the use of properties acquired by the Trust for program and beneficiary purposes.

This plan serves to provide general guidance on the use of Trust land for beneficiary programs but is limited in scope to real estate or land use related issues. Decisions related to beneficiary programs or policies are made by trustees. In addition, the plan identifies policies, procedures and other considerations relative to Trust land use or property/land acquisition for beneficiary programs.

From time to time, Trust staff, working on behalf of or with a beneficiary group, may bring a proposal to the TLO for real estate consideration. Proposals may identify the need to acquire select properties and/or the need to identify a parcel of Trust land that would be appropriate for the development of a beneficiary program or facility. TLO staff can provide technical and professional assistance and service to Trust staff by identifying existing Trust land or other available land for potential consideration by Trust staff and/or trustees.

This scenario was employed for the development of the Fairbanks Enhanced Detox Facility (2004-2008). The TLO worked with a team of stakeholders representing nonprofits, tribal organizations, and state and federal agencies to acquire raw land, develop a subdivision with road and utilities, and contract for the design and construction of a 10,500-square-foot treatment facility. The TLO's role included land and entitlement acquisition, project management and procurement for subdivision development, oversight of the construction contract and negotiation of the facility and land lease with Fairbanks Community Behavioral Health Center (FCBHC). Although initially the facility was owned by FCBHC to support funding its construction, it is now owned by the Trust, and the TLO contracts with a property manager to manage the building and provide ongoing maintenance. This model, or a variation thereof, can be implemented when facilities need to be acquired or constructed for Trust-funded program purposes.

Program-Related Real Estate Resource Management Strategy

Upon initiation by the Trust, the TLO will research, analyze and conduct due diligence relative to proposed beneficiary uses of Trust land to make recommendations to the Trust and its board of trustees. The TLO will consider those issues related to the Trust acquiring lands or buildings for beneficiary purposes but will defer to the Trust for direction and decisions related to program needs and program development. The TLO will consider long-term and short-term risk to the Trust, financial risks and considerations, investment implications and due diligence findings and provide recommendations to Trust staff and the trustees when appropriate. Any proposed beneficiary program on Trust land will be treated by the TLO as it would any other project — all recommendations will consider the best interest of the Trust. The TLO will not consider or verify the merits or values of a beneficiary program but defer to Trust program officers and the trustees for these decisions.

The use of Trust land for beneficiary interests at times may conflict with the TLO's mission to maximize revenue from Trust land. As a result of the settlement agreement of 1994, the Trust received some lands that were encumbered by long-term leases or other management agreements established under the Department of Natural Resources' (DNR) management

PROGRAM-RELATED REAL ESTATE RESOURCE MANAGEMENT STRATEGY

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of the lands as “general state land.” Although the TLO has an ongoing obligation to honor valid existing rights, such as public and charitable leases, the long-term management goal of these lands will be to maximize revenue generation over time. Each scenario will need to be considered and reviewed on a case-by-case basis, as lease conditions vary. In the case of nonprofit organizations that may also serve beneficiaries of the Trust, the TLO should always consider the potential revenue opportunities that a parcel of Trust land may offer and be ready to manage for other uses in the event that a beneficiary or nonprofit-oriented lease expires or the occupant abandons the property or changes its need for the land.

Risk Management

The primary consideration of risk to the Trust for beneficiary-related uses of Trust land includes, but may not be limited to, the following:

- Loss of potential revenue from alternative/competing development projects;
- Holding costs associated with program development when the Trust advances a program-related investment (PRI) acquisition;
- Instability in operating budgets or loss of beneficiary program funding for an existing program;
- Management or administrative issues that could negatively impact beneficiary program operations; and
- Loss of TLO staff time focusing on revenue-producing opportunities.

These potential risks vary depending on the scenario at hand. Some beneficiary-related uses of Trust land were granted prior to the reconstitution of the Trust (for example: ARC located in the Community Park Alaska Subdivision, Anchorage). Generally, these land use rights were granted by DNR under a limited rights conveyance document (such as a management agreement) or other long-term lease document that granted exclusive use rights, at times without an expiration date. In some instances, these land use rights were assignable to other non-profits or beneficiary groups. As in the case of Catholic Social Services (CSS), also located on Trust land in the

Community Park Alaska Subdivision, the land lease originally had been granted by the Municipality of Anchorage to the Sisters of Providence for a 40-year term. In 1991, the lease was assigned to CSS. The CSS programs at this location serve some of the Trust’s beneficiaries, but are not considered solely “mental health programs.” The complexity of existing land use rights coupled with the need for program services makes the identification of risk and consequent management of these existing rights and assets more difficult. As such, the TLO will work with Trust program officers to advance the mission of the TLO and the Trust subsequently, when possible.

Policies

In order to balance beneficiary needs with the TLO’s mission to maximize revenue for the Trust, proposed beneficiary-related uses of Trust land should be initiated by Trust staff. Requests from beneficiary-related groups or mental health providers operating or proposing to operate on Trust land should be considered on a case-by-case basis.

Decisions to use Trust land to directly benefit beneficiaries or to fulfill the Trust Authority’s plan for an integrated comprehensive mental health program must be approved by the trustees, and then forwarded to the TLO for consideration by the executive director.

When appropriate and approved by the board of trustees, TLO staff may seek reimbursement from the Trust for time and funding spent for projects initiated by Trust staff.

TLO and Trust staff will work together to set priorities for specific beneficiary-related projects with the direction of the board of trustees.

The Trust may also request instruction and approval of the board of trustees to incorporate program-related investment (PRI) or the use of Trust resources to loan or otherwise financially support designated projects utilizing principal resources. (See Appendix A.)

Goals and Objectives

Goal 1: Assure the real estate needs of mental health programs sponsored by the Alaska Mental Health Trust Authority are met as appropriate.

Objective 1: TLO will provide expertise to Trust staff relative to program-related real estate projects or land use authorizations on Trust land.

Objective 2: TLO will provide expertise and services to the Trust to acquire land or property for beneficiary programs.

Goal 2: Manage Trust land for the long-term preservation of the Trust's land base while supporting and enhancing the Trust's mission to promote a comprehensive integrated mental health program.

Objective 1: TLO will manage land and facilities owned by the Trust to serve the best interest of the Trust.

Objective 2: TLO will provide professional property management and other real estate and stewardship services to protect the value of program-related Trust investments.

Goal 3: Develop Trust land inventory and long-term management plans related to beneficiary programs.

Objective 1: TLO will maintain an inventory all of existing beneficiary related uses of Trust land.

Objective 2: As a function of maintaining the land base, the TLO will develop individual long term management plans for existing mental health programs located on Trust land. The plans will identify opportunities and potential scenarios for future revenue generation.

Objective 3: TLO will create an inventory identifying all Trust land that is currently zoned consistent with potential Trust beneficiary needs.

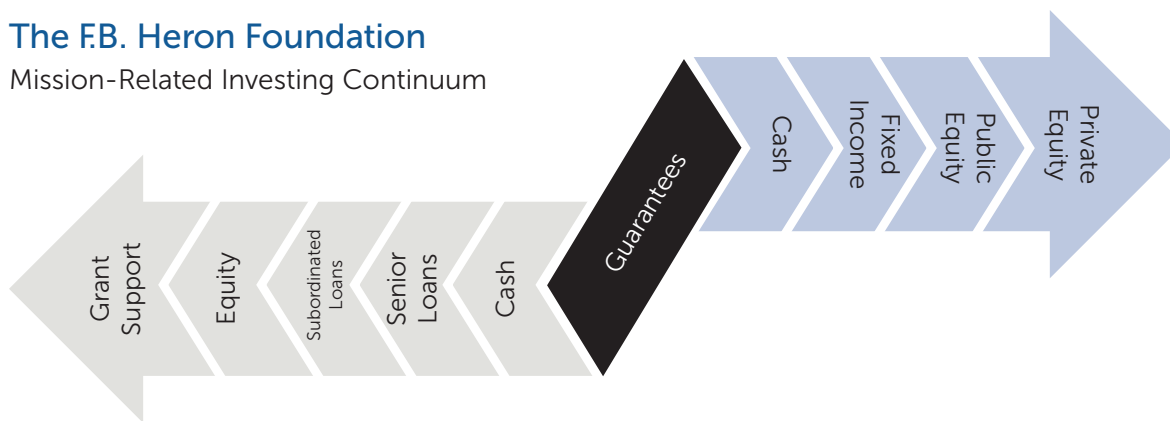
Appendix A: Program-Related Investments

(This appendix has been provided for Trust Authority staff and trustees for potential policy and decision making limited to program-related investments.)

A program-related investment (PRI) is a financing tool used by many foundations and funders to increase the impact of their limited resources on achieving priority activities. These investments have been in development by such foundations as the Ford Foundation and the F. B. Heron Foundation since the late 1960s. Assistance may be structured in several forms as demonstrated by the diagram below.

The F.B. Heron Foundation

Mission-Related Investing Continuum



The Trust has been examining PRIs as a way to achieve greater impact in the area of housing for beneficiaries. The following outlines some of the parameters that may be used to examine and develop a potential program in order to facilitate the discussion by trustees.

1. Definition and strategy goals

Housing has been discussed as one potential area for using PRI. This is likely a good place to begin with a program for the Trust: specifically, assisting nonprofit organizations in acquiring property and holding this property until they are able to apply for grant funding has been the focus of our work. Other targets may be identified to benefit the overall nonprofit sector. Examples:

- a. Social programs: Trust resources may be used for other programs than housing. One use may be to incentivize areas of interest, such as programs demonstrating fuel efficiency or pairing PRI resources with projects moving forward in the legislative process as an incentive for general fund/mental health investment.
- b. Potential markets: Trust investment needs to be in areas where traditional financing will not operate — i.e. guarantee of loans to nonprofits that are unable to secure traditional financing due to the increased risk caused by target populations (such as housing loans to augment capital funding for project targeting individuals below the market income thresholds).

2. Potential programmatic uses to benefit beneficiaries

There are a number of factors trustees should consider prior to approving individual PRIs or a PRI program. Subsequent potential projects may contain a larger amount of risk once a base program is in place. Any program should be developed to maximize Trust resources with regard to the following factors:

- a. Highest and best use opportunities

- b. Size and duration of investment
- c. Expected return

3. Risk tolerance and mitigation

- a. Corporate veil: additional corporate entity(ies)
- b. Define sound investment matrix
- c. Solicitation for acquisition process
- d. Holding cost and impact

4. Financial Strategy

- a. Principal versus income
- b. Distribution mechanism
 - i. Grants
 - ii. Debt instruments
 - iii. Leverage of external funding through other philanthropic organizations and private, revenue-generating companies
 - iv. Legislative and advocacy assistance
- c. Accounting treatment to the Trust

5. Structuring and monitoring of programs

- a. Management of funds
- b. Legal counsel review of agreements, contracts and banking accounts
- c. Staff time
- d. Organizational responsibilities of the process

6. Time horizon

- a. Timeline and terms for repayment
- b. Timeline for review and financing decisions

FOREST RESOURCE MANAGEMENT STRATEGY

FOREST RESOURCE MANAGEMENT STRATEGY

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Introduction

The TLO manages approximately 130,000 acres of lands with commercial forest potential. These lands are located across Southeast, Southcentral, and Interior Alaska. Each region has different forest types due to topography, soil conditions, and climates. These different types vary in the quality, density, and size of the timber which grows there. Revenue derived from Trust forest assets is, as a result, quite variable. Historically, forest resource revenue was generated primarily from traditional, large-tract, old growth timber sales in remote areas of Southeast. These opportunities have dwindled and the region has been transitioning to smaller, young growth sales. Much of the remaining forest land in Southeast is located in areas of high recreational value or in viewsheds in and around communities. The majority of the forested Trust lands is situated in Southcentral and Interior Alaska, but has smaller, less valuable timber making it less feasible to develop.

It is important to understand the diversity of the forest products industry, the quality of the timber required to produce a given product, and the markets and prices associated with those products in order to successfully manage the Trust's forest resources.

History and Objectives

Original land selection under the 1956 Alaska Mental Health Trust Enabling Act included lands located in and around existing communities. In the 1950s, the United States Forest Service (USFS) oversaw a robust timber harvest program on federal lands. Consequently, timber harvest on new Trust lands was not a priority. Multi-use land and community growth were more important factors in selecting Trust lands than the presence of timber resources. Even so, much of the acreage ultimately selected for the Trust does include harvestable stands of timber scattered throughout the state. Some of this acreage is in close proximity to communities.

The timber program began shortly after the establishment of the TLO and timber has been a major source of revenue generating over \$40 million. These revenues are split 85 percent to principal and 15 percent to income. The first timber sale was conducted at Icy Bay in 1995. Subsequent sales were held near Thorne Bay, Ketchikan, and Wrangell. Sales were predominately large-tract, old growth sales in a

high-demand market. Over the last few years, timber revenue has been declining and the nature of the sales has changed significantly due to the type and location of available timber.

Trust land often borders private residences and some lands have traditionally been used by the public for subsistence, recreation, water sources, view sheds and other activities. These traditional uses are often viewed by the public as conflicting with development. In recent years, objections over proposed Trust timber harvests from adjacent communities have made it difficult to monetize some timber. The TLO has utilized various methods to mitigate the public concern while meeting the Trust's objectives. These include selective helicopter harvesting, public education, and exploring alternatives to timber harvest and land exchanges. These strategies are essential because much of the remote parcels have been harvested.

The TLO is pursuing a land exchange with the U.S. Forest Service (USFS) to increase the portfolio of harvestable timber. Trust parcels in and around communities would be exchanged for remote federal land. If successful, this exchange will provide the Trust with a timber asset base that will likely provide a continuous rotation and cycle of timber harvest revenues and opportunities.

Industry Trends

The current Alaska forest products industry is composed of relatively small but diverse components. Each region of the state has its own unique composition of forest managers, loggers and sawmills. The current size and changes in the forest products industry in general reflect multiple cyclical and long-term phenomena occurring domestically and internationally. Developments in policies, programs, technologies, consumer preferences, as well as social pressures affect the industry and availability of resources. This is especially true when a majority of the land is federally owned as it is in Alaska.

Timber experiences price fluctuations according to the laws of supply and demand. Prices may vary significantly from one market to another based on factors such as availability, cost of production, transportation, and currency exchange rates. The price paid for any product class also varies according to quality.

The costs associated with timber production in Alaska

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are typically higher than in most timber producing regions of the world. These high costs are due in part to the logistics of operating in remote locations, environmental regulations, and relative small volumes of timber. Costs such as road construction, infrastructure development, transportation, labor and freight coupled with small operations are challenges to maximizing revenue to the landowner. These costs are off-set by proximity to tidewater, shorter shipping distance to Pacific Rim markets and value of timber (old growth, tight grain wood). Old growth timber from Southeast Alaska is known for its tight grain and clear (no knots) composition. These components are rare in the international markets. As Southeast Alaska transitions to young growth timber it loses the scarcity component of this equation (old growth). Southeast Alaska young growth is very similar to the young growth in other regions of the world.

The Pacific Rim constitutes the primary markets in Southeast Alaska. This export market allows for much higher returns. The TLO has averaged returns of \$125 to \$300 per/mbf (for all species) in past sales. Timber volumes of 20 mbf/acre and higher provide greater stumpage returns and the value of timber is based on the value of the products that can be made from them. This is dictated by size (height and diameter), species and quality of the trees. This is especially significant when comparing young growth timber (a readily saleable commodity) and old growth timber (a scarce niche market product).

The markets for timber in the northern region are primarily domestic and are typically about \$100 per/mbf for spruce sawlogs. The volume per acre is typically low with an average of less than 3 mbf/acre of spruce. This low volume per acre makes profitable sales difficult. The firewood markets have potential but require extensive administration and seldom provide a positive financial return. Limited export sales have occurred in the past because the distance to markets makes transportation costs challenging.

From 2008 to 2011 the TLO benefitted from an upswing in market demand in China. The Chinese demand for wood began to rapidly increase in 2008 and the Trust, through its timber purchasers, was well positioned for the advantageous market. This market allowed smaller logs which were previously not marketable to be sold. The closure of many West Coast pulp mills made the selling of logs less than 12" in diameter very challenging. If markets could be found, the offered price often did not exceed production

costs. Although the market for Alaska's high-end, tight grain, clear timber remains, it has become a niche market. The most dramatic market shift has been the decreased high-end demand from Japan for both Sitka spruce and western hemlock. Japan has been the primary market for expensive vertical grain wood, but this shift has reduced the quantity of high grade Sitka spruce that is sold annually.

Trust timber competes with timber grown all over the world. There are vast tree farms in the southeastern United States, Chile, New Zealand, South Africa, Russia and other regions that compete in the international commodity markets for timber. Random Lengths International, a trade journal which reports on global wood products markets, states, "prices of North American stock in China are heavily influenced by the volume and prices of logs and lumber from Russia, Scandinavia, New Zealand, South America, and other supplying regions."

A potential developing market for Trust timber is for use in biofuel power and heat facilities. There have been a few large biofuel projects proposed in the northern region of the state. To date, none of the larger projects have progressed past the feasibility analysis stage. Clear Airforce Base and Fort Greeley, the City of Fairbanks, University of Alaska, and Alaska Power and Telephone have all conducted studies but have not moved the projects forward. It appears that the emphasis on natural gas in the region to alleviate diesel and coal dependence is a key factor.

Small biofuel projects primarily associated with the heating of schools and other government buildings have been very successful. These projects use pellets, wood chips and cord wood for facility heating. These projects are primarily driven by various government grant programs promoting diesel conversion with the objective of reducing the use of hydrocarbon fuels. However, as these grant programs decrease, the market for timber to supply these small biofuel projects is expected to also decrease. The price paid for timber used as biofuels is typically not sufficient to provide a profit to the landowner.

Inventory of Forest Resources

Trust lands on the Kenai Peninsula, Mat-Su Area, and north of the Alaska Range, constitute the majority of the forested acreage. Although these lands are considered timber lands, the volumes, species,

density, and remoteness can create an insurmountable challenge to development and profitability. The highest-value timber is located in Southeast. The geographic separation of the Trust's timber assets complicates and increases management costs to implementing a sustainable timber harvest plan. The TLO focuses inventory projects on areas with the greatest potential for creating revenue to the Trust. For this reason, inventories have focused on parcels in Southeast. Statewide inventories will continue to identify revenue producing opportunities on Trust forest lands.

Timber is a renewable resource. The primary asset (land) is held while the secondary asset (timber) continues to accrue. Harvest of the secondary asset can occur every 50 to 100 years (70 years on average in Southeast). Timber is a solid source of revenue to the Trust and will continue to make significant fiscal contributions if prudently managed.

Forest Resource Management Strategy

Forest management is defined as the planning and implementation of sustainable production of forest crops and other forest resources and uses. Key decisions in forest management include land allocation to different uses or combination of uses, silviculture¹ method and practices, intensity of management, timber harvest scheduling and environmental protection.

The TLO will continue to employ various forest management strategies to decrease the time between harvests which will increase income to the Trust. Furthermore, it will work toward increasing fiber production for long-term management of Trust lands and research different methodology to maximize the financial return to Trust beneficiaries from its timberlands.

Forest stewardship plans and silvicultural techniques will be developed to improve timber management, while still maintaining flexibility to take advantage of high market conditions. Industry and product trends, as well as market conditions and the economy, will be evaluated to determine when and how to sell a given

commodity. The TLO will continue to work closely with industry and keep resources available for desirable market conditions.

The TLO will look for and evaluate projects where multiple resources can be developed simultaneously on Trust land or use the timber development to positively affect the other resource development potential. For instance, this may be a combination of timber sales and subsequent land sales utilizing the infrastructure built by the forestry project to enhance the subdivision sales. At times timber sales may enhance access for mining development.

The TLO works to maintain a viable timber program in Southeast Alaska. If all the companies that can support timber harvest and the necessary infrastructure disappear, the marketable timber on Trust lands will not be harvested, causing a loss of revenue to the Trust. The TLO will work with the Division of Forestry and the University of Alaska and other parties to offer enough timber to at least maintain a small timber industry in Southeast Alaska.

The TLO uses a basic economic exercise to determine if a given parcel of Trust land with a timber component is viable for harvest. The process identifies potential profitability by evaluating whether the project generates revenue greater than the cost of the operation. One of the primary factors that determine the amount of revenue generated by a project is the volume per acre of merchantable material. In Southeast Alaska, volumes per acre can be as high 30,000 board feet per acre (30 mbf/acre) or more for four merchantable species (hemlock, Sitka spruce, red and yellow cedar). In Alaska's Interior, volumes of spruce (desired saw log) in a stand are much lower (2 to 5 mbf/acre) with no other viable species, based on current markets. The average price in the Interior paid for saw log stumpage is \$100 per mbf to a limited domestic market. In Southeast, the average price paid for all species is \$100 to \$300 per mbf to a virtually unlimited export market (prices are from recent timber sales.)

The following considerations are measured when testing the viability of a timber harvest:

- a. Cost of operation (access to resource, road construction, infrastructure and harvest costs);
- b. Cost of transporting timber to point of sale;
- c. Quality and quantity of the timber being

¹ Silviculture is the practice of controlling the establishment, growth, composition, health and quality of forests to meet diverse needs and values.

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produced; and

d. Price the market will pay for timber.

The market price (d) must be greater than the sum of the first three values (a-c) or development of the parcel or resource is not feasible (i.e. there is no profit). If the projected selling price is not adequate to cover access, harvest, transportation, and administrative costs, the project is not considered viable. If a harvest project is not viable, the TLO must decide either to wait for more favorable markets or to consider developing the parcel for a purpose other than timber.

The TLO must also determine if the revenue derived from the sale of the specified asset will be higher or lower in the near future. Harvest opportunities often swing with market conditions. Typically, many Alaska regions are viable for timber harvest only at extreme high markets. This is primarily due to access difficulties and expensive harvest costs, low volumes per acre and distance from markets.

Risk Management

Market Risk

The risk of not obtaining the highest potential market values for timber can be mitigated by utilizing long-term contracts, monitoring trade publications and maintaining relationships with a variety of individuals and companies that are active in the trade. The TLO monitors industry, proposals and developments that could favorably affect the harvest of Trust assets statewide. The viability and profitability of various contingencies are analyzed often to determine if and when it would be in the Trust's best interest to participate in a market or offer a resource for development.

Regulatory Risks

Federal

Federal regulatory intervention in the management of timberlands is a major risk. Statutes such as the Clean Water Act, Clean Air Act, and Endangered Species Act can have a profound impact on forest land management. These risks can be somewhat mitigated by monitoring Federal agencies, Non-Governmental Organizations, and maintaining relationships with trade

and economic development entities. It is important that the TLO maintains relationships with groups which monitor and comment on Federal regulations to influence them to minimize impacts on Trust lands.

State

The Alaska Forest Resources and Practices Act is the primary statute regulating timber lands and associated activity within Alaska. The implementation of this act is overseen by the Board of Forestry. The board is comprised of seven seats representing commercial fisheries, the timber industry, environmental, recreation, foresters, native organizations, and the State Forester. The TLO attends these biannual meetings, which provide an awareness of new and ongoing forest land issues statewide. Close association with Alaska Department of Fish and Game also aids in minimizing impact on Trust timberlands. Although the TLO has identified potential development issues within this document, there are no current statutes preventing the Trust from harvesting its current timber holdings.

Social License

This has been defined as a local community's acceptance or approval of a company's project or ongoing presence in an area. It is increasingly recognized by various stakeholders and communities as a prerequisite for development. These groups can use opposition of development, including timber sales, as a means to raise awareness for various causes and fund raising. These groups are generally very organized and have the capability to mobilize quickly to oppose a project. Because of their willingness to litigate to stop projects, it is a growing concern for timber harvest proponents.

Over the past several decades the commercial harvest of timber has become more complex. The U.S. Forest Service no longer has a commercial timber sale program although it offers timber for sale from restoration, wildlife management, and management objectives other than timber. State and private landowners continue timber programs although operations must adhere to additional and restrictive statutory regulations and permitting processes that can require considerable expense and risk.

Business Models

Timber is an asset that literally grows physically and in value through time. A tree typically increases in size and volume and becomes more valuable with age. This relationship between a tree's biological growth and its financial value means that the negative impact of the time value of money and the risk of negative returns can be offset through timberland investment. This is due to the increasing timber volumes it generates through time.

A rapidly growing segment of global investment is Timberland Investment Management Organizations (TIMO). TIMO's were developed in the 1970's after Congress passed legislation that encouraged institutional investors to diversify their portfolios. By the early 1990's a fundamental ownership of commercial timberlands occurred and by 2008 the management of timberland moved from manufactures of timber-related products to timber management organizations. These TIMOs have the technical and market knowledge to maximize yield and increase investor return. The study of various TIMO's asset management strategies and decision criteria can assist the management of Trust timber lands.

Criteria cited for investing in timber and associated timberlands:²

- a. The worldwide demand is increasing.
- b. Timber is an inflation hedge. Timber increases in value "on the stump" at a greater rate than inflation. Between 1905 and 2005 timber prices have grown at a rate of 3% above inflation.
- c. Timber returns beat stocks. Between 1990 and 2007 the NCREIF Timberland Index annual compound return was 12.88% versus 10.54% for the S&P 500 index.
- d. Timber has a low correlation to other asset classes.
- e. Land is an appreciating asset.

Some of the major TIMOs are Plum Creek, Weyerhaeuser, Hancock Timber Resource Group, Forestland Group, Resource Management Service,

Rayonier Potlatch. These TIMOs and others collectively manage or own 57 million acres of timberland in the U.S. (Journal of Forestry, October/November 2012).

The TIMO models differ from the Trust management model and typically include more productive timberland than the Trust currently owns. The TIMO model demonstrates that the holding of productive timberlands over time is prudent investment. The TLO will continue to monitor TIMO trends, investigate potential marketing of Trust timber, and manage lands for future timber supply. It is prudent to investigate potential sale of Trust timberlands to interested parties and reinvest in other timberlands or asset categories that could provide a higher return.

Long Term Contracts

Timber, like any other commodity, experiences price fluctuation according to the laws of supply and demand. Prices may differ significantly in accordance to the markets and timing in which it is sold. Previous TLO timber contracts have demonstrated that contracting for an extended term maximizes revenue. Long term contracts provide time for contractors to develop markets and then sell the resource at optimum market rates. Contractors involved in international and domestic trade deal with multiple factors that affect price, including government fiscal policies, changes to international transactions such as currency fluctuations, market expectations, and supply and demand. The TLO will seek to create long term contracts when possible, but recognizes the need for shorter term contracts when the volume of timber does not warrant long term contracts.

Harvest Marketing

Through experience and working closely with industry partners and the known limitations and challenges previously discussed, the TLO has developed a new harvest strategy that capitalizes on market highs. The TLO's experience with this harvest-market strategy (HMS) has demonstrated that cooperating with a reliable partner in a long-term business relationship can provide higher revenue returns for both parties. When this relationship is employed in the timber industry it allows the operator to find specific markets suited for the type of timber to be harvested. Most purchasers are looking for long-term dependable supplies and will pay premium prices to guarantee

² Timber Investments Cut Down Portfolio Risk; Robert Stammers, 2008; www.investopedia.com/articles/stocks/08/timber-investment.asp

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stability. This vertically structured marketing can provide higher returns for all parties involved. The TLO has determined it to be in the best interest of the Trust to employ this model and utilize a harvest marketing strategy model in select instances.

The HMS concept is based on a shared risk and shared profit scenario. The Trust receives a percentage of the net profit rather than a fixed stumpage rate. This contractual relationship requires close scrutiny by the TLO but provides a means to increase volume as well as revenue. This maximizes revenue to Trust beneficiaries and fulfills a TLO mandate.

A typical harvest marketing agreement contract will require sale layout, timber harvest, marketing and maintenance of infrastructure but may also require the application of silvicultural treatment (pre-commercial thinning). The operator will have rights to construct road, harvest and market timber, and perform activities associated with timber harvest.

Roads, camps, log transfer facilities, shop facilities and other infrastructure constructed during the timber sale represent substantial capital expenditures. When left in place, these capital improvements may provide future economic opportunities unknown at the time of the initial timber sale contract. The presence of roads, bridges and camps can greatly enhance mineral exploration, recreational opportunities, real estate development, tourism opportunities, material sales and other economic revenue generation. In addition, long-term maintenance of this infrastructure is necessary to support access for future silviculture activities, and potentially for other development projects.

Whereas the traditional fixed stumpage price puts the risk solely on the purchaser, the HMS is based on net profit. Operating costs incurred by the contractor are deducted from the sale of the resource. The TLO must closely monitor these costs, but this effort can be mitigated with experienced contract managers. The contract negotiation can fix the pricing of overhead and development costs such as road construction per mile, thereby reducing risk to the Trust. Other costs can be negotiated on a board foot basis. These include logging costs based on system (cable and shovel), landing costs, haul costs on a per mile basis, sortyard and scaling costs, rafting, transportation to ship loading, stevedoring, shipping, and administration. The HMS was applied on the addition to the Leask Lake Timber Sale in 2011. This sale provided a significant increase in stumpage payments to the Trust as compared with the traditional fixed stumpage scenario.

Utilizing this strategy, the Trust received 66 percent of the profit while the contractor received 34 percent. This contract change resulted in a 37 percent increase over the initial contract stumpage return.

Contrarily, it is possible that employing HMS could negatively affect the Trust's timber revenue. However, if timber markets crashed during the term of an HMS contract, it is most likely that both the Trust and the contractor would agree to cease timber harvest until such a time as the markets recovered.

Land Exchange

In 2005, a proposed TLO timber sale in Petersburg was strongly opposed by a local group. At issue was the question of whether the logging of timber on steep slopes created a public safety hazard. The proposed sale included logging units located on steep ground above the Mitkof Highway and some residential subdivisions. The group contended that harvest of trees could result in increased soil erosion and landslides. The TLO proposal utilized selective harvest by helicopter to reduce required road construction and impacts such as landslides. While the TLO still believes the Petersburg timber sale area could be harvested. In a safe and responsible manner, the controversy provided an opportunity to re-craft the Trust timber harvest program to be less impactful while still profitable. The TLO decided to postpone the timber sale while it pursued a new alternative — an exchange of the Trust's timberlands near communities for USFS lands in more remote areas. That effort has led to the proposed land exchange outlined below.

There are two basic types of federal land exchange: legislative and administrative. The legislative exchange requires Congress to pass a bill that directly instructs a federal agency to conduct a specific land exchange. An administrative exchange is negotiated between a federal agency and a non-federal party for the exchange of lands. Both processes require the parcels be of equal value. The process of value equalization is conducted through a closely monitored appraisal system. The appraisal considers the highest and best uses of each of the parcels. The same appraisal criteria are used for both ownerships.

The Trust land exchange, for which the Agreement to Initiate (ATI) was signed in 2015 with the USFS, is the result of several prior proposals. Initially, the TLO sought a legislative exchange, but that route did not lead to significant progress. Consequently, in

2011, the TLO began pursuing an administrative land exchange with the USFS. A committee of interested parties was formed including the USFS, Tongass Futures Roundtable (TFR)³, and the TLO, to identify suitable lands for exchange. Organizations represented included The Nature Conservancy, Trout Unlimited, Southeast Conservation Council, Audubon Society, Sealaska Corporation, and the Landless Natives.⁴ The lands in the proposed land exchange are from a pool of six alternatives selected using stringent criteria from the USFS, the Nature Conservancy, and Audubon Society. In September 2012, the TFR voted by consensus to endorse the USFS-AMHT Land Exchange,⁵ as it had been identified through the committee's work. The recommendation included about 18,000 acres of Trust land and a pool of approximately 21,000 acres of USFS land.

The execution of the ATI required the completion of tasks such as verification of title to the lands, determination of compliance with the Tongass Land and Resource Management Plan, a preliminary best interest determination that the land exchange is in the best interest of the public, mineral review, list of encumbrances, and Washington D.C. office review. These individual steps and reports were to be completed by both landowners. Now that the ATI has been signed the federal process for finalizing the exchange continues. The federal land exchange process includes many steps which include items such as the National Environmental Policy Act (NEPA) compliance,⁶ timber cruises, surveys, land appraisals and environmental assessments.

3 The Tongass Futures Roundtable brought together a diverse group of stakeholders long involved in the Tongass to discuss how to incorporate economic, cultural, and ecological values in public policy issues throughout the region. The Roundtable seeks to explore how a broad range of stakeholders can address these public policy issues and work together to achieve a long-term balance of healthy and diverse communities, vibrant economies, responsible use of resources — including timber, while maintaining the natural values and ecological integrity of the forest. [<http://www.tongassfutures.net/about>] The TFR was disbanded May 2013.

4 Landless Natives represents groups of Alaska natives left out of the Alaska Natives Claims Settlement Act of 1971 from Wrangell, Petersburg, Tenakee Springs, Haines and Ketchikan.

5 More information about the details of the exchange is available online: <http://mhtrustland.org/index.php/southeast-land-exchange/>.

6 NEPA includes the Environmental Assessment (or EIS) of the lands included in the exchange. In addition, NEPA requires a Phase I Environmental Assessment, conducted as part of the resource reports, to identify potential contamination on parcels in the exchange.

The exchange process also has a state component defined in AS 38.50. Under this statute the Alaska State Legislature must approve the exchange of state land because of the value of the exchange. The average time to closing of an administrative exchange after the ATI is signed is three to five years. Applying these parameters, the land exchange will be completed by 2020.

The TLO will be better positioned to fulfill its mandate of maximizing Trust timber assets after the exchange is complete. If successful, the Trust will own forest resources in areas more suitable for timber harvest, mitigating the known public opposition to monetizing its current and future assets. These assets will be managed for long-term timber production and supply revenue for Trust programs on a continuing basis.

It is the TLO's goal to provide a sustainable revenue source from the Trust's timber resources. This can be accomplished in Southeast Alaska by consolidating the timber asset base through the proposed land exchange with the USFS. Once consolidation takes place, these new timber assets can then be managed on a sustainable basis. For example, under the current land exchange proposal, the Trust will acquire new timberlands. The new land, coupled with existing timberlands including Icy Bay, totals about 48,000 acres of Southeast Trust timberlands. These lands will be harvested over time. A harvest plan based on a 70-year rotation provides 686 acres of harvestable land each year. This process creates a continuous cycle of mature trees. For example, an average yield of 20,000 board feet (20 mbf) per acre can be applied. The resulting annual harvest is about 14 million board feet (14 mmbf) of wood per year. The TLO will manage the Trust's timber assets to maximize long-term revenue from Trust land while preserving the long-term viability of the resource. In practice, annual harvest rates vary and should be project specific.

In the event that the land exchange is unsuccessful, an alternative plan utilizing current Trust timber holding is discussed in Appendix A.

Summary

The Trust Land Office's (TLO) objective for its timberlands is to maximize revenue to the Trust beneficiaries. To facilitate this objective, the TLO will continue to research new forest products, perform ongoing timber inventories, conduct site visits

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throughout the state, track timber markets, attend seminars on developing technology and maintain an on-going timber sale program.

Timber has been a solid source of revenue for the Trust and with careful planning and management will continue to be long into the future. The overall objective is to consolidate Southeast timberlands and place them in long-term contracts to maximize stumpage return to the Trust and seek profitable ventures to utilize timber assets statewide. The TLO will also explore all options to monetize the Trust timber holdings including: exploring new technologies and industries, harvest marketing sales, sales of timberlands, sale of future timber options, and other land exchanges.

Goals and Objectives

The goals for managing Trust timber and forest resources are straightforward. It is important, however, to recognize the need for flexibility and the ability to respond to the market and political and environmental changes. It is also important to remember that the Trust's forest resources extend beyond the traditional timberlands in Southeast Alaska. These goals and objectives are intended to recognize all of these considerations.

Goal 1: Maintain, manage and develop forest resources to maximize revenue for the Trust.

Objective 1: Provide sustainable revenue for the Trust from a timber portfolio acquired through the USFS-AMHT Land Exchange.

Objective 2: Time harvest activities with optimal market conditions.

Objective 3: Develop timber programs throughout the state when viable.

Objective 4: Encourage domestic processing and/or use of forest products while preserving maximum revenue to the Trust.

Objective 5: Manage and develop non-timber forest resources.

Goal 2: Manage for long-term preservation of the Trust's forest resources.

Objective 1: Implement forest stewardship plans to preserve the inherent value of the Trust's timber portfolio.

Objective 2: Focus on timber or other forest resources on Trust land in the Interior and Southcentral areas to determine potential value and viability.

Appendix A

Alternative Plan to Land Exchange

Under a scenario in which the TLO is not successful in full conveyance of the lands identified in the USFS-AMHT Land Exchange, an alternative plan will be pursued to generate revenue from the Trust's timber portfolio. Toward that end, extensive planning has been conducted on the Trust's current timber holdings within the proposed exchange. Although several of the parcels in the exchange were logged in the past by TLO contractors, other Trust parcels (also in the exchange) would net significant volumes and revenue to the Trust.

Potential options for utilizing timber assets which have been explored in the past and will continue to be monitored are conservation easements, and carbon sequestration credits, and sale of the lands.

The following parcels will be analyzed for resource development and extraction if the proposed USFS-AMHT Land Exchange is not successful:

Juneau

This parcel on Douglas Island includes uplands above the Treadwell Mines and other claims. These lands will be assessed for potential timber and mineral production. This area is also considered important for public recreation to Juneau residents and is anticipated to be controversial.

Petersburg

These parcels have gone through the TLO's administrative process for the disposal of Trust assets. A large timber sale was negotiated and then canceled due to local opposition. These lands would be reconsidered for a competitive commercial timber offering.

Sitka

Parcels will be assessed for subdivision or other revenue generation. The Katlian Bay parcels were previously helicopter harvested for timber. There are known recreational trail use issues and potential conflicts on the parcels adjoining Sitka.

Wrangell

Parcels have had prior harvesting by the TLO or were harvested prior to conveyance to the Trust. Areas not previously harvested have local zoning restrictions that may require variances for timber harvest.

Meyers Chuck

These parcels will be difficult to develop for timber due to a lack of necessary infrastructure. There is no road system or log transfer facility. The TLO anticipates significant public opposition to a timber sale in Meyers Chuck. The small area (169 acres) will most likely not provide sufficient volume to cover development and mobilization costs.

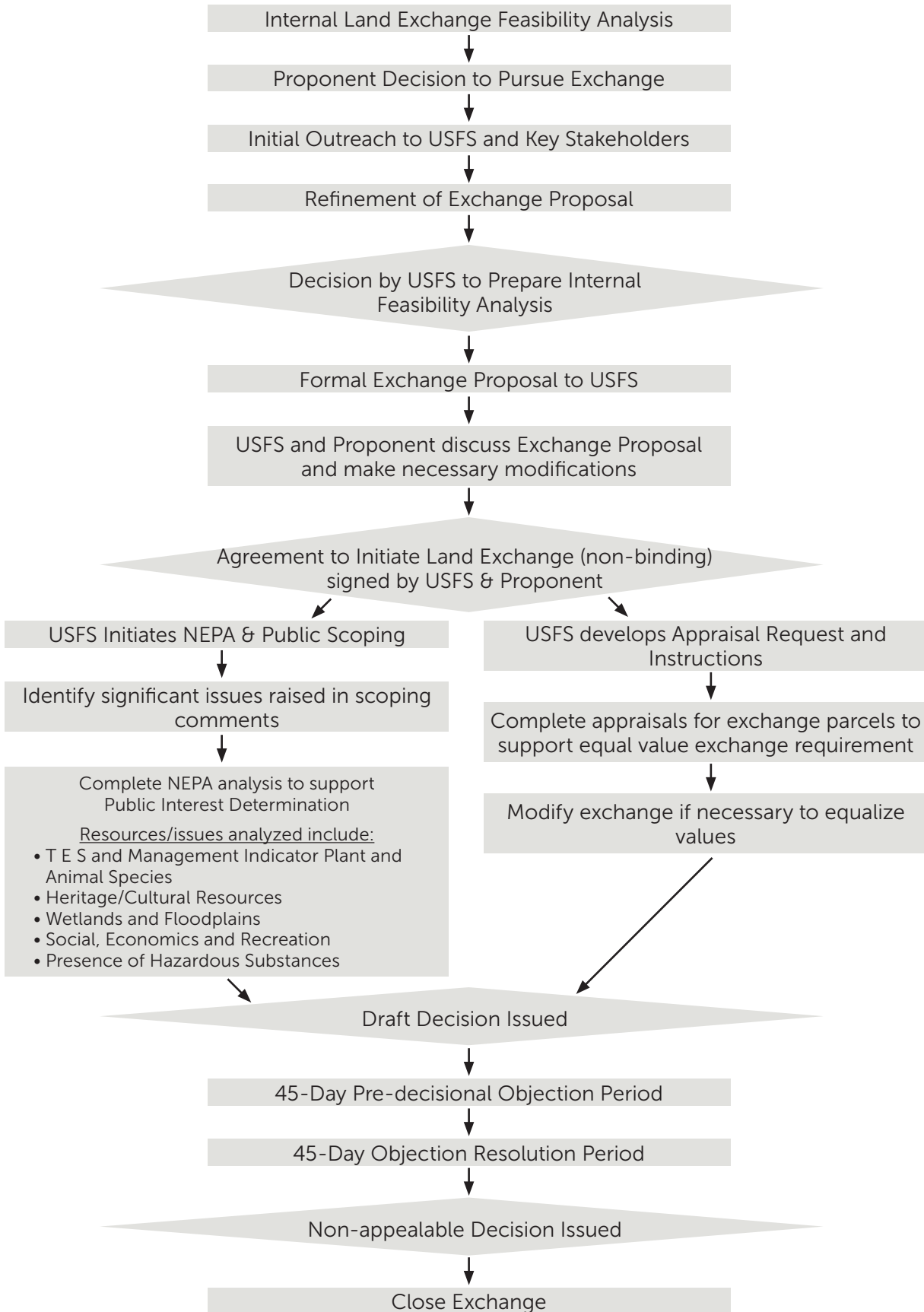
Ketchikan

There are several parcels identified for exchange in this area. A large timber sale conducted by a TLO contractor in 2004 generated more than \$4 million in revenue. This sale was performed by helicopter rather than through a ground harvest that would have required road construction.

One particular large parcel not harvested, Deer Mountain, has excellent timber. This parcel has been cruised and initial plans for sale are in place. The TLO anticipates the proposed harvest of this parcel, which is located within the view shed of Ketchikan and cruise ship traffic, will produce significant revenue but will continue to be very controversial.

Appendix B

Land Exchange Process



REAL ESTATE RESOURCE MANAGEMENT STRATEGY

REAL ESTATE MANAGEMENT RESOURCE
MANAGEMENT STRATEGY

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Real Estate Management Strategy 1

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 Project Profile 3

 Investment Return 3

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Goals and Objectives 6

Appendix A: Prudent Investor Rule 7

 AS 13.36.235. Diversification 7

Introduction

When formed, Trust was endowed with approximately one million acres located in Alaska. This acreage consists of both fee simple and partial land estates. The Trust's non-cash assets are most commonly described as "land;" however, this is a misnomer. It is important to identify these assets by their highest and best use. In terms of the Real Estate Management Plan, it is critical to distinguish real estate from all other resources, specifically land.

For the purpose of this plan, real estate is defined or identified under the following criteria:

1. All of the following must apply:
 - a. Includes only the surface estate of a parcel;
 - b. Be surveyed;
 - c. It is property that has a material investment (basis) intended to add value; and
 - d. Not currently being used for Trust programmatic or administrative purposes.
2. Some of the following may apply:
 - e. The highest and best use is determined to be income generation through commercial development;
 - f. Identified potential in the near term for generation of positive cash flow and/or;
 - g. Specifically identified by the executive director of the TLO as real estate.

Real Estate Management Strategy

Trustees have expressed a desire for the TLO to produce more income revenue. Of all the asset classes that fall within the Trust's fixed asset base, real estate in its various forms provides the greatest potential for and the greatest control of predictable income revenue. Other assets owned by the Trust in differing industries have a much greater potential to produce principal income, but are often constrained by a variety of factors not affecting the real estate industry as it pertains to the Trust. These factors include the following:

- Legacy agreements not in the Trust's interest

- Remote locations
- Regulatory issues
- Need for significant investment by third parties
- Unpredictable commodity markets
- Environmental Concerns
- Social contract and public relations issues

With the desire to create predictable streams of income revenue and the factors listed above for other asset classes, there are several methods the Trust can use to generate cash flow as an active real estate investor. These may include:

1. Acquisition of existing income properties;
2. Leasing land;
3. Developing and leasing its own real estate;
4. Acquisition of land to develop income properties; and
5. Acquisition of existing improvements for redevelopment.

Of these options, acquiring existing income properties offers the quickest access to measurable return and can be a good balance of risk and return. By acquiring existing income property, decisions can be made based on current information and historical data. Typical development risks associated with entitlements, permits, construction and market timing are all removed from the equation. The consideration is that assets with little perceived risk also provide little return and have very limited upside.

Owning any type of real estate involves risk; income property is no exception. However, detailed due diligence, transferring risk to others where possible, and conservative investment guidelines will serve to reduce much of the risk. Leasing Trust land offers a high level of value conversion to the Trust, because the Trust has no basis in its land base. Leasing land is low risk but is not always a marketable solution and is affected by the availability and cost of financing. In addition, land leases are fully dependent on third party capital to monetize the property, and offers very little upside potential. From a building owner/developer perspective, land leasing can be an attractive alternative to paying cash for land when interest

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rates and the cost of borrowing are high. In addition, although the Trust owns a large land base there are very few parcels that are situated to be leased.

Self-development of Trust assets may add risk, for which a commensurate level of return must be expected. Development can take many forms. It may involve physical improvements as simple as clearing trees or improving drainage to a property. The physical improvements could progress to include a finished product for a tenant, known as a “build to suit”. Other possibilities for development could involve changes to entitlement issues such as zoning or wetland delineation, or addressing title concerns such as easements or other clouds on the title.

Clearly more risk is associated with fully developing property as an investment strategy. The factors mentioned above add multiple opportunities for a project to be derailed or for costs to increase. Conversely, the value of development to the investor is the ability to maximize the value of the land and the opportunity to build exactly the type of structure that fits the investor/user’s needs. The most common risk, and the one most difficult to control, is construction cost. Demand for new space has to outstrip the supply of current space before rents can rise to support the cost of a new building.

While full development of Trust land may be less desirable due to risk exposure, this option should remain. The level of risk of (self) development often comes with a commensurate level of expected return. The TLO will make improvements to existing real estate holdings where necessary to increase value for future transactions. The TLO holds a delegation of authority for construction procurement from AKDOT&PF, and is focused on utilizing this delegation to make material investments in the form of improvement projects that add value to certain existing holdings. Development efforts may involve physical improvements as simple as clearing trees or making drainage improvements.

The ability to procure construction independently coupled with prudent and capable construction management will enable the Trust to recognize greater revenues from these holdings than if the improvements were contracted out, or made by the end user of the parcel in a ground lease scenario. Additionally, building a competent in-house construction management program is a necessary step toward eventual full development of a “build to suit” project completed for an end user/lessee.

Acquiring and developing land, or acquiring existing improvements for redevelopment are the highest risk options and should be expected to provide the highest returns. The most likely scenario for a project of this type would be a joint venture with a partner who can provide the necessary expertise, insight into a market, and/or an opportunity not then available to the TLO.

While the primary focus of the REMP remains on the acquisition of existing income properties, becoming a developer eventually capable of completing mid-scale developments of a similar category to our acquisition targets could increase the diversity and revenue producing potential of the plan.

Risk Profile

Investment risk can be mitigated using a number of techniques. At its most basic, mitigation involves avoidance of concentrated exposure. This includes avoiding too much exposure to any single investment type and/or avoiding too much concentration in one location. Mitigation of risk may also involve sharing risk and/or assigning risk to others. The TLO will consider all of these techniques in managing the Trust’s risk to new real estate investments.

1. Asset Type

There are a variety of income property types that provide varying levels of return and risk. Properties that produce income or cash flow are generally assigned a capitalization rate or “cap rate”¹ by the real estate market. In fact, the cap rate of income properties is possibly the single best way to judge the risk level of a property.

There are many major income property types: office, retail, industrial, hospitality, infrastructure, and multifamily residential to name the most prolific. The risk levels and cap rates vary as the need and other factors for product types change. The TLO will focus on projects that are the most likely to produce the desired returns, at acceptable levels of risk, over the proposed holding period.

¹ Cap rates are used to estimate the investor’s potential return on his or her investment. This is done by dividing the income the property will generate (after fixed costs and variable costs) by the total value of the property. If property is being evaluated for purchase using a cap rate analysis, the income would be divided into the total cost of the property.

The Trust should invest in high quality opportunities with durable cash flow. The TLO is not equipped to manage properties with intensive needs such as multifamily or hospitality and should only proceed with investment in such opportunities with exceptionally qualified joint venture partners. These factors should be considerations, but not necessarily criteria in evaluating target acquisitions.

2. Asset Location

Over-concentrating investment in one location or local economy is to be avoided. This is to minimize the effects of impacts from factors outside the Trust's control, such as an economic downturn or an oversupply of property type. There are also practical limits on the number of separate markets that a small staff can adequately manage.

Project Profile

Based on the guidelines above, the Trust is developing a commercial income property portfolio composed primarily of high quality commercial and industrial projects. As that portfolio is assembled, the following factors will be considered:

1. Single investments should not be too large in relationship to the portfolio as a whole in order to maintain diversity.
2. Properties within the Trust's portfolio should be above average in terms of quality, design and location.
3. Construction type should be of the most permanent materials, generally concrete and/or steel.
4. Tenant profile will be examined closely. In buildings with multiple occupants, the tenant mix should be compatible and the financial strength of the tenants should be very high. In single-tenant buildings, vacancy risk takes on a new dimension. Consequently, the quality of that tenant is the primary factor in deciding to make the investment. Only long-term leases with credit-worthy tenants would be acceptable for single-tenant buildings.
5. Variations from these principles can be allowed, but only after careful review.

Investment Return

There are several return factors to consider when underwriting a potential investment. The methods of determining if an investment fits the needs of the Trust for this plan will be cash-on-cash return,² net present value (NPV)³, internal rate of return (IRR)⁴ and return multiple.⁵ Each factor defines the return on an investment in a unique and meaningful way and has its place in determining the overall fit of an investment with the plan.

Cash-on-cash return and cap rate will be the same at the time an asset is purchased. The two return factors will begin to diverge as a project progresses and cash flows change due to changes in revenue, expenses and financing. Financing will generally improve cash-on-cash return, as less principal is required to provide the cash flow, even when the payment of interest is considered.

NPV is an important tool when considering investment in an asset that produces a long-term income stream. Dollars in the future are not as valuable as dollars today, and NPV defines that future income stream into today's value based on a given rate. The rate used will affect the value of a given income stream, and the longer the income stream, the greater the effect of a change in rate. It is possible to have a negative NPV when other factors are indicating a good investment.

IRR and return multiple are quick tools to evaluate the strength of an income stream. Although IRR doesn't consider the time value of money, it is a good indicator of the value of a cash flow stream in relation to investment in its entirety. Return multiple is an easy expression of whether an investment will pay out more than was invested. Financing will also generally positively affect IRR and return multiple as less principal is used to generate the cash flow.

2 Cash-on-cash return is a measure of cash return on principal invested for an individual time period, generally a year. It does not consider the time value of money. It is expressed as a percentage where a higher percentage is desired.

3 Net present value is a measure of a series of cash flows in current dollars based on a discount rate. The higher the rate, the lower the value. It is expressed in current dollars, and a positive value of even \$1 is desirable.

4 Internal rate of return is a measure of a series of cash flows expressed as a percentage; it does not consider the time value of money.

5 Return multiple is a measure of the cash flow for a given investment as a whole. It is expressed numerically where a value of 1 means return is even with investment.

For the purposes of evaluating the success of this investment plan, the primary measurement should be the cash-on-cash percent of return followed closely by NPV. This is a result of the income nature of the investment returns; the cash will be used to fund programs in the future periods. The base rate to be used as the "hurdle" for new projects should be the current cap rate for commercial properties of the type being considered for acquisition. The NPV of projects should always be at or as close to positive as possible.

An important consideration for investment return is the income revenue available for use by the Trust. A property owned free of debt will provide the greatest immediate cash flow for the Trust. Debt will reduce the immediate cash distributions available, but for the following reasons is generally a wise tool to use when planning for the needs of a perpetual entity. With the use of debt, over time, many factors working in concert provide significant and increasing cash flows with ever-reducing principal investments in any single asset. Three key factors are property appreciation, inflation and loan amortization, with the linchpin for the equation being the nature of financing for a property.

Property appreciation from a variety of factors serves to increase the absolute cash flow from rent and other possible sources over time. Inflation serves multiple advantages to the financed property both devaluing the dollars paid back to the lender and increasing the cost to potential market competitors of emulating the asset. The use of debt and the ensuing loan amortization for the purposes of the Trust is also a strong positive as when the initial loan is paid off using income from the asset; the Trust owns a property free of debt effectively purchased by the tenants. In this regard, at the completion of two cycles of 50% fully amortized financing on a property, the Trust would own a property with no principal invested. What this means is the Trust would have an asset that could distribute significant income revenue using only income for its ownership, and have the potential to distribute millions of dollars of income revenue on its sale.

The TLO will take into account market factors as well as current and future needs of income revenue when making decisions about property financing.

Real Estate Investment Criteria

1. Focus

The TLO will focus primarily on acquisition of income revenue generating real estate. This does not exclude acquisition of property for strategic purposes to enhance the value of other Trust assets or provide for long-term income generation. Development opportunities on Trust land will also be pursued, and should focus on minimizing risks and maximizing returns otherwise unavailable.

2. Prudent Investor

Investments will be measured against the Prudent Investor Rule. AS 13.36.230 & AS 13.36.235. (See Appendix A.)

3. Asset Allocation

The principal investments in income property will be determined by trustees on a case-by-case basis. The target for principal investments in income property will be derived based on annual spendable income earnings targets to be met by the portfolio. As non-recourse debt will be used, the Trust's investment will be counted as the Trust principal at risk at any given time.

4. Asset Type

The Trust will focus on acquisition of commercial and industrial properties as well as lands with long-term ground leases. They should be of high quality and have strong tenants, or be uniquely valuable for other reasons.

5. Asset Location

To minimize concentration of risk, the Trust should consider the location of its assets as a whole. Investing in a variety of real estate markets will protect Trust assets from the fluctuations of a particular market.

6. Underwriting

Potential income opportunities should be measured based on their financial merits to include NPV, cash-on-cash-return, IRR and cap rate. All parameters will have

"hurdle" rates based on current market conditions and needs of the Trust.

7. Tenant Type

The business activities of the investment property tenants must not be inconsistent with the mission of the Trust.

8. Financing

Financing may be used to fund the investments, in order to mitigate risk and increase return. The loan to value ratio should be no greater than 66 percent, unless special circumstances can be clearly identified that justifies a higher ratio. In no case should the loan to value ratio be higher than 75 percent. The debt load for the overall portfolio should be targeted at 50 percent. By staggering the financing of properties over time, the debt load of the portfolio will always remain significantly under the initial debt of any one property. Additional consideration will be made as to the cost of financing in relation to return on the potential investment under the then current market conditions. The Trust will only use financing that is nonrecourse to the Trust.

9. Ownership

The Trust will utilize single purpose entities when deemed appropriate to hold its ownership interest in the projects.

10. Joint Ventures

The Trust will, from time to time, enter into joint ventures with appropriate partners. These partnerships should always be for the benefit of the Trust. The Trust should always strive to exercise control of the partnership and not hold less than a 50 percent interest, unless it benefits the Trust to do so.

Goals and Objectives

Goal 1: Provide a stable and predictable stream of income revenue.

Hurdle return rate for investment will vary based on the needs of the Trust and the Permanent Fund's projected 10 year return.

Purchase core properties that are:

- i. Well constructed,
- ii. Located in performing markets,
- iii. Suited to the market,
- iv. Attractive and appropriate for current tenants, and
- v. Available with attractive in-place lease structure.

Use non-recourse leverage as appropriate to:

- i. Increase total return for both the subject property and portfolio as a whole,
- ii. Reduce risk, and
- iii. Provide capital for other investment.

Goal 2: Protect the Trust from unnecessary risk.

Use single purpose entities to:

- i. Own the property,
- ii. Operate the property, and
- iii. Obtain non-recourse debt.

Obtain the appropriate insurance to protect the:

- i. Asset,
- ii. Owner/entity, and
- iii. Trust.

Use non-recourse leverage as appropriate to:

- i. Increase total return for both the subject property and portfolio as a whole,
- ii. Reduce risk, and
- iii. Provide capital for other investment.

Use non-recourse leverage to decrease the Trust's principal investment.

Source the best professionals to manage the property, including:

- i. Day-to-day operations,
- ii. Leasing,
- iii. Capital planning, and
- iv. Construction.

Goal 3: Grow the invested principal

Identify and pursue properties located in markets that are:

- i. In long-term growth cycles, and
- ii. Have high barriers to entry.

Actively manage the properties:

- i. Ensure that maintenance is managed to maximize long-term return.
- ii. Balance expenses to maximize long-term returns to:
 - 1. Meet user needs, and
 - 2. Take an economical approach.
- iii. Make capital project decisions to maximize long-term return to:
 - 1. Meet users needs, and
 - 2. Take an economical approach.

Appendix A: Prudent Investor Rule

AS 13.36.230. Standard of Care; Portfolio Strategy; Risk and Return Objectives

- a. A trustee shall invest and manage trust assets as a prudent investor would by considering the purposes, terms, distribution requirements, and other circumstances of the trust. In satisfying this standard, the trustee shall exercise reasonable care, skill and caution.
- b. A trustee's investment and management decisions respecting individual assets shall be evaluated not in isolation but in the context of the trust portfolio as a whole and as a part of an overall investment strategy having risk and return objectives reasonably suited to the trust.
- c. Among circumstances that a trustee shall consider in investing and managing trust assets are those of the following that are relevant to the trust or its beneficiaries:
 1. General economic conditions;
 2. The possible effect of inflation or deflation;
 3. The expected tax consequences of investment decisions or strategies;
 4. The role that each investment or course of action plays within the overall Trust portfolio, which may include financial assets, interests in closely held enterprises, tangible and intangible personal property, and real property;
 5. The expected total return from income and the appreciation of capital;
 6. Other resources of the beneficiaries;
 7. Needs for liquidity, regularity of income, and preservation or appreciation of capital; and
 8. An asset's special relationship or special value, if any, to the purposes of the trust or to one or more of the beneficiaries.
- d. A trustee shall make a reasonable effort to verify facts relevant to the investment and management of trust assets.
- e. A trustee may invest in any kind of property or type of investment consistent with the standards of AS 13.36.225-13.36.290.
- f. A trustee who has special skills or expertise, or is named trustee in reliance on the trustee's representation that the trustee has special skills or expertise, has a duty to use those special skills or expertise.

AS 13.36.235. Diversification

A trustee shall diversify the investments of the trust unless the trustee reasonably determines that, because of special circumstances, the purposes of the trust are better served without diversifying.

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Introduction

Energy resource development decisions made today will impact the Trust and its beneficiaries for generations to come. Accordingly, a profound energy resource management strategy and a sound resource policy are required to enable economic growth on Trust lands.

Energy revenue has potential to be a major source of financial contribution to the Trust. Trust lands have significant potential for traditional energy resources (oil & gas, coal). Some natural gas production has already been realized, principally from natural gas on the Kenai and in West Cook Inlet. The importance of that production is growing as more wells are drilled. New discoveries are essential for the continuing growth in Trust land oil & gas production. Such growth is critical to retain the Trust's capacity to generate revenue to fund Trust beneficiary programs. While extensions to existing projects will continue to support production volumes, exploration for new discoveries are urgently required to ensure that an ongoing pipeline of energy projects are available to meet future demands.

Authorities and Responsibilities

The Alaska Mental Health Enabling Act of 1956 provided the Trust with a land endowment of one million acres. Specific to that grant is the statement in Sec. 202(c) that "all grants made or confirmed under this section shall include mineral deposits" subject to prior existing rights. It is inherent in the enabling act that the minerals were to be conveyed with the land in order to be utilized by the Trust. Today, the Trust finds itself with a mixture of lands, some of which are owned fee simple (meaning the Trust owns both surface and subsurface rights), while other holdings are mineral rights only, hydrocarbon rights only, or surface rights only.

Management of Trust lands is guided by Title 11, Chapter 99 of the Alaska Administrative Code. These regulations outline mining rights on Trust land as follows:

11 AAC 99.100 Mining rights

- a. *Rights to locatable minerals on trust land are available only as provided in this section. To the extent that a statute or regulation applicable*

to other state land, including AS 38.05.185, 38.05.195, 38.05.205, and 38.05.245, contains a requirement that provides for or permits the acquisition of mineral rights, rights to prospect, or rights that open land to claim staking, mineral location, or leasehold location, that provision of law is considered inconsistent with 11 AAC 99.020, and does not apply to Trust land.

- b. *The executive director, in consultation with the trust authority, shall open areas of trust land under one or more of the following methods, or under (c) of this section, which the executive director determines to be consistent with 11 AAC 99.020: (1) competitive lease; (2) exploration license; (3) negotiated agreement; (4) prospecting permit; (5) mineral entry; or (6) by other methods that the executive director considered appropriate*
- c. *If an area is not opened for the disposal of rights to locatable minerals under (b) of this section, a person may apply under 11 AAC 99.030 for an authorization to explore and prospect for or lease locatable minerals in that area.*
- d. *Terms and conditions of an authorization under (b) of this section, applicable to mining rights on trust land, shall be developed in consultation with the trust authority.*
- e. *The rent, royalty, and assessment work credit provisions of law applicable to other state land, including AS 38.05.211 and 38.05.212, do not apply to trust land unless determined by the executive director, on a case-by-case basis, to be consistent with 11 AAC 99.020. The determination shall be stated in a written finding.*
- f. *Nothing in this chapter affects valid mineral rights on trust land that existed at the time the land was designated as trust land.*

Under this code, the normal methods of acquiring mining rights on state land do not apply to Trust land. Instead, the TLO executive director will open land for mineral development as dictated under (b) above. The development of minerals must be consistent with the overall general management of Trust lands as outlined in 11 AAC 99.020, which states that "management shall be conducted solely in the best interest of the Alaska mental health trust and its beneficiaries." Mineral exploration, development and production on Trust lands are additionally permitted through the state and federal regulatory agencies.

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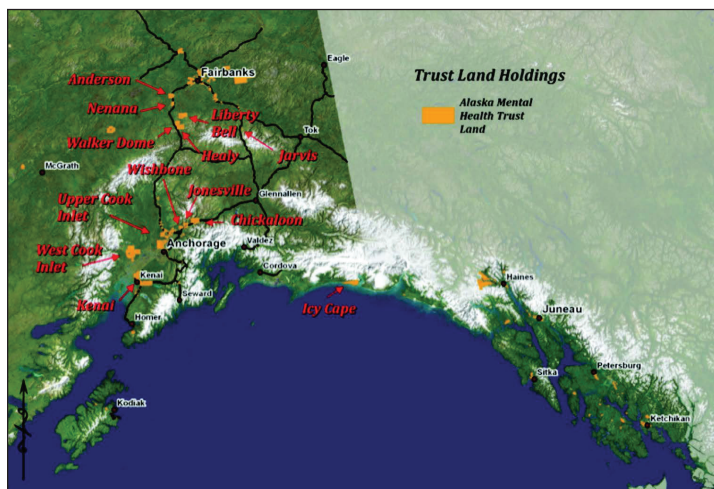
2016 RESOURCE MANAGEMENT STRATEGY

Inventory of Energy Resources

General

The TLO maintains a portfolio of multiple energy resource projects and creates partnerships with companies that fund major exploration work and resource development on Trust land.

Proper inventory of Trust lands is critical; therefore, the TLO is in the process of developing a systematic Energy Resource Information System utilizing Geographic Information System (GIS) technology. The comprehensive GIS databases are comprised of geological, structural geological, geophysical exploration datasets and subsurface exploration data accommodating spatial and non-spatial information.



percent, which means a future net income value of approximately \$8.75 million

The Trust holds leases with production from a small part of the Nicolai Creek field in west Cook Inlet through an agreement with Aurora Power. Nicolai Creek still actively produces new gas from other reservoirs in the field. The Nicolai Creek field is estimated to contain approximately 1 BCF of gas. It is a small field with little upside potential. The Trust's current allocation from this field varies but overall is about 2.3 percent (28 percent of 12.5 percent) of approximately one-half of the field. Given the known reserves, the Trust's portion is thus 2.3 percent of 0.5 billion cubic feet of gas with a value of approximately \$740,000 (based on a gas price of \$6.40 per thousand cubic feet).

Field/Area	Volume	Gas Value (\$/MCF)	Certitude	Resource Value to Trust (millions)
Kenai Loop		\$6.40	Proven	\$8.75
Nicolai Creek		\$6.40	Probable	\$0.7
Cook Inlet undiscovered gas	475 BCF	\$6.40	Highly speculative	\$3,800
Cook Inlet undiscovered oil	14.5 MMBO	\$100.00/bbl	Highly speculative	\$181

Oil and Gas

Trust oil and gas resources are largely restricted to the Railbelt. As of the publication of this document, the Kenai Loop field is producing 10 million cubic feet of gas per day (MMCFD). In March 2013, Ralph E. Davis Associates issued a reserve estimate report for the proved developed producing (PDP) and proved developed non-producing (PDNP) components of the Kenai Loop reserves. The PDP reserve estimate was 19.9 billion cubic feet (BCF) of gas, which is equivalent to 3.3 million barrels of oil (BOE); the PDNP reserves were estimated at 2.4 BCF or 400,000 BOE.

The total proved developed reserve category is therefore 22.3 BCF or 3.7 MMBOE. The reserve estimate calculated the PDP and PDNP reserves to have a future net income of approximately \$100 million. The Trust's share of this reserve is roughly 8.75

Coal and Lignite

Chuitna Proposed Mine Reserves

The coal-bearing sediments in the proposed mine area are part of the Tertiary Tyonek Formation of the Kenai Group. Although at least 18 coal seams (including stringers) are known to occur within the proposed mine area, four are of adequate areal extent and thickness to be significant to mining: Red 1, Red 2, Red 3 and Blue seams. A fifth seam, the Green Seam, is present in isolated areas and is potentially significant to mining only at several locations in the northwest area. The Chuitna Project's estimated minable reserve is approximately 300 million tons. Given a conservative coal price of \$30 per ton, the Trust's 5 percent royalty has a value of \$450 million.

Coal Resources on Trust Lands

Coal Project or Area	Resource (Million Tons)	Coal Value per Ton	Resource Category	Resource Value to Trust (Millions)
Chuitna Mine	300	\$30.00	Minable	\$450
Wishbone Hill	0.3	\$35.00	Minable	\$0.5
Jonesville	103.7	\$35.00	Measured, Indicated, Inferred	\$229
Chickaloon	24.3	\$150.00	Indicated, Inferred	\$225
Rosalie	6.7	\$35.00	Minable	\$12
Greater Chuitna Area	700	\$30.00	Inferred	
Healy Creek Area (all)	2,000		Hypothetical	
Jarvis	18.4		Hypothetical	

Wishbone Hill Reserves:

Usibelli Coal Mine Inc. estimates the surface minable reserves at Wishbone Hill at 14.4 million tons; approximately 300,000 tons is located on Trust land.

Jonesville Reserves:

The Jonesville coal project hosts the Joint Ore Reserve Committee-compliant measured, indicated and inferred resources of 130.7 million tons of coal (17 measured, 17.3 indicated, and 96.4 inferred). Coal at the Jonesville coal project is a quality high volatile B bituminous rank. It has excellent steam or thermal combustion qualities and has been used in the past for power generation. Its heat content averages 10,400 to 13,400 Btu/lb. One of the coal's key attributes is its low sulfur content (0.3 to 0.4 percent), making it valuable as a compliance coal. At a coal price of \$35 per ton, the Trust's 5 percent royalty has a value of approximately \$229 million.

Chickaloon Resource:

In the Chickaloon-Castle Mountain coal district, Barnes (1967) reported total coal resources of 25 million short tons (23 million metric tons) based on apparent rank

of bituminous coal, with thicknesses greater than 14 inches (35 cm) and between 0 and 2,000 feet (0 to 610 m) of overburden. Total resources were divided into 0.0 measured coal resources, 0.7 million short tons (0.6 million metric tons) indicated coal resources and 24.3 million short tons (22 million metric tons) inferred coal resources. At a coking coal price of \$150 per ton, the Trust's 5 percent royalty would have a value of approximately \$225 million.

Rosalie:

The Trust has considerable land holdings north and south of the Usibelli Coal Mine's (UCM) operations. UCM has leased approximately 3,400 acres of Trust land, mostly in the Healy Creek area, including the historic Rosalie mining area. UCM estimates 6.7 million tons of minable tons of coal at Rosalie.

Jarvis Creek:

The Trust owns the subsurface estate of two contiguous sections in the central portion of the Jarvis Creek coalfield, or about 10 percent of the known field. This field is the easternmost extent of the Central Alaska-Nenana coal province. The unnamed coal-bearing rocks are Tertiary in age and they unconformably overlie Birch Creek Schist. The field is estimated to contain a measured resource of 17.3 million tons, an indicated resource of 37.0 million tons, an inferred resource of 227.4 million tons and a hypothetical resource of 533.5 million tons. Data indicate that the Trust's acreage is underlain by 4 feet of coal and thus contains approximately 18.4 million tons of coal.

Underground Coal Gasification (UCG)

In May of 2011 the Trust entered into three exploration agreements with Linc Energy Alaska Inc. to explore approximately 167,917 acres of Trust land in three separate areas of the state (Kenai, Tyonek, and Interior) to determine the potential for UCG production. The Tyonek license has expired, but the other agreements extend to May of 2018. The lands under license have good potential of hosting coal-bearing strata at depths of 600 to 3,000 feet below the surface where UCG could take place. For instance, nine square miles of land with a 25-foot coal seam is capable of producing sufficient synthesis gas, or syngas, for a gas-to-liquids plant to produce 20,000 barrels of diesel fuel per day for 40 years.

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Coalbed Methane (CBM)

The coal resources of Alaska contain significant potential CBM resources. The gas currently produced in Cook Inlet is methane derived from coal that has migrated and is stored in sandstone reservoirs; CBM is gas stored in the coal itself.

A 2011 USGS estimate for Cook Inlet placed undiscovered CBM at 4,674 BCFG, or approximately 4.7 trillion cubic feet of gas. Given the Trust's land holdings in this area (3.1 percent), it can be estimated that these holdings may possess 145 BCFG of undiscovered CBM.

Hydropower

Potential may exist on some Trust lands for sites suitable for development of run-of-river hydro projects. Plans exist to assess and evaluate this potential.

Geothermal

The TLO has plans to evaluate the potential for geothermal energy sites on Trust lands.

Wind

Trust land parcels have not yet been assessed for wind power potential. The National Renewable Energy Laboratory has mapped wind potential for Alaska which can be cross referenced with Trust parcels, however more parcel-specific information is needed to better evaluate potential.

Development Issues

Land Use Conflicts

Resource conflicts on fee simple Trust lands are rare, largely because the marketplace usually quickly resolves the relative value of resources on a merit basis. For instance, most parcels in an urban or suburban setting have high real estate values and little chance of being developed for mineable resources due to their location in densely populated areas — and thus the mineral resources are not pursued. For those areas where resource conflicts do occur, such as timber and mineral resources at Icy Bay, active management is required by TLO to ensure both resources' value can be realized without sacrificing either.

More common are conflicts on lands with a split estate — where the Trust owns the subsurface mineral estate and another entity, like the State of Alaska, owns the surface estate. In such cases, the public has become habituated to using the land as if it were typical state-owned land and is not aware that the Trust has a right to develop the subsurface resources. In addition, in some instances the state has contributed to conflicts by selling the surface estate for residential use and thus has severely compromised the Trust's ability to develop its resources. In these instances, the Trust should aggressively seek to return these lands to the state and receive replacement lands that have a reasonable chance to be developed, thus meeting the original intent of Congress in granting minerals to the Trust.

Environmental Conflicts

In recent years, coal energy has become increasingly controversial, and new and ongoing development projects are routinely met with objection, particularly from environmental groups. However, the world continues to consume approximately seven billion tons of coal per year. Much of the energy resource value of Trust lands is contained in coal resources. And on much of its land, the Trust possesses only subsurface estates. As the Trust is mandated to manage the economic development of its resources for the best interest of its beneficiaries, it will continue to foster and support the responsible development of these resources.

Location

Wind and hydrokinetic projects are dependent on proximity to population centers that will use the power produced. Because of the smaller scale of energy produced by these projects, greater transmission distances reduce the profitability of the projects and can make them unfeasible. Therefore identifying locations where resources and proximity to end market coincide is critical.

Energy Management Strategy

Energy resource development projects are guided by the following management principles:

1. Must be accomplished while protecting and enhancing the non-cash asset value and productivity of Trust land.

2. Maximize revenues from Trust lands over time.
3. Maximize return at prudent risk levels, embrace a diversity of resource projects, provide ancillary values such as enhanced access to Trust lands, and prevent liability risks.
4. Competitive lease offerings are preferred, but non-competitive leases can be used where competitive lease sales have failed or where a non-competitive lease agreement benefits the Trust in other ways.

Risk Management

Natural resource projects are subject to many risks: future commodity prices; uncertainties about the quality and quantity of the resource base; developing technology; input prices; and external or domestic political developments. Such risks must be assessed and classified. Typically, investors bear operational or market risk since they can better manage or control it. The Trust shares in bearing certain political risks since natural resource development projects often have some measure of controversy.

Capital Risk

Without a doubt, the Trust has the potential to make much more profit on a large-scale resource extraction operation if it were to successfully explore its land, discover a deposit or reservoir, prove the resource is capable of being profitably extracted, successfully permit the facility, construct the facility, operate it until exhaustion of the resource, and conduct reclamation. However, each step is fraught with risk and requires expertise and personnel that would have to be acquired on a large scale. A commitment to explore Trust lands would reasonably require millions of dollars per year with no assurance of successful development. Thus risk is reduced by not investing Trust capital in resource exploration and development but rather by marketing the properties to attract others to invest in this high-risk segment of the energy business.

Partnering

The characteristics of major natural resource projects — longevity, scale, capital requirements, social and environmental impacts, specialized and demanding technology, and exposure to commodity market risks — mean that development of large projects is most efficiently achieved in cooperation with partners

that possess both significant financial capacity and the necessary technical and managerial skills. Attracting such partners while still securing full value for the Trust's resources requires carefully designed leasing policies and contractual terms. TLO follows well established procedures for leasing and seeks to establish financial terms that are competitive with the private marketplace (while recognizing that each property has its own set of merits dependent upon location, access, geology, available information and commodities). Additionally, where leasing is employed, eligibility is restricted to those entities that have demonstrated possession of, or access to, sufficient capital resources as well as appropriate management and technological capabilities.

Diversification

Another method for reducing risk is to diversify the commodity portfolio as much as possible. Most commodities have price cycles that are difficult to predict but nonetheless are cyclical with established trading ranges. Commodity prices seldom rise and fall together, so it is advantageous and reduces risk to be involved with a wide selection of resources including non-energy ones. Since some commodity prices fall as others rise, the TLO seeks to be involved with as many commodities as are available on Trust land — oil, gas, coal, UCG, CBM, wind energy, etc.

Royalty Type

There are a number of options regarding financial return to the Trust in resource extraction. These are usually in the form of royalties, typically either a net-type royalty or a gross-type royalty.

For leases of Trust land that originate from the TLO, a gross-type royalty is preferred so a steady revenue stream is available from the outset of production and continues whether the operator's profits are high or non-existent. This minimizes risk to the Trust's income stream.

The Trust receives revenue in the form of rents and royalties according to the terms and conditions of the agreements.

Disposal of Trust Energy Resources

"Disposal" here means the issuance of a lease that grants the lessee the right to explore for, develop,

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remove and market a particular Trust resource that might be located on Trust land.

11 AAC 99.020 describes the management responsibilities that are consistent with Trust principles accepted by the Territory and State of Alaska under the Alaska Mental Health Enabling Act. When taking land management actions, including disposals of resources, the executive director must make a number of considerations to be consistent with these principles. These considerations are:¹

1. *Maximization of long-term revenue from trust land;*
2. *Protection of the corpus of the trust;*
3. *Protection and enhancement of the long-term productivity of the land;*
4. *Encouragement of a diversity of revenue-producing uses of trust land; and*
5. *Management of trust land prudently, efficiently and with accountability to the trust and its beneficiaries.*

11 AAC 99.020(d) reads:

The disposal of trust land shall be on a competitive basis unless

(1) the executive director, in consultation with the trust authority, determined in a written decision required by 11 AAC 99.040 that a non-competitive disposal is in the best interest of the trust and its beneficiaries; or

(2) an existing law that is applicable to other state land and that is consistent with (a)-(b) of this section allows for a negotiated transaction.

This is the key regulation that determines how an interest in Trust land may be disposed. Disposal of resources on Trust land can be initiated in several ways, such as the expression of interest from a prospective purchaser, the acceptance of an application, or the opening of an area by the executive director for leasing, but the actual disposal is conducted based on 11 AAC 99.020(d).

Oil and Gas

The Trust owns approximately 300,000 acres that are

considered to be prospective for oil and gas resources. Most of this acreage is located in the Cook Inlet Basin, but some acreage exists in the Nenana Basin.

In January of 2001, the TLO contracted with Petrotechnical Resources of Alaska (PRA) to define leasable tracts of Trust land in the Cook Inlet area with oil and gas potential that the TLO could offer for lease in its own offerings. Fifty-seven tracts were delineated by PRA, including tracts on the Kenai Peninsula, the west side of Cook Inlet near Tyonek and Beluga, Point MacKenzie, and an area north of Big Lake. These tracts do not include the Nenana acreage. The TLO conducted its first lease sale in the fall of 2001, and continues to conduct sales on a semi-regular basis as previously leased tracts become available due to lease expiration or termination.

Most TLO oil and gas leases are competitive as required by 11 AAC 99.020(d). The leasing process used by the TLO closely resembles the process followed by the Division of Oil and Gas, except that the TLO does not operate according to a five-year schedule nor does it conduct an annual sale, simply because the Trust does not have enough acreage to warrant an annual offering, especially if most of the more prospective tracts are already leased.

Typical lease terms for a Trust oil and gas lease include the following:

1. Primary term:

Leases may be issued for a primary term of five to ten years. The lease is extended automatically if and for so long as oil or gas is produced in paying quantities from the leased area. It can also be extended if the lease is committed to an approved unit.

2. Annual rental:

Annual payments starting at \$1 per acre and ranging to \$10 per acre with annual incremental increases are required to maintain the lease. Payment rates may be increased at TLO's discretion if the lease is extended beyond the primary term. Annual rental paid in advance is a credit against royalty due for that year.

3. Royalty on production:

Except for oil, gas, and associated substances used on the lease area for development and production, or unavoidably lost, lessee shall pay to lessor as royalty

1 11 AAC 99.020 (c)

12.5 percent in amount or value of the oil, gas, and associated substances saved, removed, or sold from the lease area. The TLO, in an attempt to incentivize production, has used a production royalty rate of 10.5 percent for production in the primary term only. Beyond that, the rate increased to 12.5 percent.

Terms are subject to change based on specific opportunities or current industry practices.

A TLO oil and gas lease provides for the development of coalbed methane (shallow gas) as well as conventional oil or gas deposits.

It reserves for the TLO the right to lease oil, gas, and associated substances if the lease is extended beyond the primary term based solely on the development and production of CBM.

TLO can also issue oil and gas leases on a negotiated basis as allowed by 11 AAC 99.020(d)(1). In these instances, all the terms of the lease, including payment of cash bonuses, may be subject to negotiation, depending on the circumstances.

Also in the Trust portfolio are leases, or portions of leases, issued by the Division of Oil and Gas that were in place when land was conveyed to the Trust. The leases, termed "legacy leases," are very limited in number and include a portion of a lease in the Beluga River Unit, portions of leases in the Nicolai Creek Unit, and leases at Three Mile Creek. The Trust receives rent and royalty revenue according to the terms of these state leases.

Coal

As of this publication, there are 18 coal leases on Trust land that cover approximately 38,000 acres. These leases consist of a competitive lease issued to Riversdale Alaska for land at Chickaloon, two negotiated leases with UCM at Healy, two legacy leases with UCM at Healy, six legacy leases (or portions of leases) with UCM at Wishbone Hill (Sutton), one legacy lease with Ranger Alaska at Jonesville (Sutton), and six legacy leases with PacRim Coal at Chuitna.

Similar to the oil and gas leases, the legacy coal leases were in place when the land was conveyed to the Trust. The Trust is subject to the terms of these existing leases, which include an indefinite term, rentals of \$3 per acre per year (which may be subject to adjustment, depending on the effective date of the lease), and a

production royalty of 5 percent, adjusted by limited deductions for beneficiation and transportation, as defined in 11 AAC 85.225.

Underground Coal Gasification

In May of 2011, the TLO entered into several exploration licenses for UCG development. The licenses are issued to Linc Energy (Linc), and they allow Linc to conduct various exploration activities on Trust land in order to locate specific areas that would be suitable for UCG development. If such areas are located, the licenses allow Linc to convert that specific acreage to a lease, which would grant it the right to develop the coal to produce products through the UCG process.

The authorization process used for this resource involves the initial issuance of an exploration license rather than a lease because of the large amount of acreage involved and the significant expenditures required to explore that acreage. Such large acreage is needed because development of coal in place, and in particular the gasification of coal in place, requires that the coal possess certain characteristics, such as proper depth, acceptable moisture content, and a location that has particular geologic parameters. While these characteristics are thought to exist in the Cook Inlet area, the location of specific areas will require extensive exploration. The exploration licensing process is a competitive process, and the successful applicant is selected based not on a bonus bid per acre but on the quality and value of the exploration program the applicant proposes. Factors used to determine the successful licensee include the nature of the exploration program proposed, the expenditures associated with that program, and the schedule in carrying out the program.

Other terms of the license issued for this program include a license term of seven years; a minimum one-time, non-refundable license fee of \$1 per acre; and compliance with the work program submitted as part of the application process. The licensee is required to relinquish acreage at various points during the license term so that the entire license area does not remain encumbered, preventing other potential land uses. It is anticipated that the exploration program, if successful, will lead to a reduced, more focused land package that the licensee will lease for coal gasification development without the need for an additional leasing process. If a lease is executed, it will be on a standard Trust coal lease form, with a finite lease term.

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Rental will start at \$4 per acre per year, and royalty will be negotiated based on a mutually agreed upon method of determining coal consumption and value.

Wind Energy

To date the TLO has not authorized the development of wind energy on Trust land, although the office has received inquiries regarding the potential development of this resource and has issued licenses authorizing the installation of towers and equipment to capture data on wind speed and direction in several areas.

It is anticipated that if and when an authorization is issued to allow for the development of this resource on Trust land that the terms of the lease agreement would resemble those that the state has with Golden Valley Electric Association (GVEA) for the Eva Creek project. These include a 25-year extendable lease term with annual lease payments based on appraised value of the land plus \$3,000 per megawatt installed capacity, adjusted every five years by the Consumer Price Index. There is also a one-time installation fee of \$1,500 per megawatt. Questions exist as to the actual leasing process since 11 AAC 99.020(d) requires the disposal of Trust land to be on a competitive basis. DNR is working on new wind regulations and the TLO will have to determine if the new regulations are compatible with 11 AAC 99.020.

Hydroelectric Energy

No hydroelectric energy-generating projects are currently authorized on Trust land. It is anticipated that a prospective project would be authorized through a competitive leasing process with lease terms including annual land payments based on appraised value plus a fee for power produced, similar to that of a wind project lease.

Geothermal Energy

Like wind energy, leases for geothermal energy would involve fees related to surface access, surface uses, and annual rental based upon an acreage basis commensurate with other typical energy and mineral lease rates. The royalty would be based on a percentage of the gross revenues derived from the production, sale or use of the geothermal resources under the lease. There are specific state regulations that pertain to the permitting and leasing of geothermal resources, and it is anticipated that any leasing program on Trust land would follow these regulations to the extent that they are not in conflict with Trust management principles. An example of terms of an existing geothermal lease on state land include a primary lease term of 10 years; rental of \$3 per acre per year; and a royalty of 10 percent of the gross revenue derived from the project.

Goals and Objectives

Trust lands have a significant but undetermined amount of valuable energy resources, predominantly in the form of oil, gas, and coal. The current program of aggressively leasing land for oil and gas development is already returning good revenues. The goal is to manage these resources to provide a relatively steady and increasing stream of revenue until such time as they are exhausted.

Goal 1: Develop a diversified portfolio of energy products that can contribute significant revenue to the Trust.

Objective: Conduct leasing programs utilizing the plan guidelines for resource development on lands permissive of coal, oil, gas, underground coal gasification, coalbed methane, geothermal, wind, peat and other energy resources.

Goal 2: Continue with the current program of managing oil and gas leases to encourage exploration and development.

Objective: Conduct lease sales as parcels become available for leasing.

Goal 3: Continue with the current coal program of managing leases to encourage exploration and development in the near term.

Objective 1: Support PacRim's permitting efforts for the development of the Chuitna coal project.

Objective 2: Specify conditions in the Chuitna ASCMCRA² permits regarding reclamation and post-mining land use that allow for retention of roads and a reclamation plan that will support a commercial forest products industry or other suitable use to be developed on reclaimed Trust land.

Goal 4: Dispose of mineral- or coal-only portions of the land estate that have little chance of development because of surface use conflicts.

Objective: Return these portions of Trust land to the State and receive replacement lands.

Goal 5: Continue with periodic lease offerings of coal-bearing lands.

Objective: As land is evaluated by UCG exploration, those lands that are excluded from further exploration are to be evaluated for surface mining potential and offered for lease; coal lands in the vicinity of the Usibelli Coal Mine operations at Healy are high-value coal lands and should be offered for competitive leasing first.

Goal 6: Promote the development of the Trust's deepcoal reserves for underground coal gasification.

Objective 1: Monitor Linc Energy's proposed demonstration test burn in Wyoming. The feasibility of the UCG process using coal of similar quality in Alaska was to be demonstrated in a test burn in Wyoming by Linc Energy.

Objective 2: Monitor the state's work to develop a UCG guidance document to be used by developers seeking to advance UCG projects and by regulators as a road map for the permitting process.

Objective 3: Promote UCG evaluations of Trust land through identification of additional Trust lands with potential for UCG and conduct a lease offering if appropriate

Objective 4: Establish UCG royalty provisions for leases. Research royalty provisions in other jurisdictions and develop provisions for Trust leases. Consideration should be given to establishing the royalty on either a BTU basis or a coal value basis.

2 Alaska Surface Coal Mining Control and Reclamation Act

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Bonding Goal: Ensure adequate bonding for oil and gas developments on Trust land.

Objective: Establish bonding criteria, in concert with state and federal bonding requirements that protect the Trust while maintaining competitiveness.

Coalbed Methane Goal: Promote the development of the Trust's deep coal reserves for coalbed methane production.

Objective 1: Evaluate Trust lands for CBM potential and as a revenue source.

Objective 2: Using TLO and published geologic information, develop a leasing strategy for CBM in the Railbelt and conduct a lease offering as appropriate.

Wind Energy Goal: Promote the development of wind energy projects

Objective 1: Evaluate opportunities to develop wind energy on Trust land.

Objective 2: Utilizing GIS data and the Wind Atlas, rank Trust land for applicability for wind energy development.

Objective 3: Evaluate potential demand, users and developers of wind energy and offer Trust land for evaluation, testing and development through leasing. Develop competitive business terms for wind energy leasing.

Replacement Lands Goal: Seek replacement land for those mineral-estate-only lands where development cannot take place due to surface conflicts.

Objective 1: Identify and compile a list of these impaired lands.

Objective 2: Identify potential replacement lands.

Objective 3: Seek a remedy through administrative, legislative, or legal proceedings so that the intent of Congress can be met.

Resource Inventory Goal: Develop and maintain an inventory of energy resources.

Objective 1: Continue to develop an Energy Resource Information System based on GIS technology.

Objective 2: Continue to expand resource inventory tables for the various resource commodities on Trust land that provides information on the amount of resources present and their value.

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Introduction

Mitigation has become a resource industry in its own right and is marketed in Alaska through various trust land organizations and other entities. Trust land has the capacity to support both resource development and mitigation, at times concurrently on the same parcel. The policies and strategies within this plan will help guide the Trust Land Office (TLO) and the trustees as they develop and manage mitigation opportunities on Trust land. A new asset classification has been created, Mitigation Marketing, to take advantage of the dynamic economic opportunities of mitigation marketing in Alaska.

Wetlands mitigation banking holds the greatest potential for the Trust in mitigation marketing as it falls within the most established and lowest risk of mitigation markets. It is also the preferred mitigation by the Corps of Engineers (COE), the regulatory agency, which through a Congressionally-mandated rule adopted jointly with the Environmental Protection Agency (EPA), regulates compensatory mitigation for aquatic resources, including wetlands. On average, 35 percent of the Trust fee estate is considered wetlands. The value of wetlands when appraised as standard real estate is very low in comparison to mitigation value. Contributing a small and select portion of the Trust's wetlands into a mitigation bank can monetize low-value wetlands into higher value properties that could also support revenue generating Trust resource development projects.

The Clean Water Act (CWA), as implemented by Executive Orders and interpreted by the Supreme Court, requires any development project in the U.S. that creates unavoidable impacts to wetlands be offset or "mitigated." Planning for and approving this mitigation occurs during the project's permitting process. This essentially requires the project developer to replace the function of the wetlands lost from the development's proposed impacts. Studies have found that using bank credits to mitigate impacts significantly reduces the time and expense of permitting a project (Birnie, 2013). This efficiency increases the opportunity for the project to begin operations or production sooner and increases cash flow earlier. In so doing, Trust mitigation bank opportunities not only support generation of Trust revenue from resource industries (mining, energy, land, real estate and forestry) but also create a new revenue source by selling bank credits to project developers on and off Trust land. The increased

production time directly impacts the bottom line of a resource development project and is a direct result of having the mitigation already in place during the permitting process for a resource project.

Mitigation Markets

In 1989, President George H.W. Bush established the national policy of "no net loss of wetlands." This set a precedent for replacing a newly impacted wetland with a wetland of the same size with similar functions and values. In 2008, the EPA and COE instituted a new mitigation rule (i.e. 2008 Mitigation Rule); this national policy of no-net loss became a law that relied heavily on a market-based approach to mitigation. Under the 2008 Mitigation Rule, a project developer has three options to satisfy its unavoidable wetland impact obligations, which are listed in descending order of regulatory preference:

1. Purchase wetland credits from a mitigation bank created by a third party's successful restoration or preservation and protection of wetlands. This is the preferred regulatory option because mitigation banks perform mitigation prior to development impacts.
2. Purchase credits from an in-lieu fee program that can only be sponsored by certain non-profit entities or the government. The in-lieu fee entity promises to restore or preserve wetlands within a certain time frame determined by the COE.
3. Perform an offsetting mitigation project themselves.

An important concept is the synergistic relationship between a mitigation bank and resource development. There is no market demand for mitigation banking without development impacts; development impacts do not occur without mitigation (within the same watershed and with equivalent habitat). The Trust is in a unique position because it owns large surface acreage most often in the existing watershed of Trust projects. This inventory of comparable wetlands and the foreknowledge of future projects provide the Trust a competitive advantage with the formation of a mitigation bank.

There are other types of mitigation marketing in addition to wetlands, including conservation banks based on the Endangered or Threatened Species Act, and credit exchanges for carbon, water quality, and

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biodiversity. These other mitigation markets are still in their formative stages; the TLO will monitor emerging mitigation markets for future economic potential.

Valuation

The current highest and best use of many wetland parcels is mitigation banking. Studies of federal wetland permitting across the U.S. demonstrate that when mitigation bank credits are used to offset impacts, permitting time is cut in half.¹ This time and cost savings is the direct result of having the mitigation already in place prior to the COE approval process.

Mitigation banking also increases the appraised value of the lands within the bank because they are no longer appraised as low-value, non-developable wetlands under the national appraisal standards, Uniform Standards of Professional Appraisal Practice (USPAP).

Undeveloped wetlands are typically appraised by the sales comparison approach under USPAP. Few wetlands are sold for higher than appraised value unless they are used to form a mitigation bank. A bank valuation is determined by what financial market participants are willing to pay to acquire the business based on investment and the intrinsic value of the anticipated understanding of the bank's economic potential.

Pricing Structure

The COE does not determine bank credit pricing; the marketplace determines the credit price based on supply and demand. However, it is difficult to predict credit pricing and bank profitability because of the competitive nature of the market. Typically, only the transaction participants know credit values unless it is disclosed in the public record.

The location of a mitigation bank is a key component in determining the credit value. High-density urban properties carry the highest credit price value because the raw land value is also higher. The average price of non-tidal credits nationwide is \$74,535.² In Alaska, the

cost per credit for remote wetlands was \$5,500³ on the low end in 2013, and the reported highest cost was \$140,000 per credit in the Municipality of Anchorage. Generally, 1 acre of wetland within a bank generates one bank credit. The COE, in turn, determines how many bank credits 1 acre of wetland impact will require as mitigation; historically, this ratio can range from 1.5 per one acre of wetland impact to as much as three credits per one acre of wetland impact. Thus, for remote wetlands in Alaska, the price cited above may need a multiple of three to offset a single acre of impact, increasing the cost to \$16,500 per acre of impact.

Mitigation Marketing Strategies

The strategy of the TLO in developing a mitigation marketing management plan is to form banks that support and facilitate development projects on Trust land. A mitigation bank is considered a method of resource development. Revenue generated from a wetland mitigation bank can be significant. Consider that in 2008 the total payments by developers in the U.S. for wetland mitigation were \$1.3 - \$2.2 billion.⁴ While credit sales from a bank provide direct Trust revenue, secondary Trust revenue should also occur as the bank facilitates Trust resource projects from streamlined and cost effective permitting.

The TLO evaluated a variety of options for participation in the mitigation bank process, including equity partnerships and Trust ownership of a bank. These options are described below. The mitigation marketing management plan is an operational guideline. It does not advocate or specify a preference for a Trust-owned bank versus a partnership. The TLO will consider and evaluate opportunities for mitigation marketing on a case-by-case basis before a project is brought to the board of trustees.

A Trust Bank

Trust bank ownership is one option for mitigation banking. The advantage of a Trust-owned bank is that the entire economic benefit would be disbursed to the Trust. The disadvantage is that creating a Trust bank would require not only sizeable capital outlay for expenses related to the scientific analysis, legal work,

1 Under 33 U.S.C. §1251 et seq. (1972), the Clean Water Act establishes the structure for regulations on discharges of pollutants into the waters of the U.S. and quality standards for surface waters.

2 Birnie, Kathryn. State of the Market: National Market Analysis and Overview. National Mitigation and Conservation Banking Conference, 2013, Denver, CO.

3 Ecosystem Marketplace

4 The Conservation Fund

permitting, and restoration/preservation actions, but also operational expertise and expenses for running the day-to-day activities of the bank.

The COE also requires that mitigation must function over the long term and that the bank has legal protections in place over the bank's wetlands; typically, a conservation easement is the legal document used. The COE also requires the bank owner to maintain a long-term stewardship account to finance the long-term management of the bank wetlands. The account must identify the range of duties, activities, and enforcement of the easement conditions. Long-term stewardship management is already performed by TLO; under the bank scenario, specific monies may need to be secured in a separate account to meet stewardship obligations.

Partnerships

Partnerships may be employed to develop a wetland mitigation bank. The Trust's partner would assume the responsibility of developing and operating the bank. The advantage to the Trust is that a third party would take on much of the upfront capital requirements and associated risk. Working with an experienced partner would also shorten the time needed for COE approval. The downside is that a portion of the economic benefit will go to the partner; however, this may be offset by the comparatively greater economic benefit that an experienced partner may generate for the bank.

Risks

The TLO has well defined processes in place through statutes and regulations for the management of non-cash assets. This document sets forth portfolio management strategies to enable the TLO to implement the goals set forth by the board of trustees to manage the non-cash assets of the Trust. These management strategies include:

- creating economic diversity;
- ensuring integrity of investments;
- leveraging investments;
- managing risk by working with partners; and
- reporting financial outcomes to the Trust.

Mitigation Marketing will follow the investment guidelines adopted by the board of trustees. Each potential mitigation transaction under Mitigation Marketing will be evaluated and follow the long-term asset management strategy principles under 11 AAC 99.090(c). The TLO will also follow the administrative process for consultation with the board of trustees prior to public notice.

Important risk management factors to consider for the Trust relative to the wetland mitigation market are discussed below.

Site Selection

Site selection is a critical component for the success of a bank. The bank site must be within the same watershed that the impacts from the development project occur (this is called the bank's service area). If the Trust bank service area is located outside of the development impacts, the COE would look at other mitigation providers to fulfill the permittee's mitigation obligation inside the service area and the Trust would lose that potential revenue. The risk of selecting the wrong bank site is reduced when the creation of a bank for the Trust occurs within the mid- to end-stages of the Trust's project permitting process.

Another potential risk in site selection is that the site may yield a new resource discovery or a technology may develop that could create greater economic value than mitigation banking. The bank structure is flexible enough to allow deliberative changes to the bank site. In extreme cases, the COE allows subsurface use of land encumbered with a conservation easement for development. However, to the extent the proposed development may degrade surface wetlands, the bank would likely be required to find a similar parcel to offset the mitigation. This concept is known as "mitigating the mitigation."

Capital Investment

Formation of a Trust bank without a partner will require large capital investment for expenses related to the science, field work, mapping, legal work, permitting, restoration requirements, and operational infrastructure for the bank. A bank is required to complete its mitigation prior to receiving credits to sell. "This large initial investment, combined with delayed cash flows, exposes bank entrepreneurs to a longer payback period..." (Hook and Shadle, 2013). The risk could be abated by:

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- Working closely with the project developer on Trust lands and phasing the creation of the bank development process. While this would reduce capital costs and their associated risk, certain upfront capital costs (namely, funding bank permitting and development) would still be a risk for the Trust.
- Working with a partner who will fund the large capital outlay under negotiated terms.

Demand

Wetland mitigation banks have a synergetic relationship between development impacts and a market for the mitigation credits. A bank's inventory must not outweigh the demand of the market for a specific type of wetland or the bank will not generate optimal returns. For very large-scale projects, a bank may be developed to specifically focus on that project's credit needs; this is often referred to as a "single-user bank." While this kind of high-volume, well identified demand can be attractive, there is still risk from this approach if the single-user project does not proceed. The risk could be lessened by targeting an area with multiple project demands in the same watershed to increase the market for credit sales.

Federal policies affect demand by increasing or decreasing regulations that mandate the mitigation obligation. Rule changes could alter the market environment such as the availability of credits, the bank's service area, and unequal application of the 2008 Mitigation Rule. While the regulatory environment is dynamic and the processes are continually refined through adjustments to policy and agency procedures, the trend is that federal regulators are more consistently enforcing the requirements of the 2008 Mitigation Rule for project developers. A Trust bank will effectively assist the project developer to meet the federal no-net loss permitting obligations.

Summary of Mitigation Marketing

Federal and state regulatory permitting law mandates that project developments that impact wetlands must mitigate unavoidable impacts. Project developers on Trust land are required to comply with those regulations and the developers must pay the mitigation costs to satisfy the regulatory obligation. Developers who pay for mitigation credits generally

obtain their permits in a shorter timeframe than those developers who try to restore the site on their own because the mitigation has been performed prior to impacts. Mitigation requirements have increased since the no-net loss policy of President George H.W. Bush, regardless of Executive Branch control.

Although 35 percent of the Trust's portfolio is considered wetlands, only a small segment of those parcels will be selected for mitigation marketing. The relationship between watershed location and development impacts is a key component of the success of mitigation marketing.

The highest and best use for a small group of Trust wetlands is for use in mitigation marketing. Entry into mitigation marketing will be treated as its own asset classification. The advantage of creating this new asset classification is to provide performance indicators that will measure the results of this new resource and generate additional revenues from its development. Mitigation marketing will leverage revenues received from mitigation obligations plus revenues from the traditional resource developments in land, mining, energy, timber, and real estate sectors that its mitigation facilitates. The Trust will now not only be able to market the resource, but also provide a solution for efficiency of federal permitting obligations.

Goals and Objectives

Goal: Evaluate the potential for one mitigation marketing project to promote a Trust resource development to move forward through the federal permitting process.

Objective 1: Identify future projects which may have mitigation requirements in the coming decade.

Objective 2: Select potential parcel(s) with equivalent wetlands that may have potential to offset those resource development project impacts through known databases.

Objective 3: Evaluate and assess pro forma analysis to determine suitability of bank ownership structure through a partnership or sole-ownership by the Trust.

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