

Governor's Conference Room and Via Microsoft Teams

Join on your computer or mobile app

[Click here to join the meeting](#)

Or call in (audio only)

[+1 701-328-0950, 630230151#](#)

Phone Conference ID: **630 230 151#**

➤ = **Board Action Requested**

1. **Approval of Meeting Minutes – Joseph Heringer**

Consideration of Approval of Land Board Meeting Minutes by voice vote.

- A. [May 23, 2022](#) – minutes available via link

2. **Operations – Joseph Heringer**

A. Commissioner's Report – pg. 2

3. **Division Reports – Joseph Heringer**

A. Surface – pg. 6

B. Minerals – pg. 14

C. Unclaimed Property – pg. 15

D. Financials – pg. 16

E. Investments Update – pg. 26

4. **Investments – Michael Shackelford**

A. First Quarter & Current Market Update – pg. 27

- B. Strategic Asset Allocation Update – pg. 54

C. Hedging Oil & Gas – pg. 78

D. State Investment Board Membership and Asset Management – pg. 87

5. **Special Projects - Chris Suelzle/Joseph Heringer**

A. Acreage Adjustment Report – pg. 102

6. **Litigation – Joseph Heringer**

A. Litigation Summary – pg. 104

- **Executive session under the authority of NDCC §§ 44-04-19.1 and 44-04-19.2 for attorney consultation with the Board's attorneys to discuss: pg. 105**

- Mandan, Hidatsa, and Arikara Nation v. United States Department of Interior Case No. 20-1928

Next Meeting Date – July 25, 2022

RE: Commissioner's Report
(No Action Requested)

- Executive onboarding meetings with all OMB division directors
- Entered MOU with Kelmar Associates to begin cryptocurrency unclaimed property compliance reviews
- Moving forward with building retaining wall project under continuing authority; needed for building/foundation integrity to prevent future structural damage; estimated cost \$45 - \$50,000 which is much higher than initial estimate due to significant inflation, labor & supply chain cost increases (see attached slides)
- All staff annual reviews completed
- Numerous outreach calls/meetings with oil & gas operators re: acreage adjustment project
- Attended monthly Natural Resources Breakfast meeting (June 1)
- In-person meeting with reps from investment manager PIMCO (June 13)
- Mineral Tracker meeting re: contract renewal, product features, and annual mineral rights appraisal (June 16)
- Meeting with Billings County reps re: ND Trust Lands Completion Act (June 24)
- Field Inspector Training Day (June 28)
- New department hybrid work policy starting July 1st

Presentations

- Legislative Management's Information Technology Committee – Update re: systems upgrade projects (May 26)
- National Association of Royalty Owners - DTL overview and current issues (June 15)
- North Dakota Petroleum Council Board – DTL overview and current issues (June 22)
- Water Topics Overview Legislative Committee - Pasture water improvement programs (June 23)

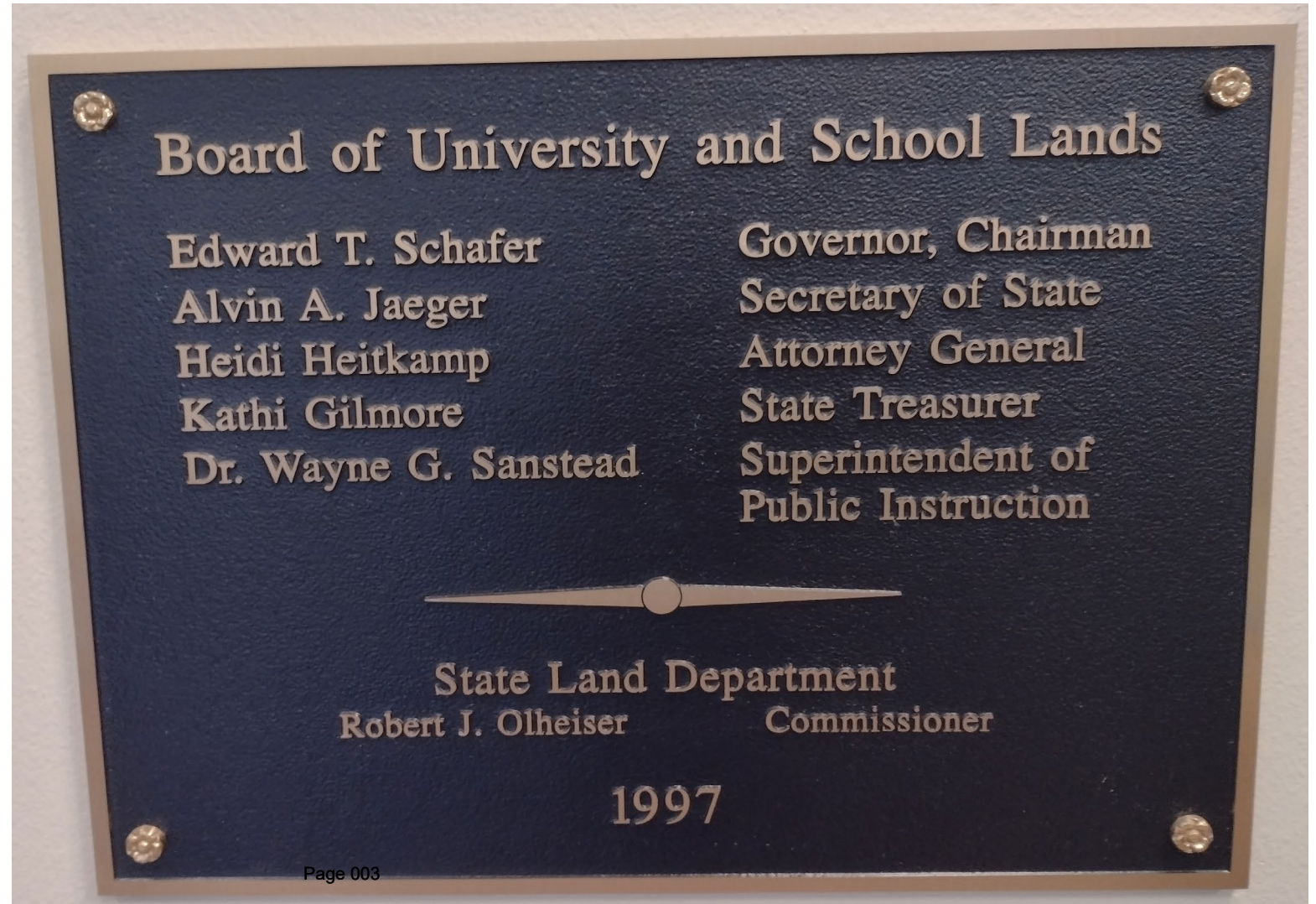
Conferences Attended

- Unclaimed Property Division Director, Susan Dollinger, attended National Association of State Treasurer's Treasury Management Symposium – Unclaimed Property Track (June 6-9 San Antonio)

Building History

The Department of Trust Lands purchased the building located at 1707 N. 9th St. in 1996 for approximately \$1,116,440.

After remodeling, the building's grand opening was held on September 25th, 1997.



Department of Trust Lands

The removal and replacement of the retaining wall is necessary for building/foundation integrity to prevent future structural damage; the estimated cost of \$45 - \$50,000 is much higher than the initial estimate due to significant inflation, labor & supply chain cost increases

The original quote of \$16,000 brought to the Board in April of 2021 did not include the removal of the existing retaining wall, only the replacement.

The Department's authority for repairs is provided in N.D.C.C. § 15-03-16:

15-03-16. Continuing appropriation for investments. There is appropriated annually the amounts necessary to pay costs related to investments controlled by the board of university and school lands, including management, trustee, consulting, custodial, and performance measurement fees; expenses associated with money manager searches and onsite audits and reviews of investment managers; **expenses associated with building repairs, maintenance, and renovations**; and payments in lieu of taxes for the building and grounds. Each payment must be made from the trust fund for which the cost was incurred.





Department retaining wall on June 23, 2022. Photo credit: Rick Owings

SURFACE DIVISION

For the month of May 2022, the Division granted 20 encumbrances for a total of \$10,521.00 in income for the trusts.



Photo Credit: Jacob Lardy
Department of Trust Lands Billings County 142-100-16

**RE: No Net Loss Land Sale Update
(No Action Requested)**

Trust Land (Attachment 1 - aerial map)

Grant County

Township 136 North, Range 86 West

Section 28: NW $\frac{1}{4}$

Section 32: N $\frac{1}{2}$ N $\frac{1}{2}$

Section 36 SE $\frac{1}{4}$

Provided accessible and leasable land (Attachment 2 - aerial map)

Hettinger County

Township 136 North, Range 94 West

Section 20: S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$

The Board of University and School Lands (Board) received an application from M. Family L.L.C. for the purchase of approximately 480 acres of trust land in Grant County (see trust land legal description above) as part of a no net loss land sale in accordance with Chapter 85-04-07 and Chapter 85-04-08 of the North Dakota Administrative Code. To meet the requirements of a no net loss land sale, the applicants/purchasers are required to provide land (see provided accessible and leasable land legal description above) as payment.

The properties were evaluated and appraised as part of a no net loss property sale and the Board of Universities and School Lands approved the no-net loss land sale and the minimum bids on November 29, 2021 (Attachment 3 – Approved Memo).

The provided land (see provided accessible and leasable land legal description above) that will be conveyed to the Board of University and School Lands as payment has better dedicated access, has the potential to generate more annual rental income, and was appraised substantially higher than the Trust Land.

The no-net loss sale was conducted at the Grant County Courthouse, Carson ND, on June 2nd, 2022 in accordance with Chapter 85-04-07 and Chapter 85-04-08 of the North Dakota Administrative Code. The results of the no-net loss sale are as follows:

DESCRIPTION	Successful Bid	Successful Bidder
T136N R86W Section 28 NW $\frac{1}{4}$	\$99,000	M. Family L.L.C.
T136N R86W Section 32 N $\frac{1}{2}$ 2N $\frac{1}{2}$	\$93,000	M. Family L.L.C.
T136N R86W Section 36 SE $\frac{1}{4}$	\$101,000	M. Family L.L.C.

A closing meeting will be held with M. Family L.L.C to finalize the no-net loss sale in the near future.

Trust Land

Grant County

Township 136 North, Range 86 West

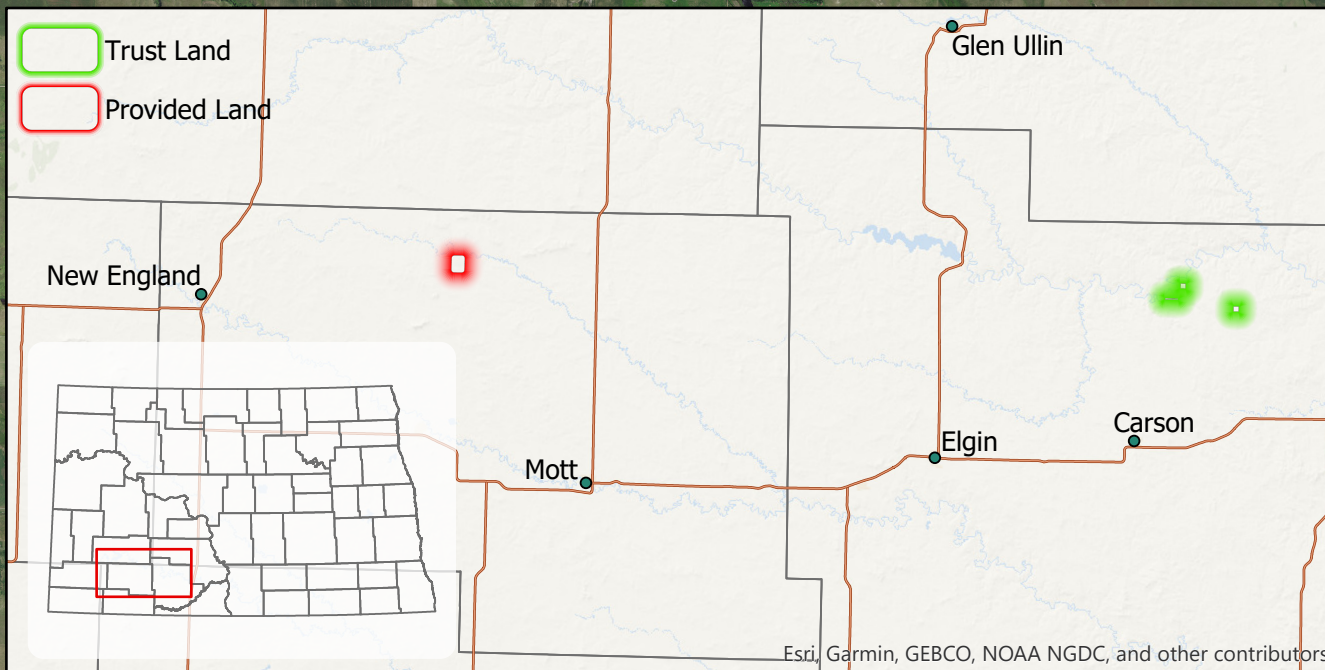
Section 28: NW¼

Section 32: N½N½

Section 36: SE¼



0 0.75 1.5 Miles



Provided Accessible and Leasable Land

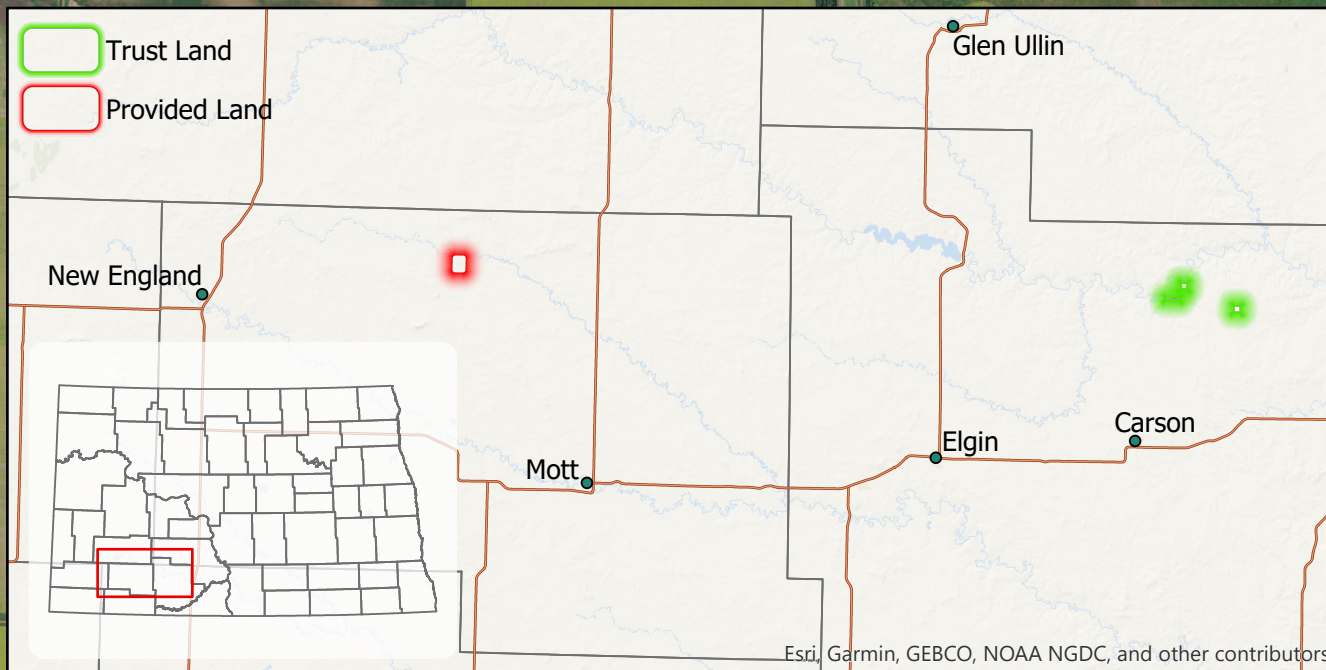
Hettinger County

Township 136 North, Range 94 West

Section 20: S1/2NE1/4, SE1/4



0 0.25 0.5 Miles



MEMORANDUM TO THE BOARD OF UNIVERSITY AND SCHOOL LANDS

November 29, 2021

RE: No Net Loss Preliminary Land Sale Approval T136N R86W Section 28 NW1/4, Section 32 N1/2N1/2, Section 36 SE1/4

Trust Land (Attachment 1 - aerial map)

Grant County

Township 136 North, Range 86 West

Section 28: NW¹/₄

Section 32: N¹/₂N¹/₂

Section 36 SE¹/₄

Provided accessible and leasable land (Attachment 2 - aerial map)

Hettinger County

Township 136 North, Range 94 West

Section 20: S¹/₂NE¹/₄, SE¹/₄

The Board of University and School Lands (Board) received an application from Kelly and Lana Moldenhauer for the purchase of approximately 480 acres of trust land in Grant County (see trust land legal description above) as part of a no net loss land sale in accordance with Chapter 85-04-07 and Chapter 85-04-08 of the North Dakota Administrative Code. To meet the requirements of a no net loss land sale, the applicants/purchasers are required to provide land (see provided accessible and leasable land legal description above) as payment.

The properties were evaluated and appraised as part of a no net loss property sale. The attached Land Evaluations (Attachments 3 and 4) contain land and environmental assessment, rental, and appraisal information for these properties. The Requirements of Sale – Sale Criteria Evaluation is also attached (Attachment 5).

The following is a summary of sale criteria (Attachment 5) considered by the Department of Trust Lands in consideration of a no net loss sale in accordance with subsections a through f of N.D. Admin. Code 85-04-07-02(2) and 85-04-08-02(2).

a. Equal of greater value

Trust Land Value:	Grant County Appraisal	\$262,625
	Allied Appraisals Inc.	\$293,000

Land to be provided:	Allied Appraisals Inc.	\$382,500
----------------------	------------------------	-----------

b. Equal or greater income

Annual Rental Income

Trust Land Fair Market Value (FMV) minimum rent Grant County	\$6,726
--	---------

Land to be provided FMV minimum rent Hettinger County	\$6,721
---	---------

Land to be provided current private rent Hettinger County	\$9,360
---	---------

Annual Income Return (rent less tax obligations)

Trust Land FMV minimum rent less taxes Grant County	\$6,624
---	---------

Land to be provided FMV minimum rent less taxes Hettinger County	\$5,677
--	---------

Land to be provided current rent less taxes Hettinger County	\$8,586
--	---------

Comments: The highest and best use for the trust land and the land to be provided is agricultural. The trust land in Grant County for which the sale application was received would have an annual income return of \$6,624. The land to be provided in Hettinger County would have a projected annual income, when applying the Board's FMV rent policy, of \$5,677, resulting in an estimated decrease in annual income of \$957 to the various trusts. Using the current cash rent value (obtained from applicant) there would be an annual income of \$8,586, resulting in an estimated increase in annual income of \$1,962 to the various trusts. It should be noted that the FMV minimum rent is lower because the major soil, Vebar-Cohagen, has a low cropland productivity index which results in the average cropland rental rate for Hettinger County being adjusted downward. The current rental rate of \$40 per acre (\$9,360) is indicative of good demand to rent cropland and a willingness for prospective lessees to pay average to above average rental rates for lower producing cropland.

- c. Acreage. A no net loss sale should result in the board receiving equal or greater acreage. The board may, however, consider receiving less acreage in return for one or more of the following:
- (1) Improved dedicated access;
 - (2) Substantially higher value; or
 - (3) Substantially higher income.

Comments: Although this transaction would not result in the Board receiving equal or greater acreage, the land to be provided has excellent dedicated access when compared to the N $\frac{1}{2}$ N $\frac{1}{2}$ of Section 32 and the SE $\frac{1}{4}$ of Section 36. The land to be provided is of higher value than trust land (\$382,500 versus \$293,000 – Allied Appraisal Values) and would provide similar income (\$5,677 versus \$6,624) using the Board's FMV rent policy and greater income (\$8,586 versus \$6,624) using the current private rental rate.

- d. Consolidation of trust lands. The proposed no net loss sale must not fragment trust land holdings by creating isolated parcels of trust land. In all no net loss sales, the Board shall reserve all minerals underlying the trust lands pursuant to section 5 of article IX of the Constitution of North Dakota subject to applicable law.

Comments: The proposed no net loss sale will not fragment trust land holdings by creating an isolated parcel of trust land. All minerals underlying the trust lands would be reserved pursuant to section 5 of article IX of the Constitution of North Dakota subject to applicable law.

- e. Potential for long-term appreciation. The proposed no net loss sale must have similar revenue potential as the trust lands.

Comments: The potential long-term appreciation for the land tracts involved in this sale would be similar for this proposed no net loss sale.

- f. Access. A no net loss sale must not diminish access to trust lands. The no net loss land should provide equal or improved access.

Comments: The land to be provided has excellent dedicated access. This land is 1 $\frac{1}{2}$ miles west of the Enchanted Highway and has a good County gravel road (St. Michaels Road) with access approaches along the south side of the tract and good section line access trails along the east and north sides of the tract. Two of the three proposed sale tracts do not have improved dedicated access. The N $\frac{1}{2}$ N $\frac{1}{2}$ of Section 32 is an isolated tract which requires access permission across surrounding private land. Access to the SE $\frac{1}{4}$ of Section 36 from the west would be across private land, while access from the east would be by section line

trail to the southeast corner. The NW $\frac{1}{4}$ of Section 28 has excellent dedicated access as a County Road traverses the tract (58th St SW).

Land adjacent to the proposed land is Wildlife Habitat to the north and east, as the United States Bureau of Reclamation owns the entire section 21 (640 acres), three quarters of section 22 (480 acres) to the east. Land to the north of Section 20 the S $\frac{1}{2}$ of Section 17 is owned by the Mott 30 Mile Creek Hunt Club. Land to the south and west is privately owned land used for cropland production.

Per N.D. Admin. Code § 85-04-07-03(3) and N.D. Admin. Code § 85-04-08-03(4) concerning the sale procedure:

Upon a determination that the application covers a tract the board is willing to sell, the department shall post on the department's website a notice of the application for sale, any supporting documentation, and instructions for submitting public comments. The department also shall publish notice of a letter of application for sale in the official newspaper of the county where the nominated tract is located and in the Bismarck Tribune. Notice must be published once each week for three consecutive weeks prior to the deadline for comments. The notice must contain the legal description of the proposed tract and the deadline for comments. If publication of any notice is omitted inadvertently by any newspaper or the notice contains typographical errors, the department may proceed with the scheduled comment period if it appears the omission or error is not prejudicial to the department's interest. All comments must be in writing and contain the following:

- a. Name and address of the interested person;
- b. Applicant's name and address;
- c. The legal description of the proposed tract for sale as shown on the published notice; and
- d. A detailed statement as to whether the interested person supports or opposes the sale.

After public comment and in accordance with N.D. Admin. Code §§ 85-04-07-03 and 85-04-08-03, the Board shall review all appraisals, any public comments, other relevant information including title examinations, and determine whether to proceed with the sale. If the Board decides to proceed with the sale, the Board shall establish a minimum acceptable sale price.

The Department posted notification in the Bismarck Tribune, the Grant County News, the Hettinger County Herald, and on the Department's website with comments received until 5:00 p.m. on September 10, 2021. The comments raised a concern that since many constituents subscribe to a newspaper in their area, which is not always the official county newspaper, not enough notification was provided to the public. It was requested that the comment period be extended and the notice of application for sale be advertised in a much larger area to allow more citizens an opportunity to comment.

On September 30, 2021, the Board authorized the Commissioner to extend the posting for public comment on the Department's website and that notice be published in necessary newspapers in areas surrounding the land for sale. The website included a notice of the application for sale, any supporting documentation, and instructions for submitting public comments regarding the sale. The notice provided a second public comment period set for October 25, 2021 through November 5, 2021. The Department posted in the following papers:

Adams County Record

Grant County News
Carson Press
Hettinger County Herold
Mandan News
Dickinson Press
Bismarck Tribune

The Department received a total of thirteen comments regarding the no net loss sale. A summary of the comments can be reviewed in Attachment 6.

Proposed Sale of Property in Grant County

Tract 1 Township 136 North, Range 86 West, Section 28 NW¼: This tract of land is located approximately 12 miles north and 2 miles east of Carson, North Dakota. There is a gravel road that provides access through the tract. This tract was acquired by foreclosure of the James N. Lester farm mortgage on January 27, 1927 and assigned to the North Dakota State University Trust Fund. The property was appraised by Allied Appraisals Inc., Bismarck, North Dakota, on February 25, 2021, having a current appraised value of \$99,000.

Tract 2 Township 136 North, Range 86 West, Section 32 N½N½: This tract of land is located approximately 9 miles north and 1 mile east of Carson North Dakota. There is no vehicular section line access to this tract. This tract was acquired by foreclosure of the Mina H. Aasved farm mortgage on August 3, 1935 and assigned to the Common Schools Trust Fund. The property was appraised by Allied Appraisals Inc., Bismarck, North Dakota, on February 25, 2021, having a current appraised value of \$93,000.

Tract 3 Township 136 North, Range 86 West, Section 36 SE¼: This tract of land is located approximately 8 miles north and 5½ miles east a of Carson, North Dakota. There is a section line trail that allows access from the east to the southeast corner of this tract. This tract is also adjacent to trust land to the north (NE¼). This land was granted to North Dakota at statehood and assigned to the Common Schools Trust Fund. The property was appraised by Allied Appraisals Inc., Bismarck, North Dakota, on February 25, 2021, having a current appraised value of \$101,000.

Recommendation: The Board authorizes the Commissioner to proceed with the no-net loss sale with a minimum opening bid for:

DESCRIPTION	Minimum Opening Bid
T136N R86W Section 28 NW1/4	\$99,000
T136N R86W Section 32 N1/2N1/2	\$93,000
T136N R86W Section 36 SE1/4	\$101,000

Action Record	Motion	Second	Aye	Nay	Absent
Secretary Jaeger	X		X		
Superintendent Baesler			X		
Treasurer Beadle		X	X		
Attorney General Stenehjem			X		
Governor Burgum			X		

For the month of May 2022, the Division approved zero oil & gas lease extensions, zero coal lease extensions, and approved 1 shut-in request.

The total DTL producing wells for the Department is unchanged from last month's report at 49% of producing wells in North Dakota.

As of May 2022, for fiscal year 2022 the Department has received \$408,783,527 in royalties as compared to \$206,836,576 last fiscal year at this time.



UNCLAIMED PROPERTY DIVISION

For the month of May 2022, the Division received 106 holder reports with a property value of \$126,623 and paid 601 claims for a total of \$921,979.

As of May, the Department had \$15,778,849 worth of unclaimed properties reported for the fiscal year.

- The total amount of property paid (from the [Unclaimed Property website](#) as of 5/31) was \$92,074,287
- The total value of cash properties available for claim was \$117,161,938*
- Total number of properties available to claim was 457,406

* Please note: This total includes only cash properties.

Date	FastTrack Passes	Claims Received	Claims Paid
July 2021	93	790	352
August 2021	298	1371	530
September 2021	144	924	431
October 2021	72	797	215
November 2021	102	982	309
December 2021	93	759	292
January 2022	112	944	439
February 2022	946	5324	1151
March 2022	127	920	418
April 2022	99	833	331
May 2022	95	748	601

**RE: Financial Statements Position Report (Unaudited) for period ended March 31, 2022
(No Action Requested)**

The following statements represent the unaudited financial position for the various trusts and funds managed by the Department of Trust Lands. The unaudited financial positions are two months delayed as a significant portion of the revenue for Commons Schools Trust, Strategic Investment and Improvements Fund, and Coal Development Trust includes gross production tax, oil extraction tax and coal severance tax distributions which are received two months after production date.

NORTH DAKOTA
BOARD OF UNIVERSITY AND SCHOOL LANDS

Financial Position Report
(Unaudited)

For period ended March 31, 2022



Board of University and School Lands		
Comparative Financial Position (Unaudited)		
Schedule of Net Assets		
Assets by Trust:	March 31, 2022	March 31, 2021
Common Schools	\$5,883,666,903	\$5,267,026,624
North Dakota State University	87,917,828	79,017,991
School for the Blind	15,475,865	14,187,149
School for the Deaf	24,184,317	22,834,488
State Hospital	16,121,622	15,337,118
Ellendale *	28,287,345	25,413,579
Valley City State University	15,386,286	13,983,117
Mayville State University	10,851,808	9,163,286
Youth Correctional Center	31,157,205	27,287,011
State College of Science	22,063,091	20,377,627
School of Mines **	27,049,846	24,475,533
Veterans Home	5,955,286	5,667,751
University of North Dakota	41,943,952	38,289,080
Capitol Building	5,879,862	4,057,371
Strategic Investment and Improvements	689,043,593	629,893,485
Coal Development	71,188,000	71,456,394
Indian Cultural Education Trust	1,416,642	1,358,125
Theodore Roosevelt Presidential Library	55,762,067	53,007,308
Total	\$7,033,351,520	\$6,322,833,037
Assets by Type:		
Cash	\$397,580,738	\$228,621,486
Receivables	7,776,058	6,630,282
Investments ***	6,540,494,042	5,936,324,340
Office Building (Net of Depreciation)	264,332	336,120
Farm Loans	4,741,374	5,450,201
Energy Construction Loans	-	-
Energy Development Impact Loans	9,196,672	10,036,074
School Construction Loans (Coal)	29,495,505	38,908,935
Due to/from Other Trusts and Agencies	43,802,799	96,525,599
Total	\$7,033,351,520	\$6,322,833,037

*** Ellendale Trust**

The following entities are equal beneficiaries of the Ellendale Trust:

Dickinson State University	School for the Blind
Minot State University	Veterans Home
Dakota College at Bottineau	State Hospital
	State College of Science - Wahpeton

**** School of Mines**

Benefits of the original grant to the School of Mines are distributed to the University of North Dakota.

***** Investments**

Includes available cash available for loans, investments, abandoned stock and claimant liability.

Board of University and School Lands

Comparative Financial Position (Unaudited)

Combined Permanent Trusts

	March 31, 2022	March 31, 2021
Balance Sheet		
Assets:		
Cash	\$97,712,554	\$47,913,563
Interest Receivable	6,724,623	8,309,805
Investments	6,093,516,615	5,591,527,256
Farm Loans	4,741,374	5,336,793
Accounts Receivable	-	-
Due from Other Agencies	23,569,269	12,470,418
Office Building (Net of Depreciation)	264,332	320,805
Total Assets	<u>\$6,226,528,767</u>	<u>\$5,665,878,640</u>
Liabilities:		
Unclaimed Property Claimant Liability	\$16,461,434	\$16,645,538
Due to Other Funds	5,977	6,756
Accounts Payable	-	-
Total Liabilities	<u>16,467,411</u>	<u>16,652,294</u>
Equity:		
Fund Balance	6,057,564,355	4,892,120,248
Net Income/(Loss)	152,497,001	757,106,098
Total Liabilities and Equity	<u>\$6,226,528,767</u>	<u>\$5,665,878,640</u>
Income Statement		
Income:		
Investment Income	\$146,180,000	\$100,110,471
Realized Gain/(Loss)	136,595,232	145,541,759
Unrealized Gain/(Loss)	(194,503,488)	543,474,120
Royalties - Oil and Gas	162,451,680	81,268,859
Royalties - Coal	273,407	242,856
Royalties - Aggregate	127,601	603,143
Bonuses - Oil and Gas	1,705,147	966,430
Bonuses - Coal	-	-
Rents - Surface	13,679,059	11,444,940
Rents - Mineral	88,274	150,434
Rents - Coal	46,927	26,036
Rents - Office Building	71,982	70,702
Encumbrances - Surface	74,070	-
Sale of Capital Asset	644	-
Miscellaneous Income	14,650	-
Oil Extraction Tax Income	83,109,854	46,440,607
Unclaimed Property Income	11,601,953	8,934,177
Total Income	<u>361,516,992</u>	<u>939,274,534</u>
Expenses and Transfers:		
Investment Expense	5,704,742	5,047,281
In-Lieu and 5% County Payments	263,239	262,264
Administrative Expense	3,617,425	2,867,056
Operating Expense - Building	62,085	106,835
Transfers to Beneficiaries	199,372,500	173,885,000
Total Expense and Transfers	<u>209,019,991</u>	<u>182,168,436</u>
Net Income/(Loss)	<u>\$152,497,001</u>	<u>\$757,106,098</u>

Board of University and School Lands

Comparative Financial Position (Unaudited)

Capitol Building Trust

	March 31, 2022	March 31, 2021
<u>Balance Sheet</u>		
Assets:		
Cash	\$2,169,729	\$942,571
Interest Receivable	18,173	23,162
Investments	3,691,960	3,218,394
Total Assets	<u>\$5,879,862</u>	<u>\$4,184,127</u>
Liabilities:		
Due to Other Trusts and Agencies	\$0	\$0
Equity:		
Fund Balance	3,462,488	5,535,786
Net Income	2,417,374	(1,351,659)
Total Liabilities and Equity	<u>\$5,879,862</u>	<u>\$4,184,127</u>
<u>Income Statement</u>		
Income:		
Investment Income	\$24,602	\$53,813
Realized Gain(Loss)	2,483	2,044
Unrealized Gain/(Loss)	(95,102)	(27,334)
Royalties - Oil and Gas	2,327,856	585,115
Bonuses - Oil and Gas	-	2,160
Bonus - Coal	-	-
Rents - Surface	174,632	165,901
Rents - Mineral	802	2,002
Encumbrances - Surface	18,385	-
Royalties - Aggregate	-	-
Total Income	<u>2,453,658</u>	<u>783,701</u>
Expenses and Transfers:		
Investment Expense	(2,520)	2,114
In-Lieu and 5% County Payments	3,897	3,620
Administrative Expense	34,907	23,386
Transfers to Facility Management	-	1,100,000
Transfers to Legislative Council	-	36,240
Transfer to Supreme Court	-	970,000
Total Expense and Transfers	<u>36,284</u>	<u>2,135,360</u>
Net Income/(Loss)	<u>\$2,417,374</u>	<u>(\$1,351,659)</u>

Board of University and School Lands		
Comparative Financial Position (Unaudited)		
Coal Development Trust		
	March 31, 2022	March 31, 2021
Balance Sheet		
Assets:		
Cash	\$123,487	\$299,694
Interest Receivable	501,221	478,669
Investments	31,794,371	21,884,063
Coal Impact Loans	9,196,672	9,972,609
School Construction Loans	29,495,505	38,908,935
Due from other Trusts and Agencies	255,811	270,032
Total Assets	<u>\$71,367,067</u>	<u>\$71,814,002</u>
Liabilities:		
Due to Other Trusts and Agencies	\$179,067	\$189,022
Equity:		
Fund Balance	71,117,671	70,750,579
Net Income	70,329	874,401
Total Liabilities and Equity	<u>\$71,367,067</u>	<u>\$71,814,002</u>
Income Statement		
Income:		
Investment Income	\$243,438	\$261,578
Interest on School Construction Loans	493,595	426,090
Realized Gain/(Loss)	27,412	9,620
Unrealized Gain/(Loss)	(916,722)	(148,725)
Coal Severance Tax Income	348,046	340,566
Total Income	<u>195,769</u>	<u>889,129</u>
Expenses and Transfers:		
Investment	15,534	10,899
Administrative	2,392	3,829
Transfers to General Fund	107,514	-
Total Expense and Transfers	<u>125,440</u>	<u>14,728</u>
Net Income/(Loss)	<u>\$70,329</u>	<u>\$874,401</u>

Board of University and School Lands

Comparative Financial Position (Unaudited)

Strategic Investment and Improvements Fund

March 31, 2022

March 31, 2021

Balance Sheet

Assets:

Cash	\$297,554,363	\$233,783,459
Interest Receivable	591,193	1,130,087
Investments	370,741,250	364,146,058
Due from other Trusts or Agencies	20,156,787	94,864,630
Total Assets	<u>\$689,043,593</u>	<u>\$693,924,234</u>

Liabilities:

Accounts Payable	\$0	\$0
------------------	-----	-----

Equity:

Fund Balance	860,465,447	767,541,457
Net Income	(171,421,854)	(73,617,223)
Total Liabilities and Equity	<u>\$689,043,593</u>	<u>\$693,924,234</u>

Income Statement

Income:

Investment Income	\$2,611,138	\$4,257,468
Realized Gain/(Loss)	299,323	154,568
Unrealized Gain/(Loss)	(9,747,515)	(2,348,686)
Interest on Fuel Prod Facility	70,433	14,863
Interest - Miscellaneous	142,379	-
Interest and Penalty	920,557	-
Royalties - Oil and Gas	103,216,932	51,564,856
Bonuses - Oil and Gas	(15,945,602)	(820,486)
Royalties - Coal	119,271	85,412
Rents - Mineral	15,219	62,271
Tax Income - Oil Extraction & Production Distribution	20,156,787	258,377,369
Total Income	<u>101,858,922</u>	<u>311,347,635</u>

Expenses and Transfers:

Administrative	1,401,317	960,824
Investment Expense	120,922	107,745
Transfers to General Fund	-	382,200,000
Transfer to Attorney General (HB 1003)	-	-
Transfer to Agriculture Department (HB 1009)	5,000,000	-
Transfer to ND Insurance Commissioner (SB 2287)	200,000	-
Transfer to Office of Management & Budget (HB 1015)	205,000,000	-
Transfer to Council on the Arts (HB 1015)	-	-
Transfer to Office of Management & Budget (HB 1015)	-	-
Transfer to Office of the Adjutant General (HB 1016)	1,000,000	-
Transfer to Innovation Loan Fund (HB 1141)	15,000,000	-
Transfer to ND University System (SB 2003)	19,000,000	-
Transfer to Office of Management & Budget (SB 2014)	9,500,000	-
Transfer to Department of Commerce (SB 2018)	15,000,000	-
Transfer to Upper Great Plains Transportation (SB 2020)	2,073,000	-
Transfer from General Fund	(14,463)	-
Transfer to Agencies with Litigation Pool	-	656,289
Transfer to Environmental Quality	-	1,040,000
Total Expense and Transfers	<u>273,280,776</u>	<u>384,964,858</u>
Net Income/(Loss)	<u>(\$171,421,854)</u>	<u>(\$73,617,223)</u>

As of March 31, 2022 the SIIF had a fund balance of \$689,043,593. The fund balance is made up of two parts. The committed fund balance is that portion of the fund that has either been set aside until potential title disputes related to certain riverbed leases have been resolved or appropriated by the legislature. The uncommitted fund balance is the portion of the fund that is unencumbered, and is thus available to be spent or dedicate to other programs as the legislature deems appropriate. The uncommitted fund balance was \$206,801,624 as of March 31, 2022.

Board of University and School Lands

Comparative Fiduciary Statements (Unaudited)

Indian Cultural Trust

	March 31, 2022	March 31, 2021
<u>Fiduciary Net Position</u>		
Assets:		
Cash	\$421	\$2,102
Interest receivable	976	1,329
Investments	1,415,245	1,374,384
Total Assets	1,416,642	1,377,815
Liabilities:		
Accounts payable	-	-
Total Liabilities	-	-
Net Position:		
Net position restricted	1,416,642	1,377,815
Total Net Position	\$1,416,642	\$1,377,815
<u>Changes in Fiduciary Net Position</u>		
Additions:		
Contributions:		
Donations	\$0	\$0
Total Contributions	0	0
Investment Income:		
Net change in fair value of investments	13,182	173,914
Interest	34,791	25,073
Less investment expense	1,343	(1,250)
Net Investment Income	49,316	197,737
Miscellaneous Income	2,458	2,905
Total Additions	\$51,774	\$200,642
Deductions:		
Payments in accordance with Trust agreement	46,052	-
Administrative expenses	500	1,031
Total Deductions	\$46,552	\$1,031
Change in net position held in Trust for:		
Private-Purpose	5,222	199,611
Total Change in Net Position	5,222	199,611
Net Position - Beginning FY Balance	1,441,059	1,221,309
Net Position - End of Month	1,446,281	\$1,420,920

Board of University and School Lands

Comparative Fiduciary Statements (Unaudited)

Theodore Roosevelt Presidential Library

	March 31, 2022	March 31, 2021
Fiduciary Net Position		
Assets:		
Cash	\$20,182	\$132,909
Interest receivable	(60,128)	(47,882)
Investments	55,802,013	53,711,797
Total Assets	55,762,067	53,796,824
Liabilities:		
Accounts payable	-	-
Total Liabilities	-	-
Net Position:		
Net position restricted	55,762,067	53,796,824
Total Net Position	\$55,762,067	\$53,796,824
Changes in Fiduciary Net Position		
Additions:		
Contributions:		
Donations	17,500,000	35,000,012
Total Contributions	17,500,000	35,000,012
Investment Income:		
Net change in fair value of investments	511,513	3,321,225
Interest	1,354,772	587,186
Less investment expense	52,297	29,990
Net Investment Income	1,813,988	3,878,421
Miscellaneous Income	54	186
Total Additions	19,314,042	38,878,619
Deductions:		
Payments in accordance with Trust agreement	912,215	-
Administrative expenses	115,225	500
Total Deductions	\$1,027,440	\$500
Change in net position held in Trust for:		
Private-Purpose	20,341,482	38,879,119
Total Change in Net Position	20,341,482	38,879,119
Net Position - Beginning FY Balance	38,446,695	14,918,706
Net Position - End of Month	\$58,788,177	\$53,797,825

**RE: Investment Updates
(No Action Requested)**

Portfolio Rebalancing Updates

Staff are currently in the process of finalizing the Fund Documents for both Morgan Stanley Ashbridge Fund II and the Hamilton Lane Infrastructure Opportunities Fund which were approved in the March Board meeting.

Rebalancing was done to the Portfolio with excess cash of \$75M and \$120M were allocated to the SSGA Russell 1000 Index CF and SSGA MSCI World exUS Index CF respectively. These investments were made to align the Broad US and Int'l Equities allocation to Policy targets.

Since the last Board meeting, Owl Rock has made both a distribution and capital call with a net distributed amount of \$35M thereby increasing its unfunded commitment back to \$70M. Millennium USA LP also made a \$30M capital call which is scheduled on for June 30th.

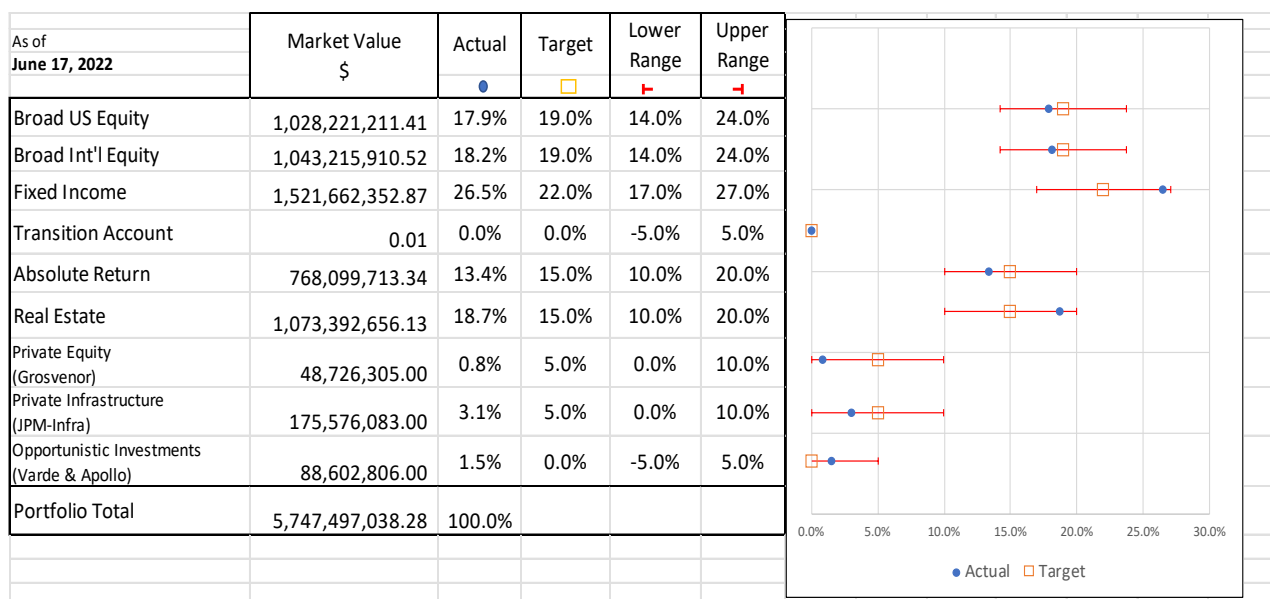
Unfunded commitments after the distribution and calls will be at \$588.4M. These are:

1. Varde Dislocation Fund, \$20.5M
2. GCM Private Equity, \$105.5M
3. ARES Pathfinder Fund, \$54.4M
4. Angelo Gordon DL IV, \$25M
5. Owl Rock Diversified Lending, \$70M
6. GCM Secondary Opportunities Fund, \$128M
7. Harrison Street Core Property Fund LP, \$30M
8. FSI GDIF (Infrastructure), \$105M
9. AGDL-BUSL Fund, \$50M

The transition account is now closed.

Asset Allocation

The table below shows the status of the permanent trusts' asset allocation as of June 17, 2022. The figures provided are unaudited.



**RE: Investment Performance Reports – 1st Quarter 2022
(No Action Requested)**

Josh Kevan from RVK will review the performance of the Board of University and School Land's (Board) investment program for the period ending March 31, 2022, and discuss current market conditions.

The first report to be reviewed was prepared by RVK to enable the Board to monitor and evaluate the collective performance of the permanent trusts' investments and the performance of individual managers within the program. In order to provide an overview of the program and highlight critical information, an executive summary has been incorporated into the Board report.

The second report shows the performance of the Ultra-Short portfolio in which the Strategic Investment and Improvements Fund, the Coal Development Trust Fund and the Capitol Building Fund are invested.

Attachment 1: RVK Permanent Trust Fund Performance Analysis

Attachment 2: RVK Ultra-short Performance Report



Investment Performance Analysis

North Dakota Board of University and School Lands

Period Ended: March 31, 2022



I. Capital Markets Review

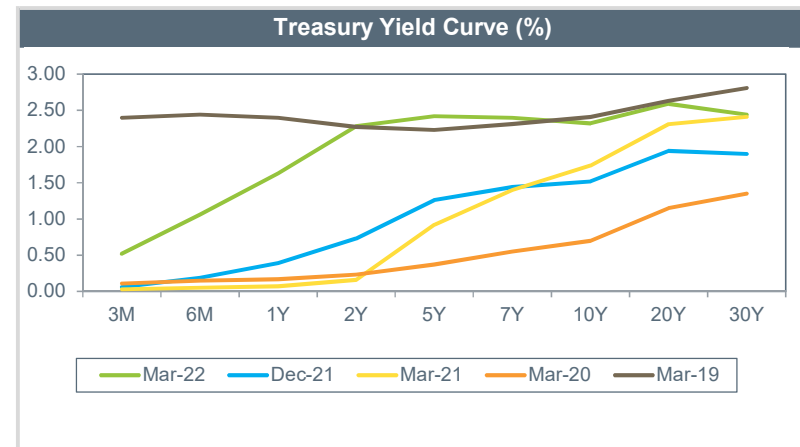


First Quarter Economic Environment

Key Economic Indicators

During Q1, investors were left with few options for capital preservation as public equity and fixed income markets fell sharply amid increasing volatility, declining global economic growth forecasts, and rising interest rates. Global capital markets faced existing and emerging headwinds, including the Russian invasion of Ukraine, which was met with condemnation from much of the international community. Existing factors—such as persistent inflation, supply chain disruption, and other issues stemming from the ongoing pandemic—were exacerbated by soaring energy costs and commodity shortages caused by the war. US labor market conditions continued to improve as unemployment fell to 3.6% in Q1 from its level above 14% early in the pandemic. Inflationary pressures have led most major central banks to tighten their monetary policies, including action by the Federal Open Market Committee (FOMC), which raised interest rates to a range between 0.25% to 0.50% during its March meeting in addition to its announced tapering of its bond purchasing program. The FOMC also suggested it will raise interest rates 11 times with a forecasted Fed funds rate of 2.75% by 2023. Even as monetary policies shift, there are factors driving inflation higher that are beyond central bank control, which limits their ability to achieve reduced inflation, including component shortages, transportation disruption, and the inflationary pressures stemming from the war in Ukraine.

Economic Indicators	Mar-22	Dec-21	Mar-21	Mar-19	20 Yr
Federal Funds Rate (%)	0.33 ▲	0.07	0.06	2.43	1.71
10 Year US Treasury Yield	2.32 ▲	1.52	1.74	2.41	6.03
30 Year US Treasury Yield	2.44 ▲	1.90	2.41	2.81	5.84
Consumer Price Index YoY (Headline) (%)	8.5 ▲	7.0	2.6	1.9	2.2
Unemployment Rate (%)	3.6 ▼	3.9	6.0	3.8	5.9
Real Gross Domestic Product YoY (%)	3.5 ▼	5.5	0.5	2.2	N/A
PMI - Manufacturing	57.1 ▼	58.8	63.7	54.9	52.5
US Dollar Total Weighted Index	115.35 ▼	115.82	113.86	115.13	103.03
WTI Crude Oil per Barrel (\$)	100.3 ▲	75.2	59.2	60.1	62.1

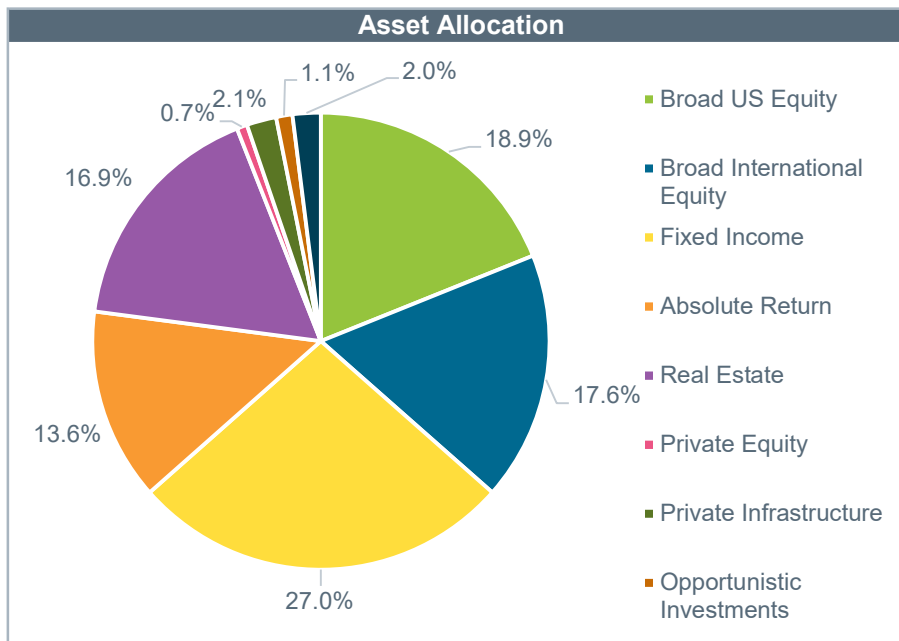


Market Performance (%)	QTD	CYTD	1 Yr	3 Yr	5 Yr	10 Yr	15 Yr	20 Yr
US Large Cap Equity	-4.60	-4.60	15.65	18.92	15.99	14.64	10.26	9.25
US Small Cap Equity	-7.53	-7.53	-5.79	11.74	9.74	11.04	7.99	8.72
Developed International Equity	-5.91	-5.91	1.16	7.78	6.72	6.27	2.91	5.98
Developed International Small Cap Equity	-8.53	-8.53	-3.63	8.51	7.42	8.30	4.47	9.14
Emerging Markets Equity	-6.97	-6.97	-11.37	4.94	5.98	3.36	3.79	8.61
US Aggregate Bond	-5.93	-5.93	-4.15	1.69	2.14	2.24	3.56	4.01
3 Month US Treasury Bill	0.04	0.04	0.06	0.81	1.13	0.63	0.83	1.27
US Real Estate	7.37	7.37	28.47	11.29	9.88	10.93	7.00	8.65
Real Estate Investment Trusts (REITs)	-3.89	-3.89	26.45	11.11	9.62	9.81	6.41	10.13
Commodities	25.55	25.55	49.25	16.12	9.00	-0.70	-1.40	2.35

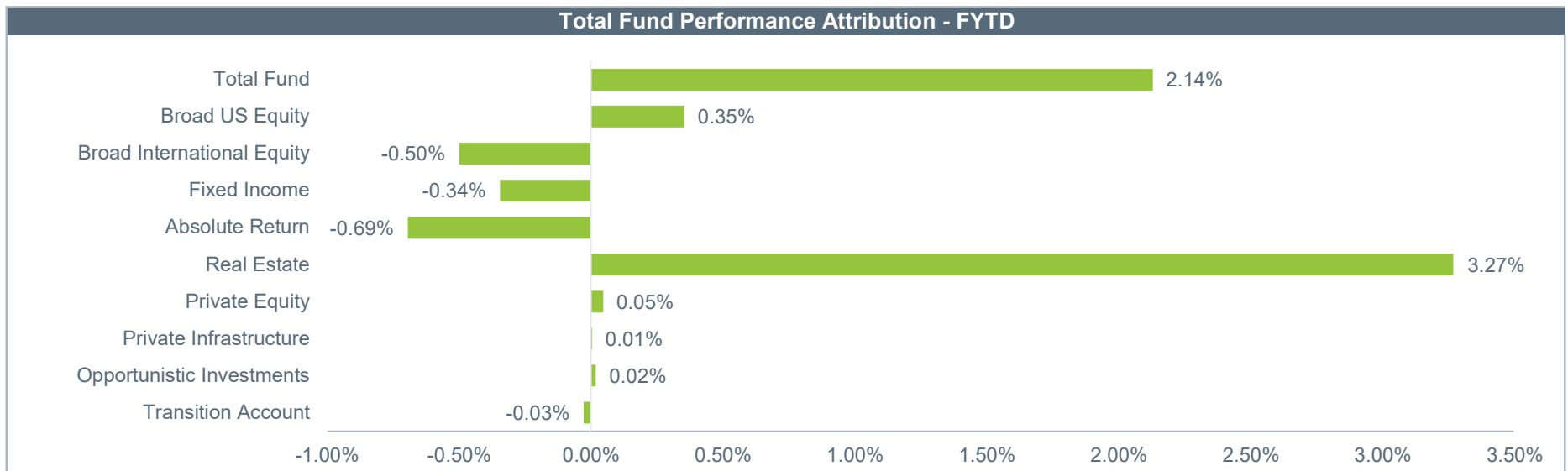
Treasury data courtesy of the US Department of the Treasury. Economic data courtesy of Bloomberg Professional Service. Real Gross Domestic Product YoY (%) is available quarterly. Real estate is reported quarterly; QTD returns are shown as "0.00" on interim-quarter months and until available. Market performance is representative of broad asset class index returns. Please see the addendum for indices used for each asset class.

II. Total Fund





Asset Allocation vs. Target Allocation			
	Asset Allocation (\$000)	Asset Allocation (%)	Target Allocation (%)
Total Fund	6,216,037	100.00	100.00
Broad US Equity	1,175,014	18.90	19.00
Broad International Equity	1,094,411	17.61	19.00
Fixed Income	1,676,868	26.98	22.00
Absolute Return	844,304	13.58	15.00
Real Estate	1,052,936	16.94	15.00
Private Equity	46,058	0.74	5.00
Private Infrastructure	130,576	2.10	5.00
Opportunistic Investments	71,455	1.15	-
Transition Account	124,415	2.00	-



Performance shown is net of fees. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Allocations shown may not sum up to 100% exactly due to rounding.

North Dakota Board of University and School Lands
Comparative Performance

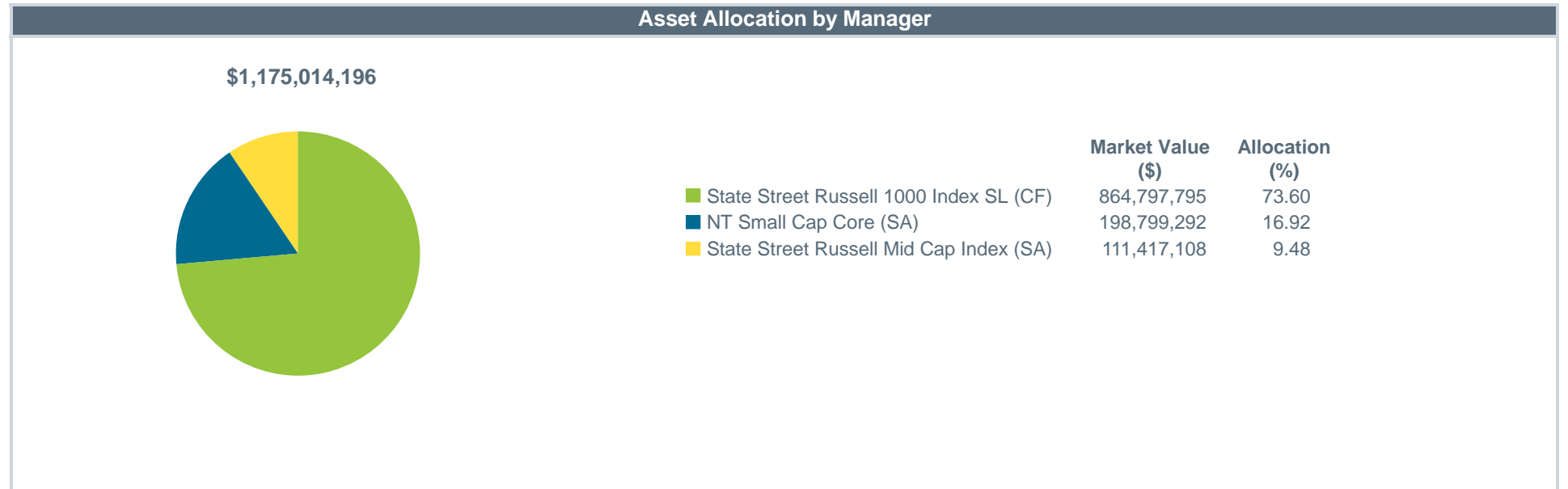
As of March 31, 2022

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Total Fund	-2.09	-2.09	2.14	6.48	7.65	6.57	5.48	6.25	6.70	08/01/1995
Target Allocation Index (Net)	-3.02	-3.02	1.72	6.88	9.61	8.08	6.76	7.40	N/A	
Difference	0.93	0.93	0.42	-0.40	-1.96	-1.51	-1.28	-1.15	N/A	
Broad US Equity	-5.66	-5.66	2.00	9.85	17.58	14.97	13.20	13.60	14.91	07/01/2009
Russell 3000 Index	-5.28	-5.28	3.40	11.92	18.24	15.40	13.38	14.28	15.44	
Difference	-0.38	-0.38	-1.40	-2.07	-0.66	-0.43	-0.18	-0.68	-0.53	
Broad International Equity	-4.60	-4.60	-2.21	3.34	8.89	6.94	5.46	6.49	6.76	07/01/2009
MSCI ACW Ex US Index (USD) (Net)	-5.44	-5.44	-6.60	-1.48	7.51	6.76	5.19	5.55	6.66	
Difference	0.84	0.84	4.39	4.82	1.38	0.18	0.27	0.94	0.10	
Fixed Income	-2.63	-2.63	-1.58	0.70	3.82	3.40	2.96	3.15	5.36	08/01/1995
Global Fixed Income Custom Index	-6.11	-6.11	-6.07	-4.23	1.85	2.38	2.21	2.33	N/A	
Difference	3.48	3.48	4.49	4.93	1.97	1.02	0.75	0.82	N/A	
Bloomberg US Agg Bond Index	-5.93	-5.93	-5.87	-4.15	1.69	2.14	1.87	2.24	4.77	
Difference	3.30	3.30	4.29	4.85	2.13	1.26	1.09	0.91	0.59	
Absolute Return	-4.20	-4.20	-5.54	-2.05	3.17	3.40	3.09	N/A	2.42	07/01/2014
Absolute Return Custom Index	-5.62	-5.62	-2.75	2.13	9.03	7.90	6.68	7.04	6.24	
Difference	1.42	1.42	-2.79	-4.18	-5.86	-4.50	-3.59	N/A	-3.82	
Real Estate	7.35	7.35	25.17	30.90	11.18	10.08	N/A	N/A	10.02	07/01/2015
NCREIF ODCE Index (AWA) (Net)	7.14	7.14	22.74	27.26	10.30	8.90	9.20	9.92	8.99	
Difference	0.21	0.21	2.43	3.64	0.88	1.18	N/A	N/A	1.03	
Private Equity	0.11	0.11	15.89	18.00	N/A	N/A	N/A	N/A	18.00	04/01/2021
Cambridge US Prvt Eq Index	0.00	0.00	11.85	26.43	22.67	19.49	16.77	16.04	26.43	
Difference	0.11	0.11	4.04	-8.43	N/A	N/A	N/A	N/A	-8.43	
Private Infrastructure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.44	02/01/2022
MSCI Wrld Infrastructure Index	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.44	
Opportunistic Investments	-1.30	-1.30	1.19	5.43	N/A	N/A	N/A	N/A	23.57	07/01/2020

Real Estate composite and index performance is available on a quarterly basis.

Performance shown is net of fees. Composite inception dates are based on availability of data for each asset class. Please see the Addendum for custom index definitions. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Fiscal year ends 06/30. Q1 performance for the Cambridge US Prvt Eq Index is currently unavailable, and a 0.00% return is assumed.

Comparative Performance										
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Broad US Equity	-5.66	-5.66	2.00	9.85	17.58	14.97	13.20	13.60	14.91	07/01/2009
Russell 3000 Index	-5.28	-5.28	3.40	11.92	18.24	15.40	13.38	14.28	15.44	
Difference	-0.38	-0.38	-1.40	-2.07	-0.66	-0.43	-0.18	-0.68	-0.53	
State Street Russell 1000 Index SL (CF)	-5.15	-5.15	4.34	13.23	18.67	N/A	N/A	N/A	15.82	06/01/2017
Russell 1000 Index	-5.13	-5.13	4.36	13.27	18.71	15.82	13.72	14.53	15.85	
Difference	-0.02	-0.02	-0.02	-0.04	-0.04	N/A	N/A	N/A	-0.03	
State Street Russell Mid Cap Index (SA)	-5.66	-5.66	-0.51	6.93	14.86	N/A	N/A	N/A	12.68	06/01/2017
Russell Mid Cap Index	-5.68	-5.68	-0.54	6.92	14.89	12.62	10.68	12.85	12.69	
Difference	0.02	0.02	0.03	0.01	-0.03	N/A	N/A	N/A	-0.01	
NT Small Cap Core (SA)	-7.83	-7.83	-6.39	-3.07	14.32	12.40	10.88	11.76	9.82	07/01/2014
Russell 2000 Index	-7.53	-7.53	-9.66	-5.79	11.74	9.74	8.87	11.04	8.80	
Difference	-0.30	-0.30	3.27	2.72	2.58	2.66	2.01	0.72	1.02	



Performance shown is net of fees. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Allocations shown may not sum up to 100% exactly due to rounding. Fiscal year ends 06/30.

Comparative Performance										
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Broad International Equity	-4.60	-4.60	-2.21	3.34	8.89	6.94	5.46	6.49	6.76	07/01/2009
MSCI ACW Ex US Index (USD) (Net)	-5.44	-5.44	-6.60	-1.48	7.51	6.76	5.19	5.55	6.66	
Difference	0.84	0.84	4.39	4.82	1.38	0.18	0.27	0.94	0.10	
State Street World Ex US Index (CF)	-4.79	-4.79	-2.45	3.06	8.51	7.08	5.35	N/A	4.02	07/01/2014
MSCI Wrld Ex US Index (USD) (Net)	-4.81	-4.81	-2.46	3.04	8.55	7.14	5.41	6.25	4.08	
Difference	0.02	0.02	0.01	0.02	-0.04	-0.06	-0.06	N/A	-0.06	
Acadian International Small Cap	-6.43	-6.43	N/A	N/A	N/A	N/A	N/A	N/A	-1.16	12/01/2021
MSCI EAFE Sm Cap Index (USD) (Net)	-8.53	-8.53	-7.64	-3.63	8.51	7.42	7.30	8.30	-4.54	
Difference	2.10	2.10	N/A	N/A	N/A	N/A	N/A	N/A	3.38	
State Street World Ex US Small Cap Index (CF)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.42	02/01/2022
MSCI Wrld Ex US Sm Cap Index (USD) (Net)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.42	
Arrowstreet Emerging Markets	-2.47	-2.47	N/A	N/A	N/A	N/A	N/A	N/A	2.51	12/01/2021
MSCI Emg Mkts Index (USD) (Net)	-6.97	-6.97	-15.62	-11.37	4.94	5.98	4.69	3.36	-5.23	
Difference	4.50	4.50	N/A	N/A	N/A	N/A	N/A	N/A	7.74	
NT Emerging Markets Index Fund	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-6.72	02/01/2022
MSCI Emg Mkts Index (USD) (Net)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-6.72	



Performance shown is net of fees. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Allocations shown may not sum up to 100% exactly due to rounding. Fiscal year ends 06/30. In Q1, State Street World Ex US Small Cap Index and NT Emerging Markets Index Fund were funded.

North Dakota Board of University and School Lands
Fixed Income

As of March 31, 2022

Comparative Performance										
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Fixed Income	-2.63	-2.63	-1.58	0.70	3.82	3.40	2.96	3.15	5.36	08/01/1995
Global Fixed Income Custom Index	-6.11	-6.11	-6.07	-4.23	1.85	2.38	2.21	2.33	N/A	
Difference	3.48	3.48	4.49	4.93	1.97	1.02	0.75	0.82	N/A	
Bloomberg US Agg Bond Index	-5.93	-5.93	-5.87	-4.15	1.69	2.14	1.87	2.24	4.77	
Difference	3.30	3.30	4.29	4.85	2.13	1.26	1.09	0.91	0.59	
Payden & Rygel Long Term (SA)	-5.66	-5.66	-5.38	-3.26	2.23	2.77	2.53	2.97	5.39	08/01/1995
Bloomberg US Agg Bond Index	-5.93	-5.93	-5.87	-4.15	1.69	2.14	1.87	2.24	4.77	
Difference	0.27	0.27	0.49	0.89	0.54	0.63	0.66	0.73	0.62	
JP Morgan Core Bond (SA)	-5.66	-5.66	-5.59	-3.74	1.39	1.89	1.75	N/A	1.80	08/01/2012
JP Morgan FI Custom Index	-5.93	-5.93	-5.87	-4.15	1.32	1.70	1.57	1.79	1.60	
Difference	0.27	0.27	0.28	0.41	0.07	0.19	0.18	N/A	0.20	
Loomis Sayles Credit Asset (SA)	-3.69	-3.69	-3.07	-0.59	N/A	N/A	N/A	N/A	-0.59	04/01/2021
Loomis Sayles CA Custom Index	-5.11	-5.11	-4.17	-1.47	3.76	3.88	3.79	4.37	-1.47	
Difference	1.42	1.42	1.10	0.88	N/A	N/A	N/A	N/A	0.88	
AG Direct Lending III LP	2.68	2.68	8.85	12.92	10.78	N/A	N/A	N/A	10.32	09/01/2018
CS Lvg'd Loan Index	-0.10	-0.10	1.75	3.22	4.10	4.05	4.09	4.47	3.78	
Difference	2.78	2.78	7.10	9.70	6.68	N/A	N/A	N/A	6.54	
AG Direct Lending IV LP	2.81	2.81	8.08	N/A	N/A	N/A	N/A	N/A	16.44	06/01/2021
CS Lvg'd Loan Index	-0.10	-0.10	1.75	3.22	4.10	4.05	4.09	4.47	2.17	
Difference	2.91	2.91	6.33	N/A	N/A	N/A	N/A	N/A	14.27	
Owl Rock Diversified Lending	2.00	2.00	N/A	N/A	N/A	N/A	N/A	N/A	2.29	11/01/2021
CS Lvg'd Loan Index	-0.10	-0.10	1.75	3.22	4.10	4.05	4.09	4.47	0.38	
Difference	2.10	2.10	N/A	N/A	N/A	N/A	N/A	N/A	1.91	
Apollo Defined Return Fund LP	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	04/01/2022
CS Lvg'd Loan Index+2%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Performance shown is net of fees. The Global Fixed Income Custom Index currently consists of the Bloomberg US Unv Bond Index. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Fiscal year ends 06/30. Market values for Direct Lending and Private Credit are as of previous quarter end and adjusted for subsequent cash flows until the current quarter's valuations are available. Market value for Brandywine Gbl Opp Fixed Income consist of uninvested cash. In Q1, Apollo Defined Return Fund was funded.

Comparative Performance										
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Ares Pathfinder Fund LP	3.77	3.77	12.46	15.91	N/A	N/A	N/A	N/A	86.05	03/01/2021
Schroders Flexible Secured Income (SA)	-1.20	-1.20	N/A	N/A	N/A	N/A	N/A	N/A	-0.96	09/01/2021
3 Month LIBOR Index (USD)+1.75%	0.38	0.38	1.31	1.80	2.78	3.12	2.88	2.64	0.99	
Difference	-1.58	-1.58	N/A	N/A	N/A	N/A	N/A	N/A	-1.95	
ND Land - PTF Cash (SA)	0.02	0.02	0.05	0.06	0.79	N/A	N/A	N/A	1.11	07/01/2017
ICE BofAML 3 Mo US T-Bill Index	0.04	0.04	0.07	0.06	0.81	1.13	0.87	0.63	1.15	
Difference	-0.02	-0.02	-0.02	0.00	-0.02	N/A	N/A	N/A	-0.04	
FLP (Loans)	1.10	1.10	3.45	4.61	4.37	5.04	5.34	5.46	6.90	08/01/1995

Asset Allocation by Manager

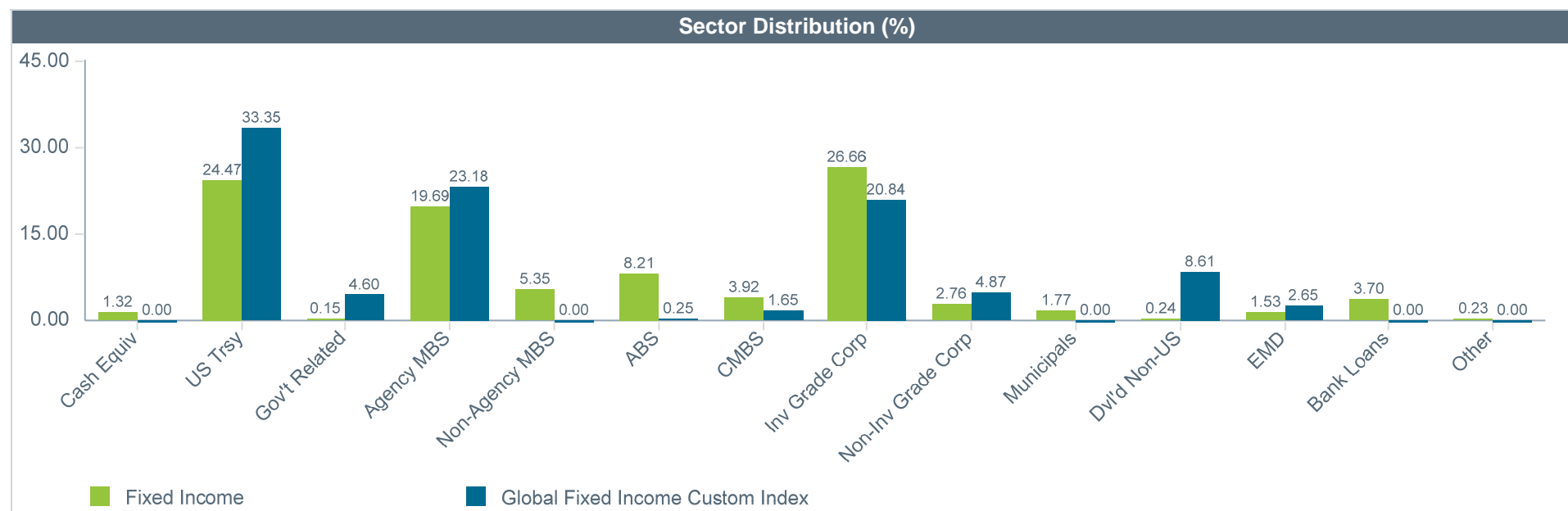


Performance shown is net of fees. The Global Fixed Income Custom Index currently consists of the Bloomberg US Unv Bond Index. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Fiscal year ends 06/30. Market values for Direct Lending and Private Credit are as of previous quarter end and adjusted for subsequent cash flows until the current quarter's valuations are available. Market value for Brandywine Gbl Opp Fixed Income consist of uninvested cash. In Q1, Apollo Defined Return Fund was funded.

North Dakota Board of University and School Lands
Fixed Income vs. Global Fixed Income Custom Index
Portfolio Characteristics

As of March 31, 2022

Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	5.96	6.36
Avg. Maturity	8.17	8.61
Avg. Quality	A2	N/A
Coupon Rate (%)	2.73	2.75
Yield To Worst (%)	3.37	3.29
Current Yield (%)	3.00	N/A

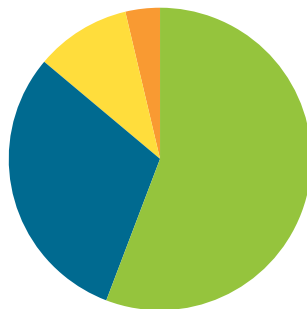


FLP Bank Loans, AG Direct Lending Fund III LP, AG Direct Lending Fund IV LP, ND Land - PTF Cash (SA), Schrodgers Flexible Secured Income and Ares Pathfinder Fund LP are excluded from portfolio characteristics and sector distribution. Allocation to "Other" consists of CDOs and Convertibles.

Comparative Performance										
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Absolute Return	-4.20	-4.20	-5.54	-2.05	3.17	3.40	3.09	N/A	2.42	07/01/2014
Absolute Return Custom Index	-5.62	-5.62	-2.75	2.13	9.03	7.90	6.68	7.04	6.24	
Difference	1.42	1.42	-2.79	-4.18	-5.86	-4.50	-3.59	N/A	-3.82	
PIMCO:All Ast Ath;Inst (PAUIX)	-2.64	-2.64	-0.43	6.09	6.87	4.95	4.28	N/A	2.68	07/01/2014
All Asset Custom Index (Eql Wtd)	-3.67	-3.67	-1.12	2.09	6.47	5.85	5.16	5.14	4.70	
Difference	1.03	1.03	0.69	4.00	0.40	-0.90	-0.88	N/A	-2.02	
Millennium USA LP	3.62	3.62	N/A	N/A	N/A	N/A	N/A	N/A	3.62	01/01/2022
HFRI RV Multi Strat Index	1.76	1.76	1.77	4.72	5.97	4.52	4.20	4.72	1.76	
Difference	1.86	1.86	N/A	N/A	N/A	N/A	N/A	N/A	1.86	
PineBridge Dyn AA;Inst (PDAIX)	-9.00	-9.00	N/A	N/A	N/A	N/A	N/A	N/A	-9.00	01/01/2022
Consumer Price Index+5%	4.39	4.39	9.76	13.97	9.40	8.52	8.00	7.40	4.39	
Difference	-13.39	-13.39	N/A	N/A	N/A	N/A	N/A	N/A	-13.39	

Asset Allocation by Manager

\$844,303,849



	Market Value (\$)	Allocation (%)
PIMCO:All Ast Ath;Inst (PAUIX)	470,986,738	55.78
PineBridge Dyn AA;Inst (PDAIX)	256,082,547	30.33
GMO:Bchmk-Fr All;IV (GBMBX)	86,149,426	10.20
Millennium USA LP	31,085,138	3.68

Comparative Performance										
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Real Estate	7.35	7.35	25.17	30.90	11.18	10.08	N/A	N/A	10.02	07/01/2015
NCREIF ODCE Index (AWA) (Net)	7.14	7.14	22.74	27.26	10.30	8.90	9.20	9.92	8.99	
Difference	0.21	0.21	2.43	3.64	0.88	1.18	N/A	N/A	1.03	
Morgan Stanley Prime Property (CF)	7.01	7.01	24.11	27.57	11.33	9.99	N/A	N/A	10.09	07/01/2015
NCREIF ODCE Index (AWA) (Net)	7.14	7.14	22.74	27.26	10.30	8.90	9.20	9.92	8.99	
Difference	-0.13	-0.13	1.37	0.31	1.03	1.09	N/A	N/A	1.10	
UBS Trumbull Property LP (CF)	7.18	7.18	19.26	22.52	4.52	4.94	N/A	N/A	5.60	07/01/2015
NCREIF ODCE Index (AWA) (Net)	7.14	7.14	22.74	27.26	10.30	8.90	9.20	9.92	8.99	
Difference	0.04	0.04	-3.48	-4.74	-5.78	-3.96	N/A	N/A	-3.39	
Jamestown Premier Property (CF)	2.07	2.07	5.19	3.52	-2.42	2.25	N/A	N/A	3.75	07/01/2015
NCREIF ODCE Index (AWA) (Net)	7.14	7.14	22.74	27.26	10.30	8.90	9.20	9.92	8.99	
Difference	-5.07	-5.07	-17.55	-23.74	-12.72	-6.65	N/A	N/A	-5.24	
Prologis Targeted US Logistics LP (CF)	11.93	11.93	41.24	57.68	27.49	23.42	N/A	N/A	22.21	04/01/2016
NCREIF ODCE Index (AWA) (Net)	7.14	7.14	22.74	27.26	10.30	8.90	9.20	9.92	8.64	
Difference	4.79	4.79	18.50	30.42	17.19	14.52	N/A	N/A	13.57	
JP Morgan US RE Inc & Grth LP (CF)	5.93	5.93	25.36	30.98	9.61	7.75	N/A	N/A	8.02	07/01/2016
NCREIF ODCE Index (AWA) (Net)	7.14	7.14	22.74	27.26	10.30	8.90	9.20	9.92	8.68	
Difference	-1.21	-1.21	2.62	3.72	-0.69	-1.15	N/A	N/A	-0.66	
Harrison Street Core Property Fund	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.76	02/01/2022
NCREIF ODCE Index (AWA) (Net)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.76	
State Street US REIT Index (CF)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	04/01/2022
NCREIF ODCE Index (AWA) (Net)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Performance shown is net of fees. Real Estate manager and index performance is available on a quarterly basis. Interim period performance assumes a 0.00% return. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Allocations shown may not sum up to 100% exactly due to rounding. Fiscal year ends 06/30. In Q1, Harrison Street Core Property Fund and State Street US REIT Index were funded.

Asset Allocation by Manager

\$1,052,936,070



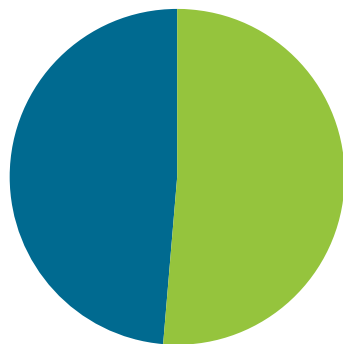
	Market Value (\$)	Allocation (%)
Morgan Stanley Prime Property (CF)	284,594,664	27.03
Prologis Targeted US Logistics LP (CF)	249,922,252	23.74
UBS Trumbull Property LP (CF)	191,960,312	18.23
JP Morgan US RE Inc & Grth LP (CF)	173,372,118	16.47
Jamestown Premier Property (CF)	65,986,955	6.27
Harrison Street Core Property Fund	61,668,048	5.86
State Street US REIT Index (CF)	25,431,721	2.42

Performance shown is net of fees. Real Estate manager and index performance is available on a quarterly basis. Interim period performance assumes a 0.00% return. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Allocations shown may not sum up to 100% exactly due to rounding. Fiscal year ends 06/30. In Q1, Harrison Street Core Property Fund and State Street US REIT Index were funded.

Comparative Performance										
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Private Equity	0.11	0.11	15.89	18.00	N/A	N/A	N/A	N/A	18.00	04/01/2021
Cambridge US Prvt Eq Index	0.00	0.00	11.85	26.43	22.67	19.49	16.77	16.04	26.43	
Difference	0.11	0.11	4.04	-8.43	N/A	N/A	N/A	N/A	-8.43	
GCM Grosvenor BUSL LP	-0.26	-0.26	13.32	15.38	N/A	N/A	N/A	N/A	15.38	04/01/2021
Cambridge US Prvt Eq Index	0.00	0.00	11.85	26.43	22.67	19.49	16.77	16.04	26.43	
Difference	-0.26	-0.26	1.47	-11.05	N/A	N/A	N/A	N/A	-11.05	
GCM Grosvenor Secondary Opp Fund III LP	0.40	0.40	N/A	N/A	N/A	N/A	N/A	N/A	0.40	01/01/2022
Cambridge US Prvt Eq Index	0.00	0.00	11.85	26.43	22.67	19.49	16.77	16.04	0.00	
Difference	0.40	0.40	N/A	N/A	N/A	N/A	N/A	N/A	0.40	

Asset Allocation by Manager

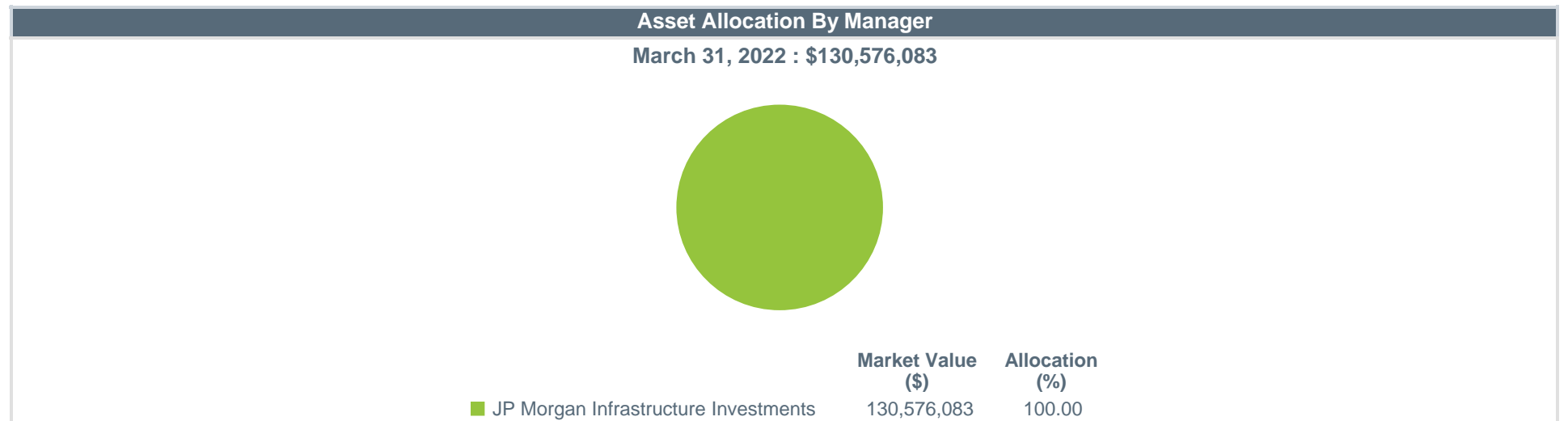
March 31, 2022 : \$46,058,191



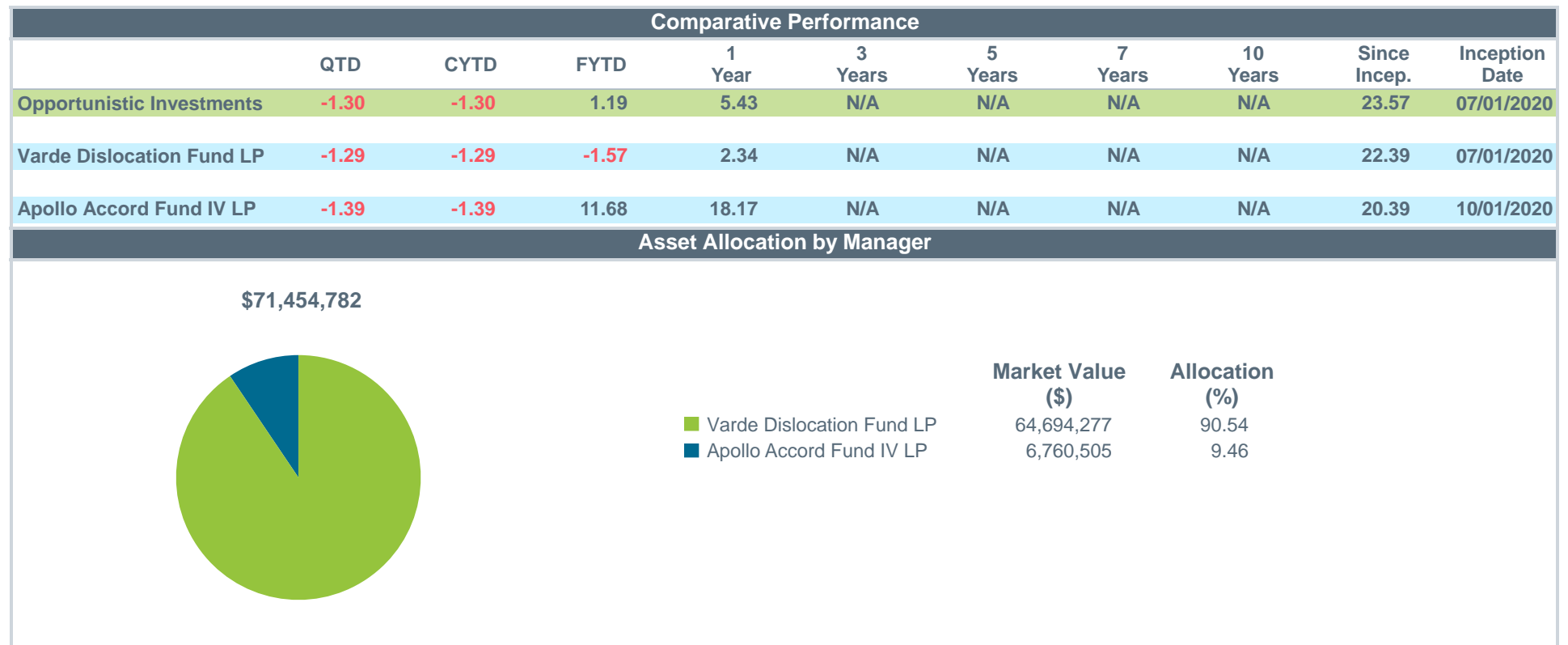
■ GCM Grosvenor Secondary Opp Fund III LP
■ GCM Grosvenor BUSL LP

Market Value (\$)	Allocation (%)
23,648,739	51.35
22,409,452	48.65

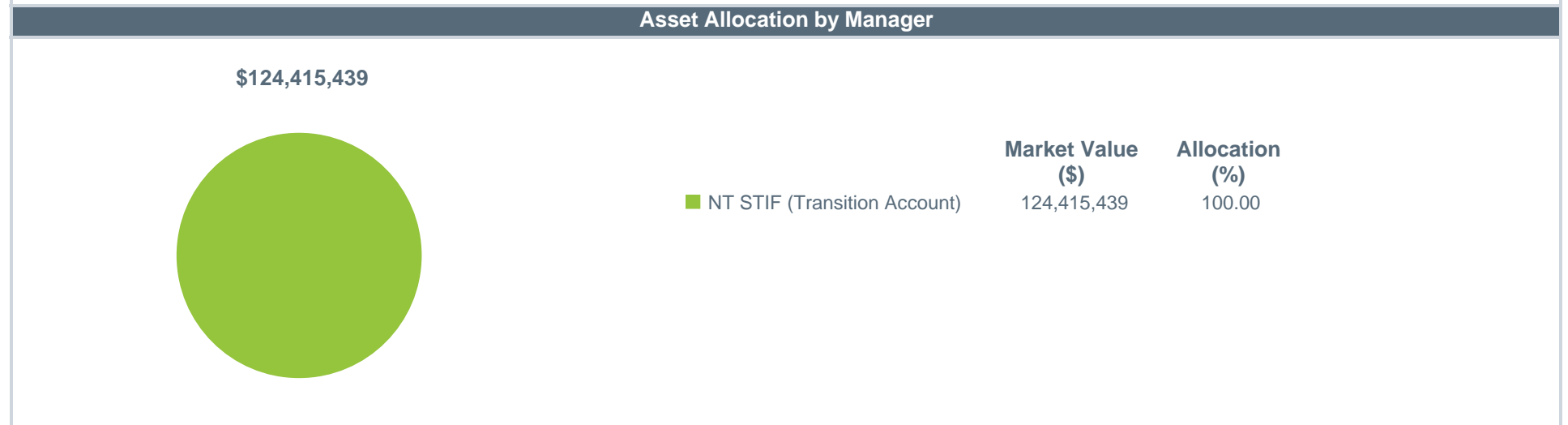
Comparative Performance										
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Private Infrastructure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.44	02/01/2022
MSCI Wrld Infrastructure Index	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.44	
JP Morgan Infrastructure Investments	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.44	02/01/2022
MSCI Wrld Infrastructure Index	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.44	



Performance shown is net of fees. RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Allocations shown may not sum up to 100% exactly due to rounding. Fiscal year ends 06/30. In Q1, JP Morgan Infrastructure Investments was funded.



Comparative Performance										
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
NT STIF (Transition Account)	-0.48	-0.48	-0.56	-0.50	N/A	N/A	N/A	N/A	-0.13	06/01/2020
ICE BofAML 3 Mo US T-Bill Index	0.04	0.04	0.07	0.06	0.81	1.13	0.87	0.63	0.09	
Difference	-0.52	-0.52	-0.63	-0.56	N/A	N/A	N/A	N/A	-0.22	



III. Addendum



North Dakota Board of University and School Lands
Alternative Investment Private Credit Fund Performance Listing

As of March 31, 2022

Fund Name	Vintage	Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	Quartile	Index IRR (%)	Fund Multiple
AG Direct Lending Fund III, LP	2018	Private Credit - Direct Lending	150,000,000	138,000,000	47,907,004	133,239,387	10.96	N/A	1.96	1.31
AG Direct Lending Fund IV, LP	2020	Private Credit - Direct Lending	100,000,000	75,648,632	2,476,713	80,920,445	N/M	N/A	N/M	1.10
Apollo Accord Fund IV, L.P.	2020	Private Credit - Opportunistic Credit	100,000,000	18,500,000	15,287,460	6,760,505	26.52	N/A	-1.50	1.19
Ares Pathfinder Fund, LP	2020	Private Credit - Specialty Finance	100,000,000	45,687,447	1,079,927	53,186,599	41.40	N/A	-9.14	1.19
Owl Rock Diversified Lending 2020 Fund, LP	2020	Private Credit - Distressed/Special Situations	100,000,000	64,859,845	0	66,264,016	N/M	N/A	N/M	1.02
Varde Dislocation Fund, LP	2020	Private Credit - Distressed/Special Situations	100,000,000	57,500,000	100,849	64,694,277	11.26	N/A	-5.36	1.13
			650,000,000	400,195,924	66,851,953	405,065,229	12.80		-1.14	1.18

Certain valuations (marked with a **) are preliminary estimates of valuation as of the date of reporting and reflect the estimated impact of subsequent net cash contributions/distributions. These figures may be used in calculations contained in this report. Index IRR represents the dollar-weighted returns calculated using the Barclays US Agg Bond Index assuming an index investment with the same cash flow timing. IRRs are shown only for investments with one year or more of cash flows and for which an accurate IRR could be calculated. Applicable IRRs are marked with 'N/M' for not material. Fund IRR is the annualized since-inception net internal rate for the indicated fund or composite. Fund Multiple is the since inception sum of distributions and valuation divided by paid in capital. Quartile data is based on information provided by Preqin.

North Dakota Board of University and School Lands
Alternative Investment Private Equity Fund Performance Listing

As of March 31, 2022

Fund Name	Vintage	Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	Quartile	Index IRR (%)	Fund Multiple
Grosvenor - BUSL, LP	2021	Private Equity - Multi-Stage	130,000,000	21,338,017	1,410,637	22,409,452 *	17.72	N/A	4.75	1.12
Grosvenor Secondary Opportunities Fund III, LP	2021	Private Equity - Fund of Funds	150,000,000	21,730,018	0	23,648,739 *	N/M	N/A	N/M	1.09
			280,000,000	43,068,035	1,410,637	46,058,191	21.35		-3.95	1.10

Certain valuations (marked with a "**") are preliminary estimates of valuation as of the date of reporting and reflect the estimated impact of subsequent net cash contributions/distributions. These figures may be used in calculations contained in this report. Index IRR represents the dollar-weighted returns calculated using the Russell 3000 Index assuming an index investment with the same cash flow timing. IRRs are shown only for investments with one year or more of cash flows and for which an accurate IRR could be calculated. Applicable IRRs are marked with 'N/M' for not material. Fund IRR is the annualized since-inception net internal rate for the indicated fund or composite. Fund Multiple is the since inception sum of distributions and valuation divided by paid in capital. Quartile data is based on information provided by Preqin.

Performance Related Comments

- Manager inception dates shown represent the first full month following initial funding.
- RVK began monitoring the assets of North Dakota Board of University and School Lands in Q3 2014. Prior historical data was provided by North Dakota Board of University and School Lands.
- Real Estate composite, manager, and index performance are available on a quarterly basis. Market values are as of the most recent quarter-end and adjusted for subsequent cash flows. Interim period performance assumes a 0.00% return.
- Indices show N/A for since inception returns when the fund contains more history than the corresponding benchmark.
- As of 07/2014, composite and manager performance is provided and calculated by RVK.
- Net performance for FLP bank loans represent Fees Payable.
- During 03/2021 JPM FI Intermediate Bond transitioned from intermediate duration to full duration core mandate.
- During 08/2021 Schroders Securitized Credit transitioned into Schroders Flexible Secured Income.
- RVK cautions that the interpretation of time-weighted returns on non-marketable investments such as Private Equity, Private Real Estate, and Private Credit is imperfect at best, and can potentially be misleading.

Index Comments

- The Target Allocation Index (Net) is a static custom index that is calculated monthly and consists of:
 - From 05/2020 through present: 19% Russell 3000 Index, 19% MSCI ACW Ex US Index (USD) (Net), 22% Global Fixed Income Custom Index, 15% NCREIF ODCE Index (AWA) (Net), 15% Absolute Return Index, 5% Cambridge US Private Equity Index, and 5% MSCI World Infrastructure Index.
 - From 07/2019 through 04/2020: 18.5% Russell 3000 Index, 18.5% MSCI ACW Ex US Index (USD) (Net), 23% Global Fixed Income Custom Index, 15% NCREIF ODCE Index (AWA) (Net), 15% Absolute Return Custom Index, and 10% DIS Custom Index.
 - From 02/2018 through 06/2019: 17% Russell 3000 Index, 17% MSCI ACW Ex US Index (USD) (Net), 21% Global Fixed Income Custom Index, 15% NCREIF ODCE Index (AWA) (Net), 20% Absolute Return Custom Index, and 10% DIS Custom Index.
 - From 07/2016 through 01/2018: 17% Russell 3000 Index, 15% MSCI ACW Ex US Index (USD) (Net), 23% Global Fixed Income Custom Index, 15% NCREIF ODCE Index (AWA) (Net), 20% Absolute Return Custom Index, and 10% DIS Custom Index.
 - From 04/2016 through 06/2016: 17.6% Russell 3000 Index, 15.5% MSCI ACW Ex US Index (USD) (Net), 23.8% Global Fixed Income Custom Index, 12% NCREIF ODCE Index (AWA) (Net), 20.7% Absolute Return Custom Index, and 10.4% DIS Custom Index.
 - From 01/2016 through 03/2016: 17.7% Russell 3000 Index, 15.6% MSCI ACW Ex US Index (USD) (Net), 25.3% Global Fixed Income Custom Index, 10% NCREIF ODCE Index (AWA) (Net), 21% Absolute Return Custom Index, and 10.4% DIS Custom Index.
 - From 10/2015 through 12/2015: 17.9% Russell 3000 Index, 15.9% MSCI ACW Ex US Index (USD) (Net), 25.5% Global Fixed Income Custom Index, 9% NCREIF ODCE Index (AWA) (Net), 21.1% Absolute Return Custom Index, and 10.6% DIS Custom Index.
 - From 07/2015 through 09/2015: 19.5% Russell 3000 Index, 17.4% MSCI ACW Ex US Index (USD) (Net), 26.2% Global Fixed Income Custom Index, 4.1% NCREIF ODCE Index (AWA) (Net), 22% Absolute Return Custom Index, and 10.8% DIS Custom Index.
 - From 07/2014 through 06/2015: The index was calculated monthly using beginning of month asset class weights applied to each corresponding primary benchmark return.
 - From 01/2013 through 06/2014: 18.7% Russell 1000 Index, 12.4% Russell 2500 Index, 7.5% FTSE EPRA/NAREIT US Index, 12.4% MSCI EAFE Index (USD) (Net), 33.3% Bloomberg US Agg Bond Index, 0.70% CS Lvg'd Loan Index, 10% Bloomberg US Corp Hi Yld Index, and 5% Bloomberg Gbl Agg Ex USD Index (Hedged).
 - From 07/2009 through 12/2012: 15% Russell 1000 Index, 10% Russell 2500 Index, 6% FTSE EPRA/NAREIT US Index, 10% MSCI EAFE Index (USD) (Net), 32.3% Bloomberg US Agg Bond Index, 1.70% CS Lvg'd Loan Index, 10% Bloomberg US Corp Hi Yld Index, 5% Bloomberg Gbl Agg Ex USD Index (Hedged), and 10% ICE BofAML Cnvt Bonds Index (All Qual).
- The Global Fixed Income Custom Index consists of the Bloomberg US Unv Bond Index. Prior to 03/2019, the index consisted of 75% Bloomberg US Unv Bond Index and 25% Bloomberg Multiverse Index.
- The Absolute Return Custom Index consists of 60% MSCI ACW IM Index (USD) (Net) and 40% Bloomberg US Agg Bond Index.

Cont.

The All Asset Custom Index (EqI Wtd) is an equal-weighted hybrid created independently by RVK specifically for PIMCO's All Asset strategies, and it consists of the following benchmarks:

1. Short Term Strategies: ICE BofAML 1 Yr T-Bill Index
2. US Core and Long Maturity Bond Strategies: Bloomberg US Agg Bond Index
3. EM and Gbl Bond Strategies: PIMCO GLADI Index*
4. Crdt Strategies: ICE BofAML US Hi Yld Master II Index
5. Inflation Related Strategies: Bloomberg US Trsy US TIPS Index
6. US Equity Strategies: Russell 3000 Index
7. Global Equity Strategies: MSCI ACW Index (USD) (Net)
8. Alternative Strategies: ICE BofAML 3 Mo US T-Bill Index + 3%

*Performance for the PIMCO Gbl Advantage Bond Index (London Close) prior to 01/01/2004 consists of the JPM EMBI Gbl Dvf'd Index (TR).

The asset class market performance is represented by the respective indices:

- US Large Cap Equity = S&P 500 Index (Cap weighted)
- US Small Cap Equity = Russell 2000 Index
- Developed International Equity = MSCI EAFE Index (USD) (Net)
- Developed International Small Cap Equity = MSCI EAFE Small Cap Index (USD) (Net)
- Emerging Markets Equity = MSCI Emerging Markets Index (USD) (Net)
- US Aggregate Bond = Bloomberg US Aggregate Bond Index
- 3 Month US Treasury Bill = ICE BofAML 3 Month US T-Bill Index
- US Real Estate = NCREIF ODCE Index (AWA) (Gross)
- Real Estate Investment Trust (REITs) = FTSE NAREIT Equity REITs Index (TR)
- Commodities = Bloomberg Commodities Index (TR)

**North Dakota Board of University and School Lands
Comparative Performance**

As of April 30, 2022

	April	CYTD	FYTD	1 Year
Total Fund	-3.73	-5.73	-1.66	0.56
Target Allocation Index (Net)	-4.82	-7.70	-3.18	-0.59
Difference	1.09	1.97	1.52	1.15
S&P 500 Index (Net)	-8.74	-13.03	-3.08	-0.21
MSCI EAFE Index (USD) (Net)	-6.47	-12.00	-10.03	-8.15
MSCI Emg Mkts Index (USD) (Net)	-5.56	-12.15	-20.32	-18.33
Bloomberg US Agg Bond Index	-3.79	-9.50	-9.45	-8.51

Real Estate composite and index performance is available on a quarterly basis. Interim period performance assumes a 0.00% return.

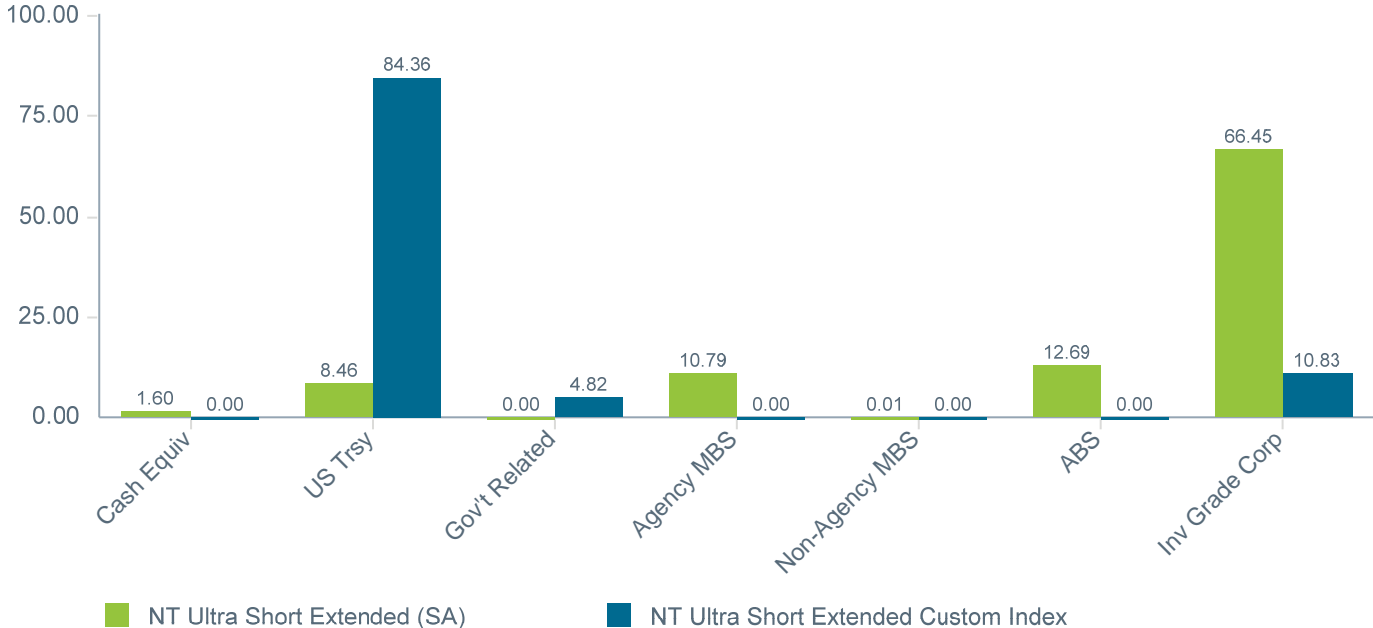
PORTLAND

BOISE

CHICAGO

NEW YORK

Disclaimer of Warranties and Limitation of Liability - This document was prepared by RVK, Inc. (RVK) and may include information and data from some or all of the following sources: client staff; custodian banks; investment managers; specialty investment consultants; actuaries; plan administrators/record-keepers; index providers; as well as other third-party sources as directed by the client or as we believe necessary or appropriate. RVK has taken reasonable care to ensure the accuracy of the information or data, but makes no warranties and disclaims responsibility for the accuracy or completeness of information or data provided or methodologies employed by any external source. This document is provided for the client's internal use only and does not constitute a recommendation by RVK or an offer of, or a solicitation for, any particular security and it is not intended to convey any guarantees as to the future performance of the investment products, asset classes, or capital markets.

Schedule of Investable Assets																															
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)		Ending Market Value (\$)	% Return																									
QTD	368,990,069	2,021,213	-6,507,471		364,503,810	-1.76																									
Asset Allocation & Performance																															
	Market Value (\$)	Performance (%)																													
		QTD	CYTD	FYTD	1 Year	Since Incep.	Inception Date																								
NT Ultra Short Extended (SA)	364,503,810	-1.76	-1.76	-2.06	-1.93	1.29	08/01/2015																								
NT Ultra Short Extended Custom Index		-1.23	-1.23	-1.45	-1.43	1.05																									
Difference		-0.53	-0.53	-0.61	-0.50	0.24																									
Fund Objective																															
The objective of this fund is to provide capital preservation with returns which exceed that of its custom benchmark, 50% Bloomberg US Gov't Crdt 1-3 Yr Bond Index and 50% ICE BofAML 3 Mo US T-Bill Index.																															
Portfolio Characteristics																															
	Portfolio		Benchmark																												
Effective Duration	1.33		1.09																												
Modified Duration	1.36		1.05																												
Spread Duration	1.52		1.09																												
Convexity	0.03		0.02																												
Avg. Maturity	1.33		1.12																												
Avg. Quality	Aa3		Aa1																												
Yield To Maturity (%)	1.99		1.48																												
Coupon Rate (%)	0.88		N/A																												
Current Yield (%)	0.90		N/A																												
Holdings Count	147		1,668																												
Sector Distribution (%)																															
 <table><thead><tr><th>Sector</th><th>NT Ultra Short Extended (SA)</th><th>NT Ultra Short Extended Custom Index</th></tr></thead><tbody><tr><td>Cash Equiv</td><td>1.60</td><td>0.00</td></tr><tr><td>US Trsy</td><td>8.46</td><td>84.36</td></tr><tr><td>Gov't Related</td><td>0.00</td><td>4.82</td></tr><tr><td>Agency MBS</td><td>10.79</td><td>0.00</td></tr><tr><td>Non-Agency MBS</td><td>0.01</td><td>0.00</td></tr><tr><td>ABS</td><td>12.69</td><td>0.00</td></tr><tr><td>Inv Grade Corp</td><td>66.45</td><td>10.83</td></tr></tbody></table>								Sector	NT Ultra Short Extended (SA)	NT Ultra Short Extended Custom Index	Cash Equiv	1.60	0.00	US Trsy	8.46	84.36	Gov't Related	0.00	4.82	Agency MBS	10.79	0.00	Non-Agency MBS	0.01	0.00	ABS	12.69	0.00	Inv Grade Corp	66.45	10.83
Sector	NT Ultra Short Extended (SA)	NT Ultra Short Extended Custom Index																													
Cash Equiv	1.60	0.00																													
US Trsy	8.46	84.36																													
Gov't Related	0.00	4.82																													
Agency MBS	10.79	0.00																													
Non-Agency MBS	0.01	0.00																													
ABS	12.69	0.00																													
Inv Grade Corp	66.45	10.83																													
NT Ultra Short Extended (SA)		NT Ultra Short Extended Custom Index																													

Performance shown is net of fees. Net cash flow includes fees, securities lending income and client directed flows. Gain/loss includes dividend and interest income and capital appreciation. Allocations shown may not sum up to 100% exactly due to rounding. The NT Ultra Short Extended Custom Index is calculated monthly and currently consists of 50% Bloomberg US Gov't Crdt 1-3 Yr Bond Index and 50% ICE BofAML 3 Mo US T-Bill Index. Fiscal year end 6/30.

RE: Strategic Asset Allocation Study and Recommended Changes

The Board's Investment Policy Statement (IPS) requires a formal asset allocation review at least once every four years; the last study was completed in March 2020. At the request of the Department Investment Staff (Staff), RVK recently conducted a formal asset allocation study for the Permanent Trust Funds (PTFs).

As part of the study RVK used their 2022 capital market assumptions, which updated their long-term expectations for investment returns and risk for all major asset classes. RVK then ran these assumptions through their optimization model and Monte Carlo simulations. The result would reduce public equities and public credit. Conversely, the model favors an increase in private equities and private credit. Likewise, there is a reallocation away from global tactical strategies in favor of hedge funds within the absolute return strategies. (Please see attached).

- Public equities have had a strong runup over the past decade, even despite the recent market correction. Most market observers and RVK believe future return expectations for public equities should be muted. RVK's model prefers private equity to public equity. While private equity has a higher risk profile than public equity, it also has a higher return profile. Most market participants, and RVK, see private equity as an enhancement to a long-term portfolio.
- Public credit continues to struggle with low yields, even with the current increase in interest rates. After over 30 years of structural decline in rates, bonds will either hover around low yields or begin a structural increase in rates, and neither would be optimal for bond returns for the foreseeable future. For this reason, RVK's model favors private credit as a replacement for a public credit. While private credit has a slightly higher risk profile than public bonds, it also has a much higher return expectation. In addition to higher yields, private credit benefits from floating rate terms on most loans, which perform better in rising rate environments.
- Global Tactical Asset Allocation (GTAA) strategies generally perform better than public equities in volatile and dislocated markets. However, multi-strategy hedge funds have been even stronger performers and RVK's model favors these hedge funds over GTAA strategies.

Below is a comparison of the current SAA to the proposed SAA:

Asset Class	Current Strategic Asset Allocation	Proposed Strategic Asset Allocation
Broad US Equity	19%	15%
Broad International Equity	19%	15%
Fixed Income	22%	-
* Public Credit	-	5%
* Private Credit	-	20%
Absolute Return	15%	-
* Global Tactical Asset Allocation	-	5%
* Multi-Strategy Hedge Fund	-	10%
Real Estate	15%	15%
Private Equity	5%	8%
Private Infrastructure	5%	7%
Opportunistic Investments	0-5%	0-5%

Attachment 1: RVK Asset Allocation Overview

Recommendation:

The Board approve the changes to the PTFs' Strategic Assets Allocation (SAA) to the Proposed Portfolio as indicated on page 11 of the attached RVK Asset Allocation Overview. To authorize the Staff to begin investment manager searches to meet the new SAA for future Board approval.

Action Record	Motion	Second	Aye	Nay	Absent
Secretary Jaeger					
Superintendent Baesler					
Treasurer Beadle					
Attorney General Wrigley					
Governor Burgum					



June 30, 2020

North Dakota Board of University and School Lands

Asset Allocation Overview



Table of Contents

Section

- Overview and Recommendation
- Asset Allocation Study
- Scenario Analysis

1

2

3

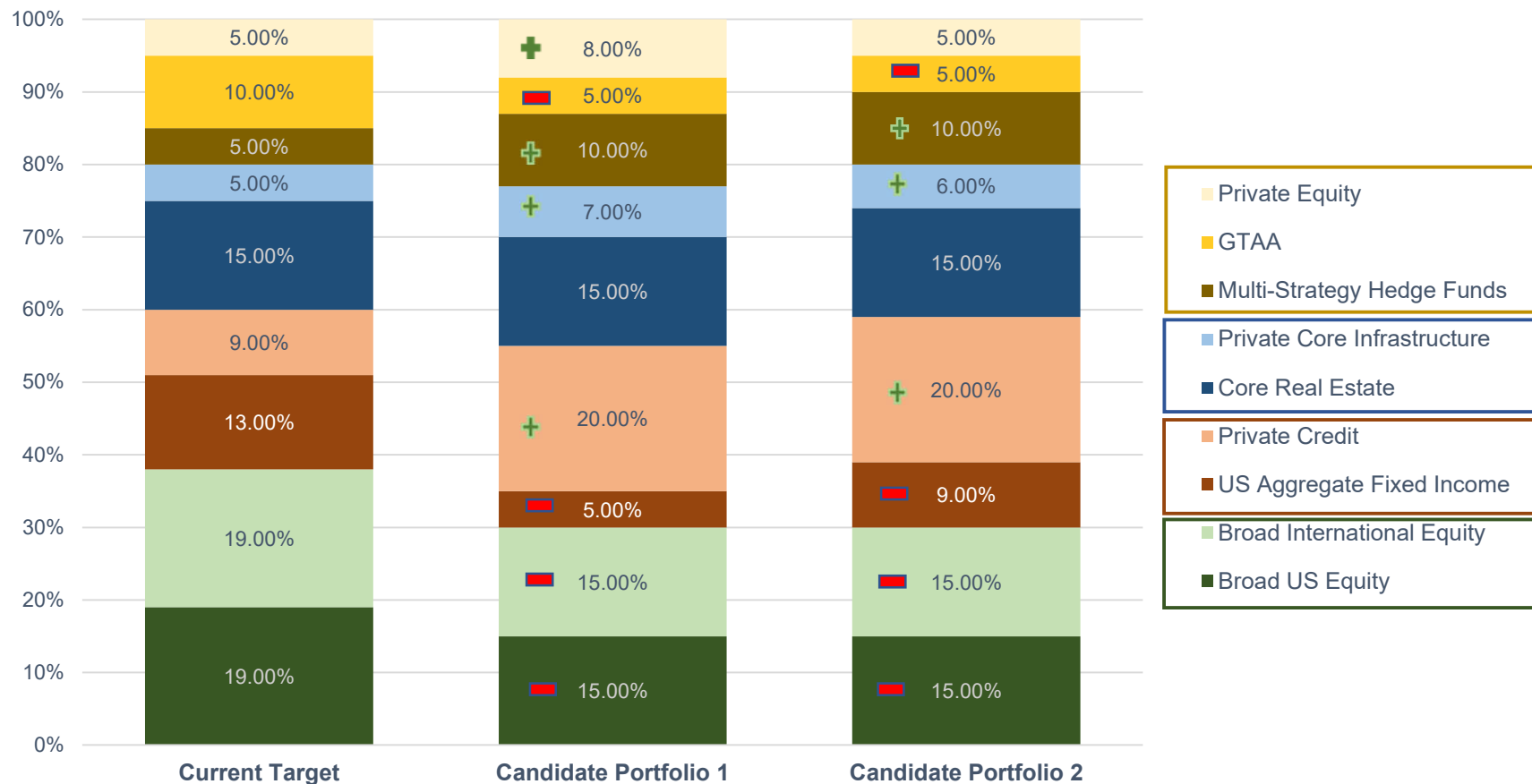
Overview & Recommendation

Overview and Recommendation

- In line with The Land Board's Investment Policy Statement which calls for a formal asset allocation review at least every four years, RVK conducted a formal asset allocation study for the Permanent Trust Funds ("the PTFs) updated with RVK's 2022 capital market assumptions.
 - A formal asset allocation study was previously completed for the PTFs in 2020.
- RVK and Staff evaluated the PTFs' current target portfolio and potential portfolios that could improve the PTF's long-term expected risk/return profile, including considering increased allocations to private market investments such as private credit, multi-strategy hedge funds, private infrastructure, and private equity.
 - Analysis included wealth projects based on various oil revenue contribution scenarios.
- RVK and Staff recommend the PTFs' asset allocation targets be modified to reflect one of the alternative candidate portfolios identified in this presentation. They are identified as Candidate 1 ("C1") and Candidate 2 ("C2"). We would also note that "Portfolio 6" on the efficient frontier represents an additional potential option that represents a mid-point between C1 and C2. Although the candidate portfolios differ in their precise construction, they share the following characteristics relative to the current policy:
 - Higher expected compound long-term returns and improved probability of achieving long-term intergenerational equity objectives
 - Improved risk/return efficiency
 - Higher allocations to private market assets and lower allocations to traditional public equity and fixed income investments
- RVK and Staff further recommend additional pacing analysis and development of a thoughtful approach to building out the expanded private market positions across multiple vintage years.

Overview and Recommendation

- Candidate Portfolios
 - decrease allocation to public equities, US fixed income and GTAA
 - increase allocation to private credit, multi-strategy hedge funds and private core infrastructure (with an increase in private equity for C1)



Overview and Recommendation

- Compared to the current target portfolio, the candidate portfolios would:
 - Improve long-term expected returns
 - Reduce allocations to relatively less attractive asset classes (US aggregate fixed income, broad international equity and broad US equity), in favor of allocations to more attractive asset classes, private credit, multi-strategy hedge funds, private equity and private core infrastructure
 - Be expected to provide a higher projected median real wealth value over 10 years across various contribution scenarios modeled
 - Have less liquidity

	Current Target	Candidate Portfolio 1	Candidate Portfolio 1 vs. Current Target	Candidate Portfolio 2	Candidate Portfolio 2 vs. Current Target
Broad US Equity	19.00%	15.00%	-4.00%	15.00%	-4.00%
Broad International Equity	19.00%	15.00%	-4.00%	15.00%	-4.00%
US Aggregate Fixed Income	13.00%	5.00%	-8.00%	9.00%	-4.00%
Private Credit	9.00%	20.00%	11.00%	20.00%	11.00%
Core Real Estate	15.00%	15.00%	0.00%	15.00%	0.00%
Private Core Infrastructure	5.00%	7.00%	2.00%	6.00%	1.00%
Multi-Strategy Hedge Funds	5.00%	10.00%	5.00%	10.00%	5.00%
GTAA	10.00%	5.00%	-5.00%	5.00%	-5.00%
Private Equity	5.00%	8.00%	3.00%	5.00%	0.00%
Total	100%	100%	--	100%	--
Expected Return	6.12%	6.56%	0.44%	6.32%	0.20%
Risk (Standard Deviation)	10.32%	10.86%	0.54%	10.24%	-0.08%
Risk/Return Ratio	0.59	0.60	0.01	0.62	0.03
RVK Liquidity Metric	62	47	-15	50	-12

Asset Allocation Study

Asset Allocation Inputs

- Key Inputs in the asset allocation setting process include:
 - Return objectives
 - Long-term preservation of purchasing power (spending rate + inflation)
 - Cash flow expectations and liquidity needs
 - Analysis of projected income levels from royalties, extraction taxes, and other sources
 - Analysis of projected payout levels (spending policy) and net cash flow
 - Capital Markets Assumptions
 - Projected long-term return, risk, and correlation behavior of the various capital markets and investment categories
 - Updated Qualitative Preferences of the Board/Staff
 - Tolerance for illiquid investments
 - Other Considerations
 - Relationship between income sources and investment portfolio exposures

RVK Capital Markets Assumptions Overview

Capital Market (CM) assumptions are forward-looking estimates of the behavior of asset classes.

- The asset class behaviors that we attempt to estimate in our CM assumptions – **risk, return and correlation** – are widely accepted as the most powerful drivers of the total fund return over the long run.
- Forecast Horizon: CM forecasts are virtually never less than three years, and even forecasts of five years are rare. Typically, the outlook is 10 years or more. Economic forecasts typically center around 12 months.
- We deploy a team of RVK professionals each year to focus on each asset class and we ensure that all of our consultants formally review, critique, and ultimately support our CM assumptions.
- RVK's CM assumptions have a time horizon of 10-20 years.
- Annual updates are typically gradual and incorporate historic performance, current valuations, as well as the overall economic environment.
- The modeling assumes passive index returns for traditional asset classes. Additional alpha can be achieved through active management in select asset classes.

Asset Allocation Study

Key Inputs

Long-Term Return and Risk Assumptions

Asset Class	Arithmetic Return Assumption	Standard Deviation Assumption	Index	Longest Historical Time Frame	Annualized Arithmetic Return	Annualized Standard Deviation
Broad US Equity	5.80	16	Russell 3000	Jan 1979 - Dec 2021	12.43	16.23
Broad International Equity	8.35	18.65	MSCI ACW Ex US IMI (Gross)	Jun 1994 - Dec 2021	6.03	20.77
US Agg Fixed Income	2.50	5.05	Bloomberg US Agg Bond	Jan 1980 - Dec 2021	7.28	6.77
Private Credit	7.25	13	--	--	--	--
Core Real Estate	6.00	12.5	NCREIF ODCE (Gross) (AWA)	Mar 1978 - Sep 2021	8.45	9.21
Private Core Infrastructure	7.00	15	--	--	--	--
Multi-Strategy Hedge Funds	5.00	8.5	HFRI RV Multi-Strategy	Jan 1990 - Dec 2021	7.33	8.47
GTAA	5.00	9.04	Custom GTAA Index*	Dec 1988 - Dec 2021	7.50	11.00
Private Equity	9.00	22	Cambridge US Private Equity Index	Jul 1986 - Sep 2021	14.24	13.64

2022 RVK Capital Market Assumptions.

Custom GTAA Index is comprised of 30% MSCI ACWI IMI, 25% BB US Agg, 5% FTSE Non-US Wrld Gov Bond, 10% JPM EMBI Gbl Dvf'd, 10% BB US TIPS, 10% BB US Corp HY, and 10% BB Cmdty.

A return premium is added onto the standard Infrastructure assumption to reflect the additional expected return of the private asset class.

Asset Allocation Study

Key Inputs

Correlations

	Broad US Equity	Broad International Equity	US Agg Fixed Income	Private Credit	Core Real Estate	Private Core Infrastructure	Multi-Strategy Hedge Funds	GTAA	Private Equity
Broad US Equity	1.00	0.85	0.15	0.71	0.25	0.13	0.59	0.85	0.73
Broad International Equity	0.85	1.00	0.01	0.82	0.30	0.13	0.69	0.92	0.73
US Agg Fixed Income	0.15	0.01	1.00	-0.23	-0.09	-0.12	0.13	0.25	-0.28
Private Credit	0.71	0.82	-0.23	1.00	0.39	0.13	0.75	0.84	0.81
Core Real Estate	0.25	0.30	-0.09	0.39	1.00	0.20	0.23	0.34	0.51
Private Core Infrastructure	0.13	0.13	-0.12	0.13	0.20	1.00	0.07	0.07	0.09
Multi-Strategy Hedge Funds	0.59	0.69	0.13	0.75	0.23	0.07	1.00	0.77	0.69
GTAA	0.85	0.92	0.25	0.84	0.34	0.07	0.77	1.00	0.72
Private Equity	0.73	0.73	-0.28	0.81	0.51	0.09	0.69	0.72	1.00

Asset Allocation Study

Efficient Portfolio

In conducting the Asset Allocation study, RVK and Staff considered expanded potential allocations to private credit, private infrastructure, multi-strategy hedge funds, and private equity.

Frontier 1

	Min	Max	1	2	3	4	5	6	7	8	9	10	Current Target	C1	C2
Broad US Equity	15	50	15	15	15	15	15	15	15	16	20	30	19	15	15
Broad International Equity	15	50	15	15	15	15	15	15	15	16	20	30	19	15	15
US Agg Fixed Income	5	15	15	15	15	12	9	7	5	5	5	5	13	5	9
Private Credit	0	20	8	14	20	20	20	20	20	20	20	20	9	20	20
Core Real Estate	0	15	15	15	15	15	15	15	15	15	12	0	15	15	15
Private Core Infrastructure	0	7	7	7	7	7	7	7	7	7	7	0	5	7	6
Multi-Strategy Hedge Funds	0	10	10	10	8	10	10	10	10	5	0	0	5	10	10
GTAA	5	15	15	9	5	5	5	5	5	5	5	5	10	5	5
Private Equity	0	10	0	0	0	2	4	6	8	10	10	10	5	8	5
Total			100	100	100	100	100	100	100	100	100	100	100	100	100
Capital Appreciation			38	44	50	52	54	56	58	63	71	90	52	58	55
Capital Preservation			15	15	15	12	9	7	5	5	5	5	13	5	9
Alpha			25	19	13	15	15	15	15	10	5	5	15	15	15
Inflation			22	22	22	22	22	22	22	22	19	0	20	22	21
Expected Arithmetic Return			5.72	5.86	6.00	6.13	6.27	6.41	6.55	6.69	6.83	6.97	6.12	6.56	6.32
Expected Risk (Standard Deviat			8.86	9.02	9.25	9.63	10.02	10.43	10.84	11.36	12.11	14.41	10.32	10.86	10.24
Expected Compound Return			5.35	5.48	5.60	5.70	5.80	5.90	6.00	6.09	6.15	6.01	5.62	6.01	5.83
Expected Return (Arithmetic)/Risk R			0.65	0.65	0.65	0.64	0.63	0.61	0.60	0.59	0.56	0.48	0.59	0.60	0.62
RVK Expected Eq Beta (LCUS Eq=			0.49	0.49	0.50	0.52	0.54	0.56	0.58	0.61	0.67	0.83	0.58	0.58	0.55
RVK Liquidity Metric (T-Bills = 100)			63	58	54	52	50	49	47	48	53	66	62	47	50

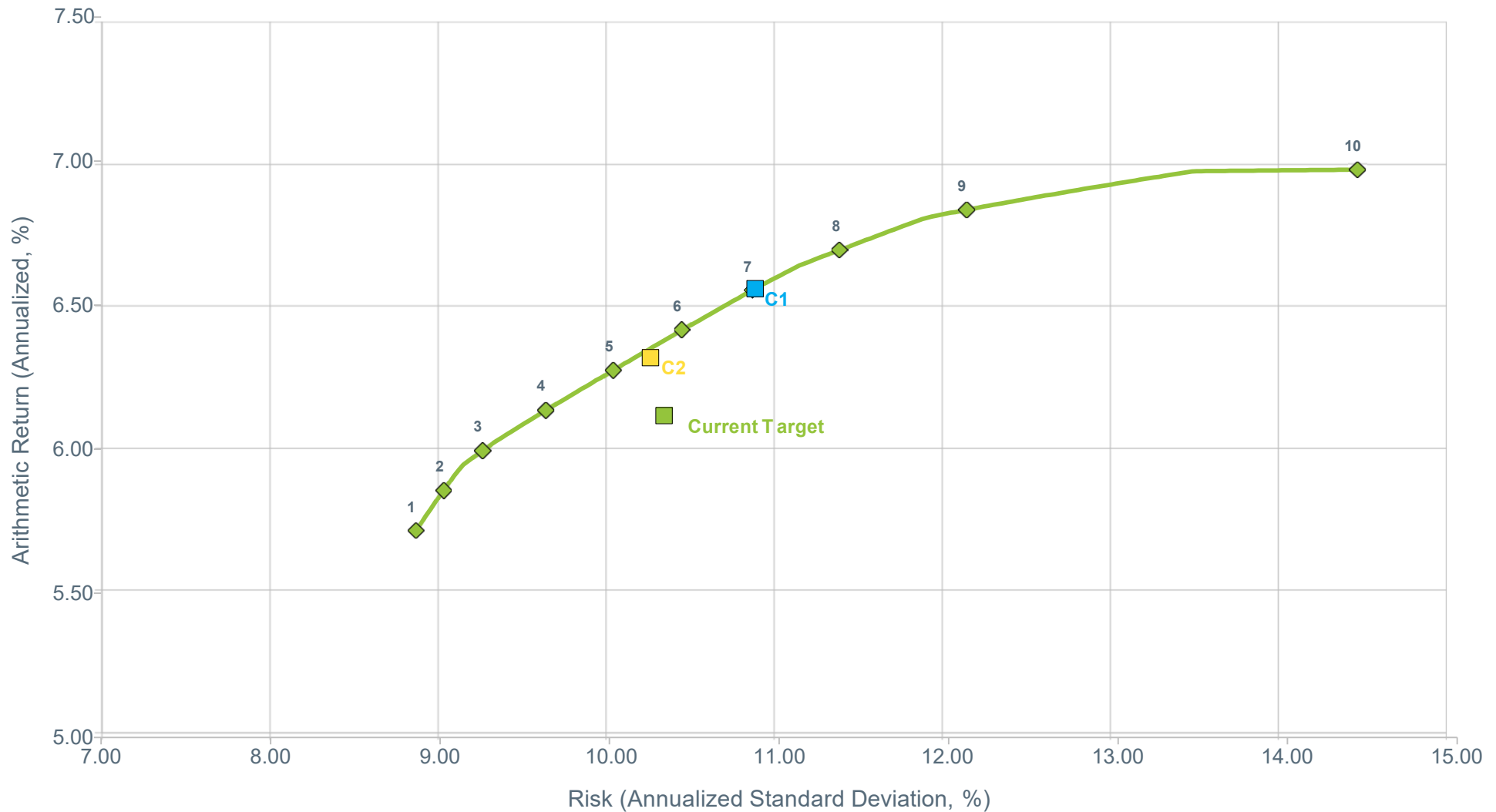
Constraints – US Equity greater than or equal to International Equity

Asset Allocation Study

Efficient Frontier

The figure below illustrates the relationship between risk and return. The line connecting the points represents all the optimal portfolios subject to the given constraints and is known as the "efficient frontier".

Frontier 1



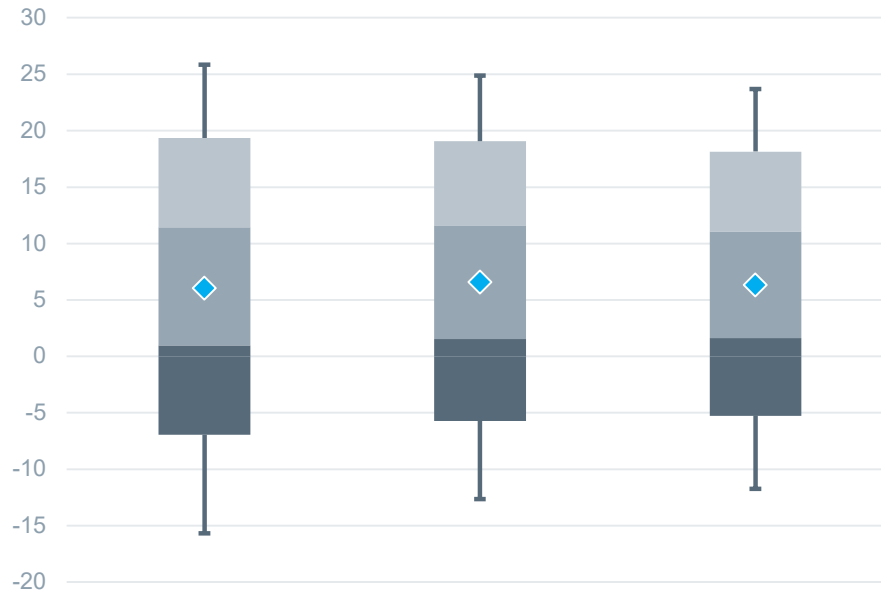
Scenario Analysis

Monte Carlo Simulation – Expected Returns

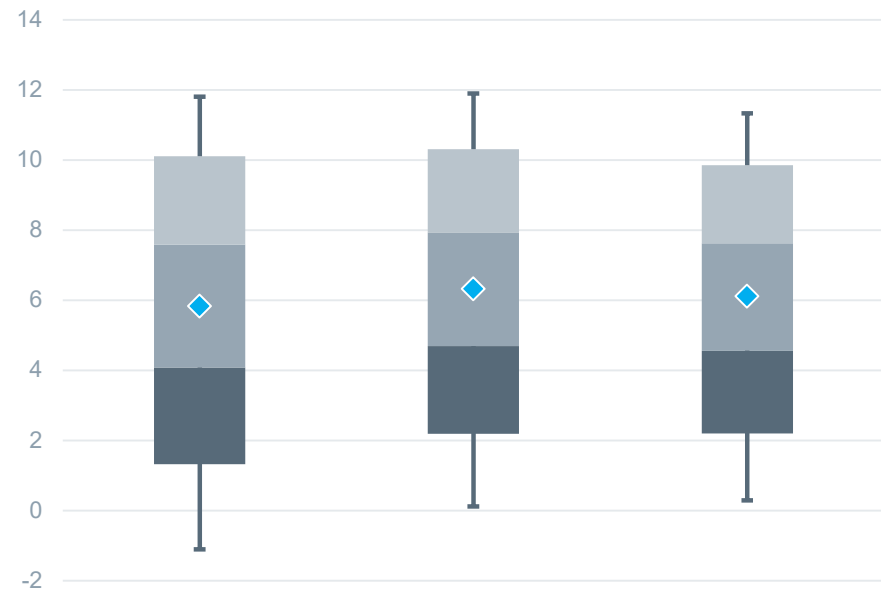
Current vs. Candidate Portfolios

The charts below show the expected return by percentile for the Current and Candidate Portfolios for the 1 and 10 year periods.

Monte Carlo Simulation - 1 Year Returns



Monte Carlo Simulation - 10 Year Returns



Current Target Candidate Portfolio 1 Candidate Portfolio 2

Current Target Candidate Portfolio 1 Candidate Portfolio 2

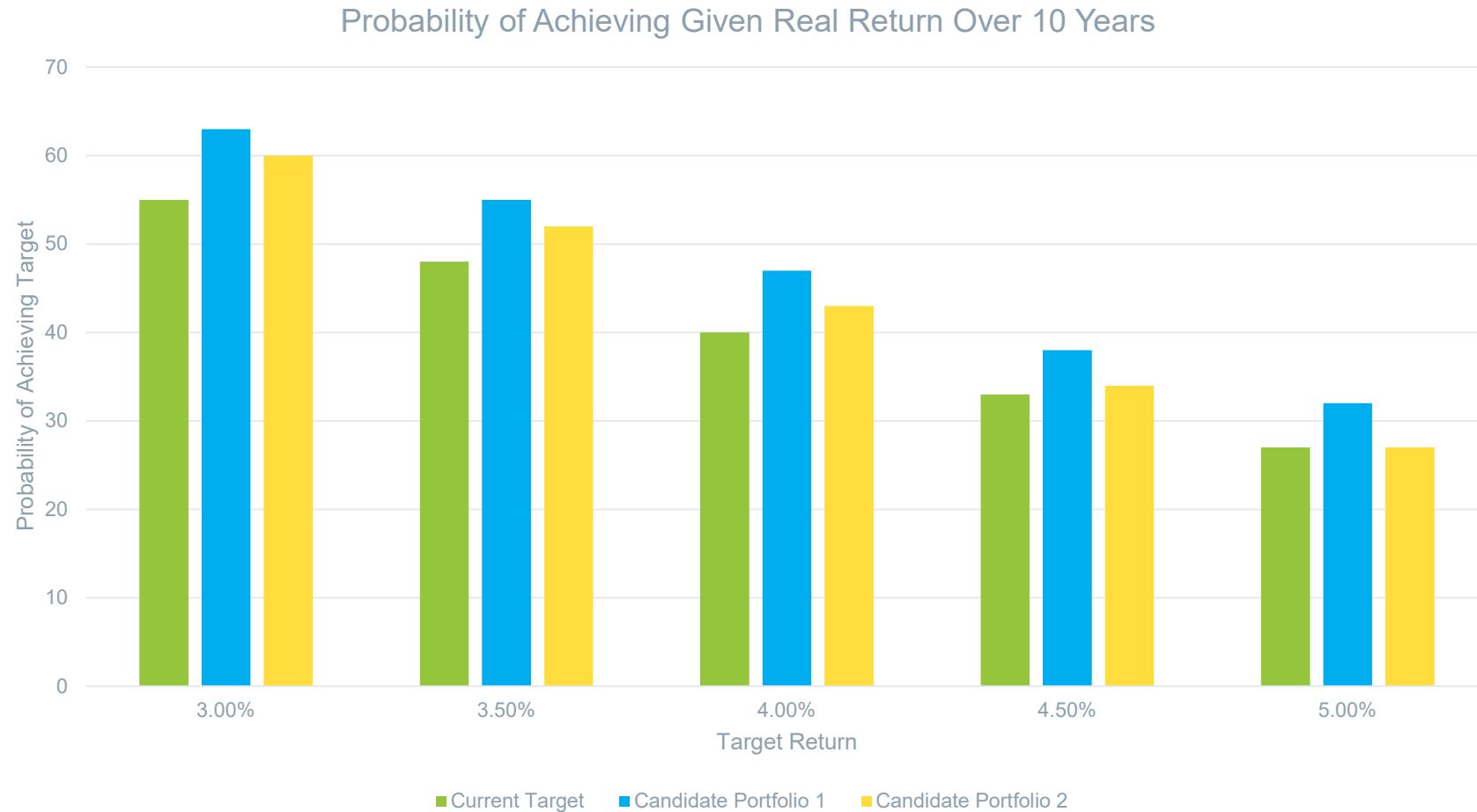
1st -5th percentile 5th -25th percentile 25th -50th percentile ◆ Median 50th -75th percentile 75th -99th percentile

	1 Year					10 Years				
Percentile	Current Target	Candidate Portfolio 1	Candidate 1 vs. Current	Candidate Portfolio 2	Candidate 2 vs. Current	Current Target	Candidate Portfolio 1	Candidate 1 vs. Current	Candidate Portfolio 2	Candidate 2 vs. Current
99th	25.83	24.89	-0.94	23.68	-2.15	11.80	11.90	0.10	11.33	-0.47
95th	19.35	19.06	-0.29	18.14	-1.21	10.11	10.31	0.20	9.85	-0.26
75th	11.43	11.60	0.17	11.07	-0.36	7.59	7.94	0.35	7.63	0.04
Median	6.05	6.58	0.53	6.34	0.29	5.84	6.33	0.49	6.12	0.28
25th	0.97	1.54	0.57	1.61	0.64	4.08	4.69	0.61	4.56	0.48
5th	-6.96	-5.74	1.22	-5.26	1.70	1.32	2.19	0.87	2.20	0.88
1st	-15.69	-12.65	3.04	-11.76	3.93	-1.11	0.12	1.23	0.29	1.40

Monte Carlo Simulation – Probability of Achieving Set Returns

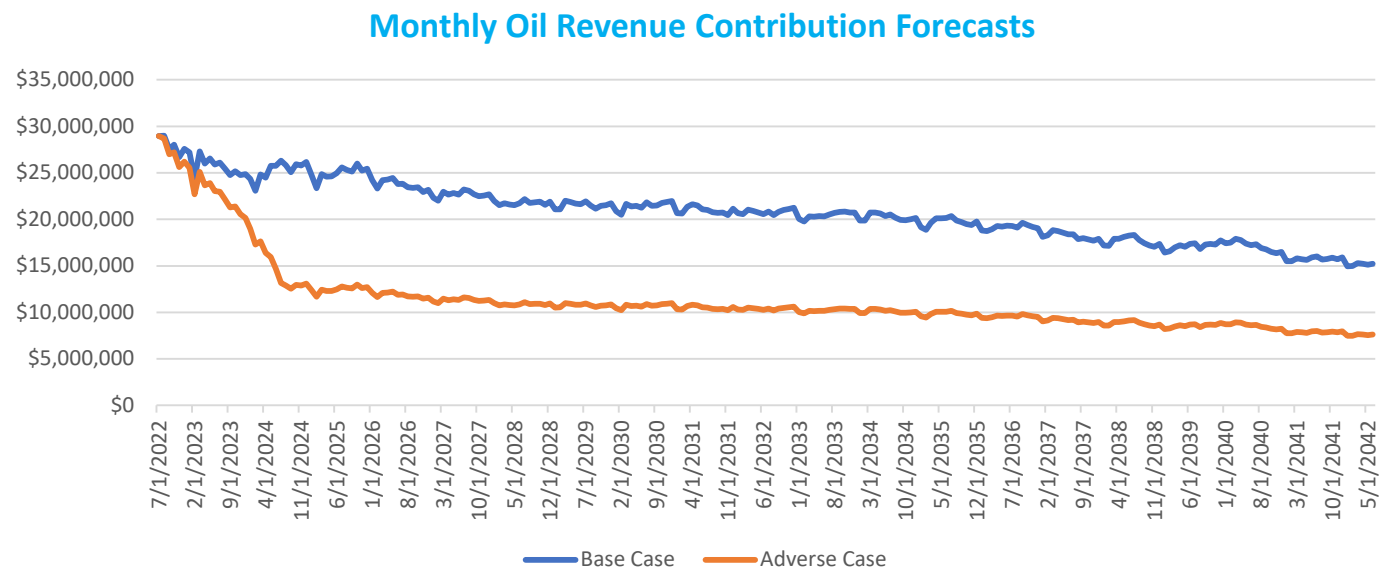
Current vs. Candidate Portfolios

The chart below shows the percentage chance of achieving or exceeding the given real return for the Current and Potential portfolios over the 10 Year period.



Cash Flow Projections

- **Contributions** – Revenues received from sources outside of the investment portfolio including mineral royalties, oil taxes, rental income, easement revenues and unclaimed property collections.
 - Staff provided “base case” projections for oil revenues as developed by Mineral Tracker. RVK and staff also developed an “adverse case” for oil revenues for purposes of stress testing.



- **Distributions** – Assumes bi-annual distribution calculation (10% of trailing 5 year average market value as of 1 year prior to start of bi-annual period). Annual spending during the bi-annual period is 50% in Year 1 and 50% in Year 2.
 - If portfolio values are rising, this will result in a “lag effect” whereby the annual spending rate is effectively lower than 5%. The reverse can occur if portfolio values are falling.

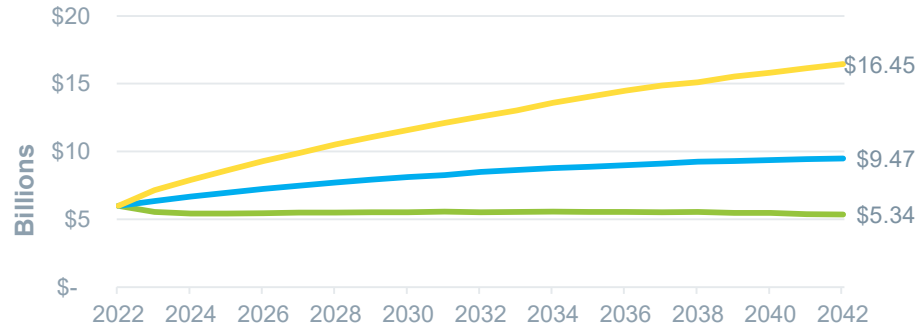
Real Wealth Analysis

- The following slides compare the projected market value/total assets based on the modeling output of the PTF under various time frames, asset allocation targets, and external asset inflow scenarios previously described. Monte Carlo simulation was used for this analysis.
- The projected market values incorporate the cash flow assumptions previously outlined on the prior slide.
- The beginning point for the analysis is 06/30/2022, with an assumed starting asset value of approximately \$6 billion.
- We considered the following asset allocation targets:
 - Current Targets: PTF's current target asset allocation
 - Candidate 1 ("C1")
 - Candidate 2 ("C2")
- Based on our analysis, the Potential Portfolios have more favorable expected outcomes than the PTFs' current target across virtually all scenarios.

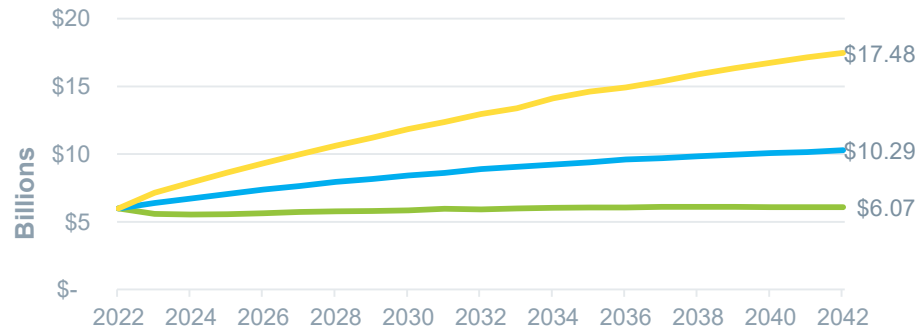
Projected Real Market Value Summary

Base Case Revenue

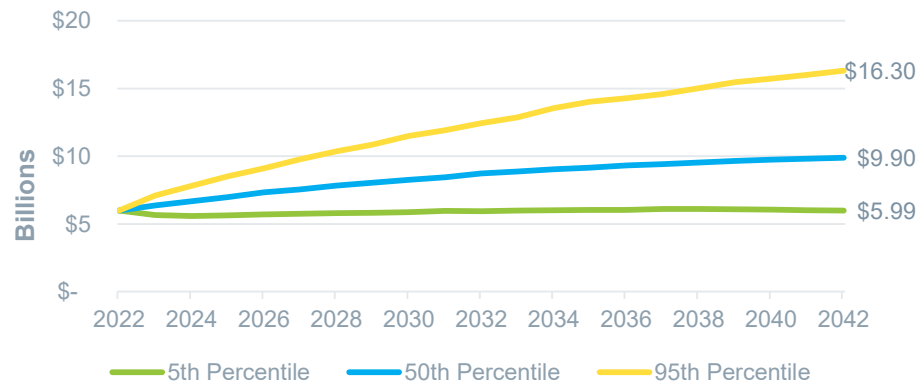
Current Target



C1



C2



5th Percentile 50th Percentile 95th Percentile

*Market values are in real and not in nominal terms

5 Years

	Current Target	C1	C1 vs. Current Target	C2	C2 vs. Current Target
5th Percentile	\$5.51	\$5.73	\$0.22	\$5.76	\$0.25
50th Percentile	\$7.47	\$7.64	\$0.16	\$7.55	\$0.08
95th Percentile	\$9.88	\$7.64	(\$2.24)	\$9.76	(\$0.12)

10 Years

	Current Target	C1	C1 vs. Current Target	C2	C2 vs. Current Target
5th Percentile	\$5.51	\$5.93	\$0.42	\$5.93	\$0.43
50th Percentile	\$8.48	\$8.89	\$0.41	\$8.72	\$0.24
95th Percentile	\$12.57	\$12.95	\$0.38	\$8.72	(\$3.85)

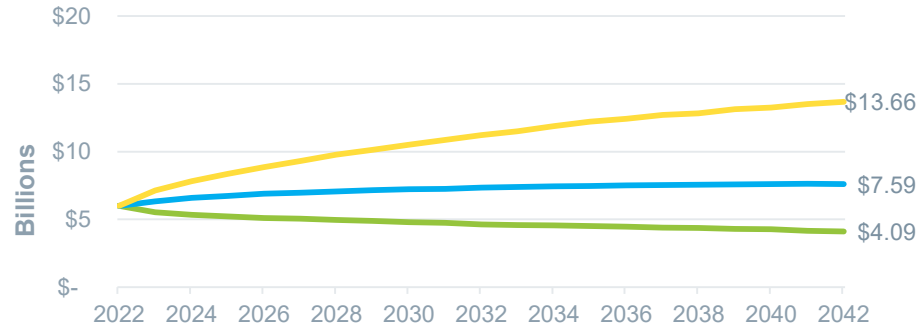
20 Years

	Current Target	C1	C1 vs. Current Target	C2	C2 vs. Current Target
5th Percentile	\$5.34	\$6.07	\$0.73	\$5.99	\$0.65
50th Percentile	\$9.47	\$10.29	\$0.82	\$9.90	\$0.43
95th Percentile	\$16.45	\$17.48	\$1.02	\$16.30	(\$0.15)

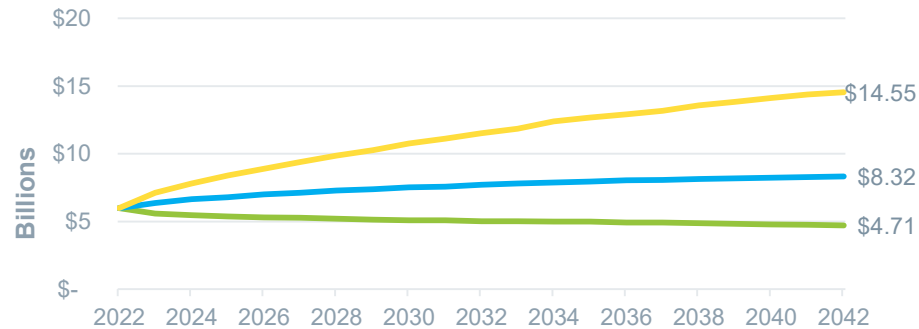
Projected Real Market Value Summary

Adverse Case Revenue

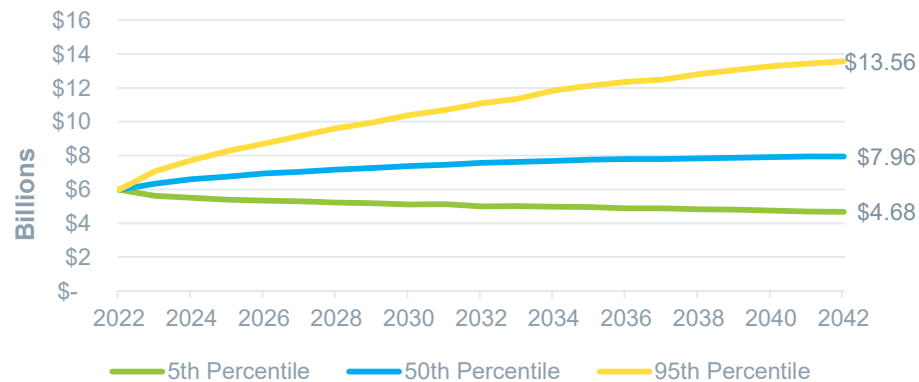
Current Target



C1



C2



5th Percentile 50th Percentile 95th Percentile

*Market values are in real and not in nominal terms

5 Years

	Current Target	C1	C1 vs. Current Target	C2	C2 vs. Current Target
5th Percentile	\$5.05	\$5.28	\$0.24	\$5.31	\$0.26
50th Percentile	\$6.96	\$7.12	\$0.17	\$7.04	\$0.08
95th Percentile	\$9.30	\$7.12	(\$2.17)	\$9.18	(\$0.12)

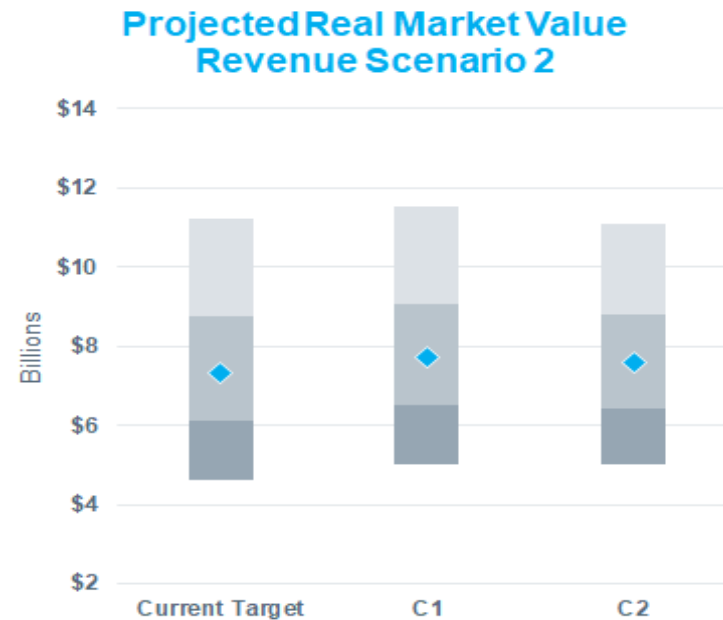
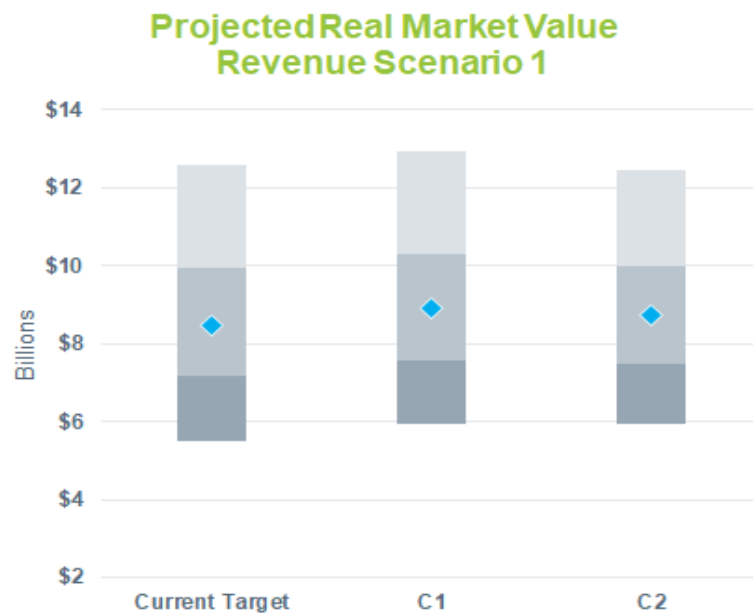
10 Years

	Current Target	C1	C1 vs. Current Target	C2	C2 vs. Current Target
5th Percentile	\$4.62	\$5.01	\$0.39	\$5.00	\$0.38
50th Percentile	\$7.34	\$7.73	\$0.39	\$7.57	\$0.23
95th Percentile	\$11.19	\$11.50	\$0.31	\$7.57	(\$3.62)

20 Years

	Current Target	C1	C1 vs. Current Target	C2	C2 vs. Current Target
5th Percentile	\$4.09	\$4.71	\$0.62	\$4.68	\$0.59
50th Percentile	\$7.59	\$8.32	\$0.73	\$7.96	\$0.37
95th Percentile	\$13.66	\$14.55	\$0.89	\$13.56	(\$0.10)

Real Wealth Analysis – 10 Years



■ 5th -25th percentile ■ 25th -50th percentile ◆ Median ■ 50th -75th percentile

10 Year Projected Real Market Values (\$ Billions)										
Percentile	Revenue Scenario 1					Revenue Scenario 2				
	Current Target	C1	C1 vs. Current Target	C2	C2 vs. Current Target	Current Target	C1	C1 vs. Current Target	C2	C2 vs. Current Target
5th	\$5.51	\$5.93	\$0.42	\$5.93	\$0.43	\$4.62	\$5.01	\$0.39	\$5.00	\$4.61
25th	\$7.15	\$7.56	\$0.41	\$7.46	\$0.31	\$6.13	\$6.51	\$0.38	\$6.42	\$6.04
Median	\$8.48	\$8.89	\$0.41	\$8.72	\$0.24	\$7.34	\$7.73	\$0.39	\$7.57	\$7.19
75th	\$9.95	\$10.30	\$0.34	\$10.00	\$0.05	\$8.73	\$9.06	\$0.32	\$8.79	\$8.46
95th	\$12.57	\$12.95	\$0.38	\$12.46	(\$0.11)	\$11.19	\$11.50	\$0.31	\$11.07	\$10.76

Market values are in real and not in nominal terms

PORTLAND

BOISE

CHICAGO

NEW YORK

Disclaimer of Warranties and Limitation of Liability - This document was prepared by RVK, Inc. (RVK) and may include information and data from some or all of the following sources: client staff; custodian banks; investment managers; specialty investment consultants; actuaries; plan administrators/record-keepers; index providers; as well as other third-party sources as directed by the client or as we believe necessary or appropriate. RVK has taken reasonable care to ensure the accuracy of the information or data, but makes no warranties and disclaims responsibility for the accuracy or completeness of information or data provided or methodologies employed by any external source. This document is provided for the client's internal use only and does not constitute a recommendation by RVK or an offer of, or a solicitation for, any particular security and it is not intended to convey any guarantees as to the future performance of the investment products, asset classes, or capital markets.

**RE: Oil Hedging Discussion
(No Action Requested)**

In April 2022 the Board of University and School Lands (Board) requested Department Investment Staff (Staff) research the cost and benefits of hedging the Board's oil and gas revenues against significant declines in price. Staff partnered with the Board's investment consultant RVK to research potential oil and gas hedging partners and strategies best suited to the Board's assets.

The process began by reviewing the Board's revenues. After a thorough review, Staff and RVK decided to focus on oil revenues from royalties as they are the largest source of cashflow, most directly correlated to market prices, and not subject to legislative appropriations. Staff and RVK identified two investment managers who were willing to work on this project, provided meaningful market insight, and proposed the most appropriate strategies.

Three oil hedging strategies:

1. Protective Puts – Purchasing “out of the money” put options that pay off if the price of oil falls below the strike price.
2. Collars and Spreads – Purchasing protective puts and offsetting all or some of the put cost by selling call options, which is also selling away upside (collar), or selling lower strike puts, which is also selling away the protection on more extreme downside (put spread).
3. Swap Agreements – Entering into a long-term, direct agreement with a counterparty to exchange sequences of cash flows for a set period, which could mimic a protective put.

Major considerations for each strategy:

1. Protective Puts – The premium on the protective put can be expensive over time. Not effective against ordinary declines in price.
2. Collar and Spreads – The cost is lower than a protective put, but can still add up. On a collar, trading away the upside may become untenable if prices remain persistently high.
3. Swap Agreements – The swap costs will be even higher than the protective put costs. Also, the Board must accept counter-party risk, meaning the risk that the counterparty will not be able to make payment.

Staff and RVK seek the Board's guidance on whether to proceed by defining the:

- Objective
- Budget
- Risk Tolerance
- Governance
- Resources
- Manager Search

Attachment 1: RVK Oil Hedging Presentation

June 2022

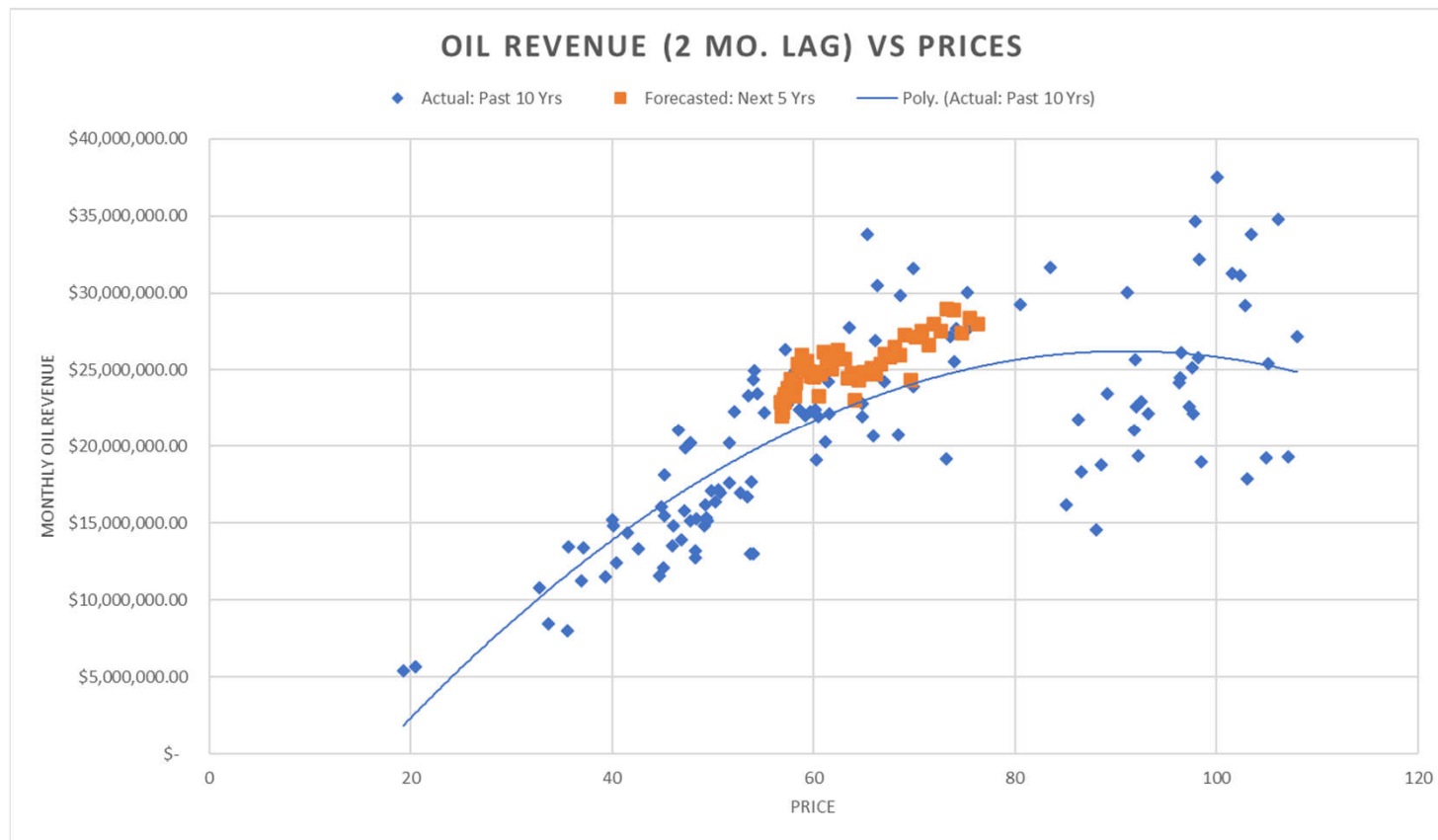
Oil Hedging Introduction

North Dakota Board of University and School
Lands



Background

- The Permanent Trust Funds receive monthly contributions from income generated by Trust Lands. The largest source of income is mineral royalty income.
- As the chart below indicates, there is a significant, but imperfect relationship between the spot price of oil, and monthly oil revenues.



Price = WTI Spot Prices. Source: <https://fred.stlouisfed.org/series/DCOILWTICO>
Forecast Data from Mineral Tracker Projections prepared for North Dakota Department of Trust Lands

Summary

- Department of Trust Lands Investment Staff (“Staff”) and RVK have conducted initial research on potential hedging solutions that could be utilized to narrow the impact of price volatility on monthly contributions to the Trust from oil revenues.
- We have categorized the potential hedging solutions into 3 primary approaches:
 - Protective Puts
 - Purchase out of the money put options designed to pay off if the price of oil falls below a predetermined price within a specified time frame
 - Collar and Spread Strategies
 - Purchasing protection against oil price declines with protective puts and offsetting all or some of the option cost by selling away upside (collar) or more extreme downside (put spread)
 - Swap Agreements
 - Entering into a direct agreement with a counter-party to exchange sequences of cash flows for a set period
- Goal for this discussion: Introduce the basic elements of these approaches, perceived benefits and risks, and solicit Board direction on desired next steps.

Protective Puts

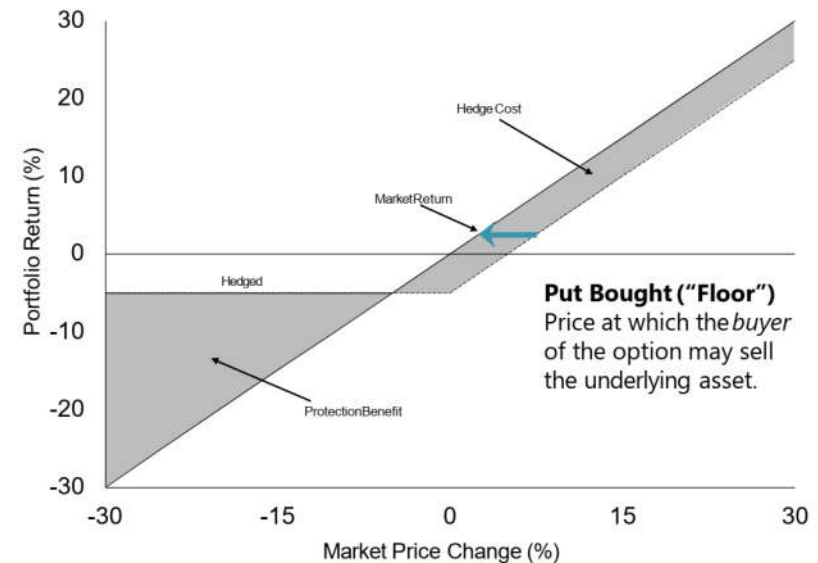
Put Option Basics

- A put option is a contract giving the option buyer the right, but not the obligation, to sell a specific amount of an underlying security at a predetermined price within a specified time frame.
- Put options experience price changes as the underlying asset price changes – becoming more valuable if the underlying asset price declines.

Benefits

- Simple strategy utilizing exchange traded instruments
- Risk of loss is limited to option premium
- Effective and reliable hedge against downside price movement in oil
- Can be managed with the assistance of a professional asset manager

Illustrative Put Payoff Profile



Risks

- May not protect well against smaller declines in prices
- May require long periods of time where there is a net cost before realizing any benefit from the protection. Over time, these costs can be significant.
- Potential decision-making risk as an effective hedging program requires a consistent approach

Collar and Spread Strategies

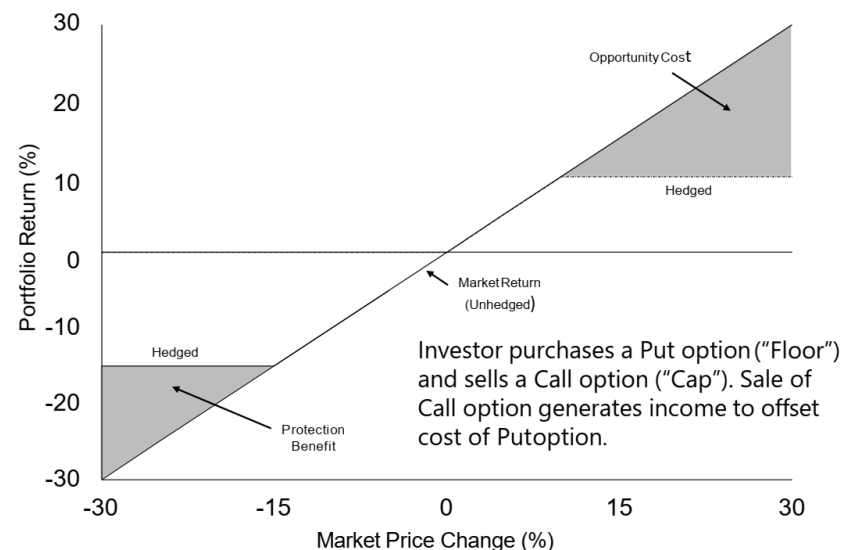
Collar and Spread Basics

- Collar - a call option (the right, but not the obligation to buy a specific amount of an underlying security at a predetermined price within a specified time frame) is sold in addition to the purchase of a protective put. Option premium from the sale of the call pays for (all or partially) the cost of the protective put.
- Put Spread – a deeper out of the money put option is sold in addition to the purchase of a protective put. Option premium from the sale of the put pays for (all or partially) the cost of the protective put.

Benefits

- Provides the benefits of the protective put option with a potentially lower cost
- Uses exchange traded instruments
- Can be managed with the assistance of a professional asset manager

Illustrative “Costless” Collar Payoff Profile



Risks

- Opportunity cost may be significant if upside is sold away via call options
- Significant financial risk introduced if prices rise, and actual production doesn't offset
- Put spreads introduce financial risk exposure at lower oil prices
- Margin requirements
- Potential decision-making risk

Swap Agreements

Swap Basics

- Customized over-the-counter (“OTC”) contracts established between private parties
- Typically, a fixed payment is paid by one party in exchange for a variable payment determined by the price of an underlying asset or reference rate
- Swap dealers such as financial institutions often play the role of market maker, profiting from a bid-ask spread imbedded in the agreement
- Example – Party A agrees to pay Party B \$X M per month in exchange for Party B paying Party A an amount equal to a formula such as (Y Number of Barrels * Avg. WTI Spot price for that month).

Benefits

- Can be highly customized to deliver a consistent level of contributions
- Can remove some of the decision-making risk if structured over a longer time frame than is available with options

Risks

- OTC instruments, not traded on an exchange and lacks oversight of exchange regulator
- Exposure to counter-party risk
- Significant financial risk exposure potentially introduced if production risk is not born by the counter-party
- Requires direct engagement with sophisticated counter-parties that serve as a principal in the transaction

Concluding Thoughts

- There are several factors we believe are worth considering that will inform what approaches to hedging, if any, may best serve the institution.
 - Objectives: What are the primary goals of the hedging program? Is it to protect against severe price declines or to narrow the range of outcomes as tightly as possible?
 - Budget: What is the investor willing to pay for the protection of a hedging program? Preference for paying explicit costs vs market upside?
 - Risk Tolerance: What risk exposures introduced by a hedging program are simply not tolerable?
 - Governance: Does the Governance structure support a long-term strategic and consistent approach? What policies and guidelines are in place (or need to be developed) to ensure a consistent approach? How often do the decision makers change and what risks does that introduce?
 - Resources: Does the investment staff have the requisite experience and capacity to implement and oversee a hedging program? If not, what external resources may be required?
- We stand ready to assist the Board with further research and assistance on this topic as it deems appropriate.

PORTLAND

BOISE

CHICAGO

NEW YORK

**RE: Transferring Land Board Assets to State Investment Board
(No Action Requested)**

The North Dakota State Investment Board (SIB) has undertaken a review of its governance structure and as part of its review SIB is considering recommendations to the legislature on the composition of the SIB membership. The current SIB membership includes the Commissioner of University and School Lands (Commissioner). SIB has determined that the Commissioner's continued membership on the SIB should be tied to whether the assets of the Board of University and School Lands (Board) resides with SIB through the Retirement and Investment Office (RIO). As such, SIB has requested the Board's guidance on whether it prefers to move its assets to RIO or not.

There are many issues to be considered and discussed by the Board related to this decision. Below are several key issues for the Board's consideration:

- **Administrative Expense** – SIB charges client funds approximately 0.015% on RIO's Assets Under Management (AUM).
 - In accordance with N.D.C.C. § 21-10-06.2, SIB is permitted to charge its client accounts most of its administrative costs for managing the accounts. Based on SIB's recent financial statements that would amount to approximately 0.015% of the Board's assets or an amount in excess of \$1,000,000 (the majority would come from the Common Schools Trust Fund at around \$850,000 per year). Only a small portion of this administrative expense would have offsetting savings with the transfer of two investment professionals from the Department of Trust Lands (Department) to RIO.
- **Internal Management** – SIB through RIO has a strategic plan to bring in-house for internal management as much as 50% of its AUM, with the purpose of saving \$40-50 million in investment management fees. The majority of the insourced assets would be publicly traded securities, such as large and mid-cap equities and core bonds. While the potential fee savings is significant for SIB's existing clients, what would be the explicit costs and opportunity costs of such an undertaking to the Permanent Trust Funds (PTFs)?
 - **Management Fees** – The Board will pay approximately \$1.9 Million in investment management fees this year on its publicly traded assets. Approximately: \$80,000 on US large cap equities, \$30,000 on US mid cap equities, \$130,000 on international large cap equities, \$980,000 on core bonds, \$430,000 on core plus bonds, and \$220,000 on low duration bonds. If managed inhouse by RIO, the Board might save \$900,000 nominally at the current SIB admin fee of 0.015%. However, the likely savings does not include trading costs, securities lending income, nor does it include alpha or tracking error.
 - **Trading Costs** – Much of the PTFs' large cap and mid cap equities are managed by State Street Global Advisors (SSGA). SSGA manages more than \$4 Trillion in assets globally, most of which are equity index funds. On behalf of the Board, SSGA manages the PTFs' US large cap index fund, the international index fund, and US mid cap index fund. These index funds are managed by SSGA with very low trading costs. One reason SSGA can do it for very low trading costs is their enormous economies of scale. Would RIO have the same low trading costs?
 - **Securities Lending Income** – Securities lending is the loaning of securities to short sellers in exchange for interest income. SSGA is very active in the securities lending market and generates \$1-2 Million in securities lending income per year for the PTFs.

Part of SSGA's success in this area is again due to their large size. What success would RIO's have in this area?

- Tracking Error – Tracking error is the difference between the manager's returns and the index returns. SSGA has very low tracking error on its index funds (about -4 basis points per index fund in the last three years). Their low tracking error is again owing to their large scale, which gives them the ability to trade at low costs, use derivatives effectively, and invest in technology to reduce market frictions. Will RIO replicate this low tracking error?
- Alpha Generation – Alpha is the excess return over the benchmark return delivered by active management. For core bonds, our current managers have demonstrated over long periods they can deliver alpha over their benchmarks. Payden & Rygel has generated an average of 66 basis points of net alpha annually for the past seven years. JP Morgan has generated an average of 18 basis points of net alpha annually for the past seven years, and under stricter credit and durations limits for most of that time. Will RIO generate similar net alpha in core bonds?
- Asset Allocation – The Strategic Asset Allocation (SAA) of the PTFs is different than the Pension Trusts or Legacy Fund. The Pension Trusts are underfunded, and distributions exceed contributions. The Legacy Fund has positive cashflows, no regular defined beneficiary payments, and an in-state investment requirement. The PTFs have regular scheduled payments to beneficiaries and positive cashflows. This gives the PTFs the ability to invest in illiquid private markets for greater return with moderate risk. The SAA of the PTFs has evolved over the past three years to include more private credit and private real estate, and the addition of private equity and private infrastructure. These assets cannot be easily or cheaply managed in-house. Is the Board willing to forgo private market returns in favor of public markets that RIO can manage in-house to save on management fees?
- Administrative Fee Increase – If the legislature provides RIO the staffing to complete their strategic plan, RIO will have a total of 24 investment professionals (an additional 20 new staff members) and an additional 13 operations staff members to manage the 50% AUM inhouse. Will this increase the administrative fee RIO currently charges to client accounts? What will the charge be to the PTFs if the SAA remains significantly in private assets and large cap equities remain with SSGA?
- Investment Center of Excellence – As noted above, if RIO completes its strategic plan, RIO will have 24 investment professionals working on state investment portfolios. The congregation of investment professionals would significantly increase investment expertise in-state. In that circumstance, moving the Board's assets to RIO would allow the Board's assets to benefit from a more robust investment environment. The Board's assets would be subject to more diverse investment opinions and viewpoints. In addition, RIO plans to increase its spending on investment technology to improve its risk monitoring and stress testing of its AUM, this would also benefit the Board's assets.
- Economies of Scale – RIO's plan to manage 50% of its AUM inhouse would still leave 50% managed externally. To the extent that asset classes overlap between the Pension Trusts, Legacy Fund, and the PTFs, in the long run there would be some fee savings in terms of breakpoints for certain managers/funds. (Breakpoints are the higher and higher capital commitment levels at which investment managers give lower and lower fees.) Similarly, with a larger pool of AUM comes an increased ability to seed new funds, as the Board did with

Apollo and Schroders, which leads to the significant fee reductions that come with seeding new funds.

- Governance of the Assets – Should the Board decide to move its assets to SIB, the following governance issues would need to be resolved:
 - Investment Authority – The Board would need to decide if ordinary investment authority and decision making would reside with itself or SIB. Currently, most major investment decisions are made by the Board, including hiring/firing managers, asset allocation, and investment policies. Would the Board cede some or all these decisions to SIB?
 - Investment Committee – Related to above, SIB is considering setting up an Investment Committee, which will be vested with some of the decision-making authority that currently resides with SIB. The Board will have to decide if this governance structure is acceptable and whether the resulting investment decisions are in the best interest of the PTFs and other funds under its control.
 - Investment Consultant – Should the Board decide to transfer its assets to SIB, the Board may want to consider retaining a separate investment consultant from Callan. The Board's contract with RVK has over a year remaining through August 2023, with an optional two-year extension. Whether the Board chooses to extend the RVK contract or select a new consultant, a consultant other than Callan would ensure that the assets of the Board are considered separately from the Pension Trusts and the Legacy Fund.

Attachment 1: For reference, prior Land Commissioner's January 2021 testimony on HB 1202 dealing with similar issues



**TESTIMONY OF JODI SMITH
COMMISSIONER
North Dakota Department of Trust Lands**

House Bill 1202

**House Government and Veterans Affairs Committee
January 22, 2021**

Chairman and members of the House Government and Veterans Affairs Committee, I am Jodi Smith, the Commissioner and Secretary for the Board of University and School Lands (Board). I am here to testify in opposition to House Bill 1202.

The Department of Trust Lands (Department) is the administrative arm of the Board, serving under the direction and authority of the Board. The Board is comprised of the Governor, Secretary of State, Attorney General, State Treasurer, and Superintendent of Public Instruction. The Department's primary responsibility is managing the Common Schools Trust Fund (CSTF) and 12 other permanent educational trust funds. The beneficiaries of the trust funds include local school districts, various colleges and universities, and other institutions in North Dakota. The Department manages five additional funds: the Strategic Investment and Improvements Fund (SIIF), the Coal Development Trust Fund, the Capitol Building Fund, the Indian Cultural Education Trust, and the Theodore Roosevelt Presidential Library and Museum Endowment.

The Department also administers the responsibilities outlined in the Uniform Unclaimed Property Act, N.D.C.C. ch. 47-30.1. In this role the Department collects "unclaimed property" (uncashed checks, unused bank accounts, etc.), and processes owners' claims. This property is held in permanent trust for owners to claim, with the revenue from the investment of the property benefiting the CSTF.

Additionally, the Department operates the Energy Infrastructure and Impact Office (EIIO), which provides financial support to political subdivisions that are affected by energy development. Assistance is provided through both the oil and gas impact grant program and the coal impact loan program. The EIIO also distributes energy and flood grants carried over from prior biennia.

HISTORY

In 1889, Congress passed the Enabling Act "to provide for the division of Dakota [Territory] into two states, and to enable the people of North Dakota, South Dakota, Montana, and Washington to form constitutions and state governments, and to be admitted into the union on an equal footing with the original states, and to make donations of public lands to such states." Act of February 22, 1889, Ch. 180, 25 Statutes at Large 676.

Section 10 of this Act granted sections 16 and 36 in every township to the new states "for the support of common schools." In cases where portions of sections 16 and 36 had been sold prior to statehood, indemnity or "in lieu" selections were allowed. In North Dakota, this grant of land totaled more than 2.5 million acres.

Under sections 12, 14, 16 and 17 of the Enabling Act (and other acts referred to therein), Congress provided further land grants to the state of North Dakota for the support of colleges, universities, the state capitol, and other public institutions. These additional grants totaled approximately 668,000 acres; thus the total of Enabling Act land grants was nearly 3.2 million acres.

PERMANENT TRUST FUNDS

The land grant at statehood and the State Constitution both provide that the Board manage the trust land and minerals and their proceeds, for the exclusive benefit of supporting the common schools (primary education) and the institutions for which the lands were granted. In accordance with Article IX of the North Dakota Constitution, the trust funds must be managed to preserve purchasing power and to maintain stable distributions to trust beneficiaries. The Board is a constitutional board charged, among other things, with the duty of directing the investment of funds derived from the other sources, including the sale of lands granted by the United States to the state of North Dakota for the support of the common schools and from other sources. It is vested with discretion in the performance of its duties commensurate with the importance of the confidence reposed in the Board. The great and primary duty of the Board is to safeguard the Permanent Trust Funds (PTFs) under its control and direct the investment thereof to the best advantage. HB 1202 removes all discretion from the Board in making investment decisions on behalf of the PTFs. Approval of HB1202 would mean investment decisions by the Board would be eliminated and essentially transferred to the State Investment Board (SIB) in direct contravention to the language and intent of the Constitution.

REVENUE AND DISTRIBUTION HISTORY

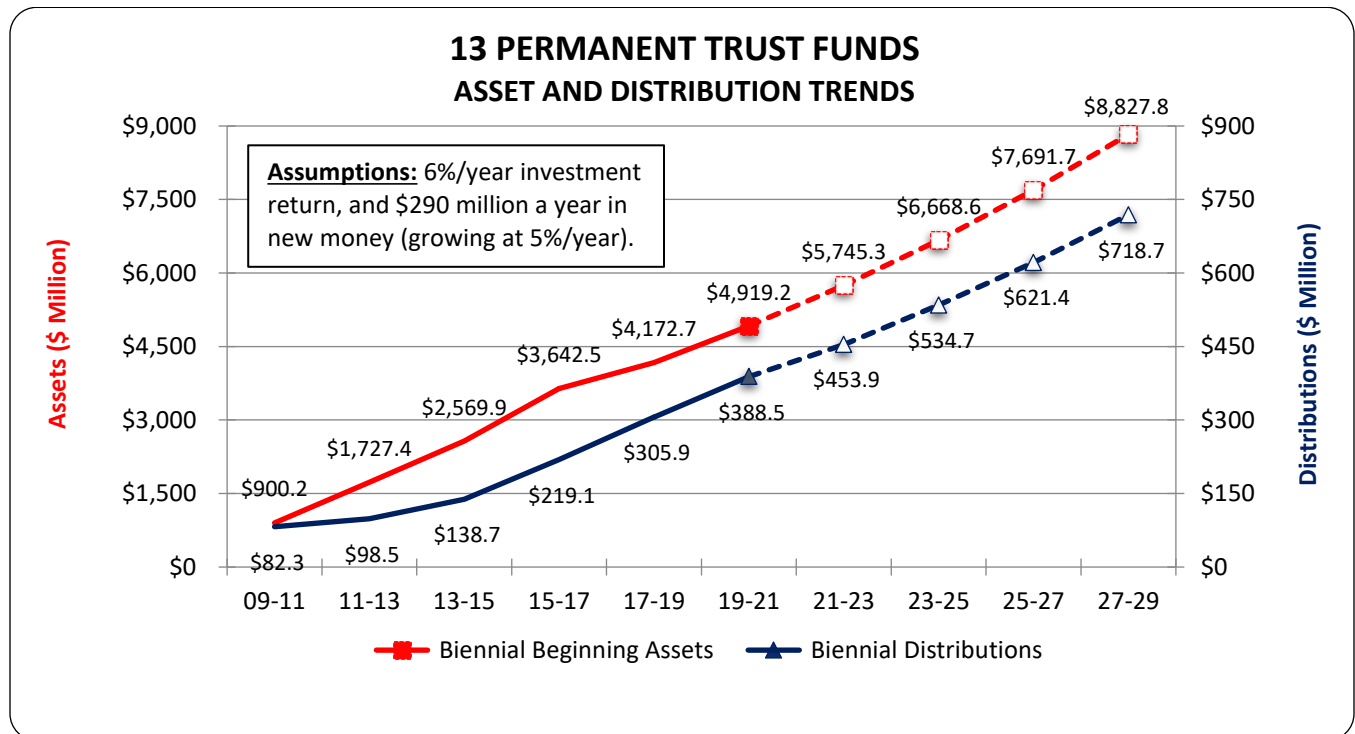
Article IX, Section 2 of North Dakota Constitution provides:

Distributions from the common schools trust fund, together with the net proceeds of all fines for violation of state laws and all other sums which may be added by law, must be faithfully used and applied each year for the benefit of the common schools of the state and no part of the fund must ever be diverted, even temporarily, from this purpose or used for any purpose other than the maintenance of common schools as provided by law. Distributions from an educational or charitable institution's trust fund must be faithfully used and applied each year for the benefit of the institution and no part of the fund may ever be diverted, even temporarily, from this purpose or used for any purpose other than the maintenance of the institution, as provided by law.

For the biennium during which this amendment takes effect, distributions from the perpetual trust funds must be the greater of the amount distributed in the preceding biennium or ten percent of the five-year average value of trust assets, excluding the value of lands and minerals. Thereafter, biennial distributions from the perpetual trust funds must be ten percent of the five-year average value of trust assets, excluding the value of lands and minerals. The average value of trust assets is determined by using the assets' ending value for the fiscal year that ends one year before the beginning of the biennium and the

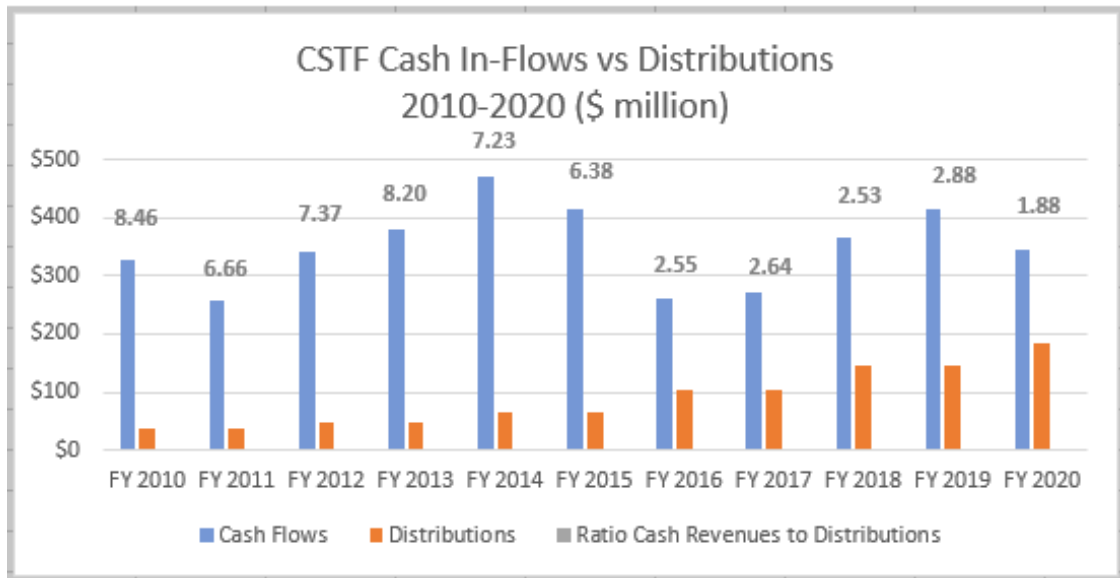
assets' ending value for the four preceding fiscal years. Equal amounts must be distributed during each year of the biennium.

Educational and institutional trust distributions are based upon the growth in value of the trusts' financial assets over time, rather than on the amount of interest and income earned by each trust during the year. Biennial distributions from the PTFs must be 10 percent of the five-year average value of trust assets, excluding the value of lands and minerals. Equal amounts are distributed during each year of the biennium. With the substantial growth in trust assets over the past 10 years, distributions to beneficiaries have significantly increased.



Oil and gas lease bonus and royalty revenues resulted in substantial growth in the CSTF, increasing by 300% over eight years. Strong investment markets have also driven growth since the 2008-2009 recession.

TRUST REVENUES FROM FY 2010 THOUGH FY 2020



In the 2021-2023 biennium, distributions by the CSTF will increase by \$54,264,000 which is a 14.8% increase.

School Year	Amount Distributed	CS % of Cost of Education	CS \$/Pupil Distribution	Biennial Figures		
FY 2010	\$ 38,589,000	4.1%	\$ 404.04	\$ 400.96		
FY 2011	\$ 38,589,000	3.9%	\$ 397.88	4.0%		
FY 2012	\$ 46,257,000	4.6%	\$ 468.50	\$ 461.33		
FY 2013	\$ 46,257,000	4.3%	\$ 454.16	4.46%		
FY 2014	\$ 65,163,000	6.2%	\$ 651.13	\$ 643.27		
FY 2015	\$ 65,163,000	5.9%	\$ 635.40	6.0%		
FY 2016	\$ 103,067,000	8.8%	\$ 979.74	\$ 971.69		
FY 2017	\$ 103,067,000	8.4%	\$ 963.64	8.6%		
FY 2018	\$ 144,132,000	11.6%	\$ 1,334.22	\$ 1,320.90		
FY 2019	\$ 144,132,000	11.4%	\$ 1,307.59	11.5%		
FY 2020	\$ 183,378,000	14.0%	\$ 1,634.88	\$ 1,620.19		
FY 2021	\$ 183,378,000	13.4%	\$ 1,605.49	13.7%	Actual	
FY 2022	\$ 210,510,000	15.4%	\$ 1,847.97	\$ 1,829.31	Estimate/Projection	
FY 2023	\$ 210,510,000	15.2%	\$ 1,810.66	15.3%	Estimate/Projection	

The table below is another look at the CSTF's impact education. With the inclusion of the 2021-23 contribution, the CSTF will have supplied over \$1.4 billion to the schools.

Biennium	Formula Payment	Common Schools	Percentage of Formula	Common Schools Increase
2013-15	\$ 2,165,690,363	\$ 130,326,000	6.0%	\$ 37,812,000
2015-17	\$ 2,398,962,382	\$ 206,134,000	8.6%	\$ 75,808,000
2017-19	\$ 2,512,392,039	\$ 288,264,000	11.5%	\$ 82,130,000
2019-21	\$ 2,679,595,449	\$ 366,756,000	13.7%	\$ 78,492,000
2021-23	\$ 2,751,285,781	\$ 421,020,000	15.3%	\$ 54,264,000

The Board manages other funds for the State and other beneficiaries, including:

Indian Cultural Education Trust

The Indian Cultural Education Trust was created in 2003 to generate income to benefit Indian culture (N.D.C.C. ch. 15-68). Present assets are managed for the benefit of the Mandan, Hidatsa, and Arikara Nation Cultural Education Foundation. This trust's assets are managed, and distributions are determined, in the same manner as the PTFs.

Capitol Building Fund

The Capitol Building Fund was established in N.D.C.C. § 48-10-02 pursuant to Article IX of the North Dakota Constitution. Section 12 of the Enabling Act of 1889 authorized the land grant for "public buildings at the capital of said states". N.D.C.C. § 48-10-02 defines the fund, outlines its purposes, and assigns management of the land and the fund's investment to the Board. Unlike the PTFs created under Article IX, this fund is fully expendable and is subject to legislative appropriation each biennium.

Strategic Investment and Improvements Fund

The SIIF is a fund financed by the revenues earned from sovereign mineral acres, including those formerly owned by the Bank of North Dakota and State Treasurer and minerals located under navigable rivers and lakes (N.D.C.C. ch. 15-08.1 and § 61-33-07). The SIIF also receives a portion of the oil and gas production and extraction taxes (N.D.C.C. § 57-51.1-07.5). This fund may be appropriated by the legislature for one-time expenditures relating to improving state infrastructure or for initiatives to improve the efficiency and effectiveness of state government (N.D.C.C. § 15-08.1-08).

Coal Development Trust Fund

The Coal Development Trust Fund is established by N.D.C.C. ch. 57-62, pursuant to Article X, Section 21 of the North Dakota Constitution. The Fund receives 30 percent of the coal severance tax. This fund is held in trust and is administered by the Board for loans to coal impacted counties, cities, and school districts as provided by N.D.C.C. § 57-62-03 and for loans to school districts pursuant to N.D.C.C. ch. 15.1-36. Any balance not loaned is invested according to the policies of the Board. The income earned by this fund is transferred to the State General Fund each year.

Theodore Roosevelt Presidential Library and Museum Endowment Fund

The Theodore Roosevelt Presidential Library and Museum Endowment Fund (TR Fund) was created to generate income to be used for the operation and maintenance of the library and museum, after the Theodore Roosevelt Presidential Library Foundation raised or secured binding pledges of \$100 million. The TR Fund is managed through an agreement between the Office of the North Dakota Governor and the Board. In May of 2019 the first deposit, totaling \$15 million, was made to the Board for the Theodore Roosevelt Presidential Library and Museum Endowment.

INVESTMENTS

In early 2013, the investment consultant firm, R.V. Kuhns (now known as RVK), was hired through a competitive hiring process by the Board to submit a written report addressing the following issues:

1. Recommendations for a comprehensive evaluation and rewrite of the Board's investment policies and procedures for the PTFs that would help state and ensure long-term goals and objectives for the PTFs.
2. A recommendation of an asset allocation policy for the PTFs that, while recognizing the Board's risk tolerance and return expectations, balanced the Board's responsibilities under North Dakota law to:
 - a. Support the trust beneficiaries;
 - b. Maintain the permanent strength of the fund; and
 - c. Follow the prudent investor rule.
3. A recommendation as to the most appropriate way to transition the PTFs from the then current asset allocation plan to the recommended asset allocation plan.
4. An analysis of the costs associated with the recommended asset allocation plan, including performance monitoring and measurement services. This analysis would include an evaluation of various implementation scenarios, including:
 - a. An ultra-low-cost investment approach;
 - b. A more traditional plan sponsor/investment /consultant approach; and
 - c. An outsourced Chief Investment Officer (including SIB) approach.
5. An analysis of the management of cash and cash-like funds that are not part of the PTFs responsibilities of the Board, in particular the SIIF.

In January 2014, after reviewing the various options provided by RVK, the Board entered into another agreement with RVK to implement the recommendations that came out of RVK's 2013 investment study and to provide performance monitoring services to the Board.

In July 2015, after reviewing the pros and cons of a potential partnership with the SIB, the Board voted four-to-one to continue to actively manage the permanent trusts' investment program through Department staff with the assistance of a retained investment consultant, while also working with the SIB to minimize costs and fees, and to improve efficiencies.

The Commissioner continues to work closely with SIB when negotiating money manager and service provider fees to ensure that both entities are getting the best possible fees, based on the cumulative assets involved. This has resulted in significant fee savings for both entities in the past 20 years.

As of fiscal year-end 2020, the Board had authority over \$5.75 Billion in investment assets. Transferring investment assets from the Board to SIB will NOT realize cost savings.

INVESTMENT FEES

Investment management fees paid by the Board would not change significantly, if at all, by moving the management of investments to SIB. In fiscal year (FY) 2020 the Board and SIB paid nearly the same rate on total investment management fees and in FY 2019 the Board paid a slightly lower rate on investment

management fees than SIB, according to the audited financial statements for the Board and SIB. These low fees are the result of both the Board and SIB pressing investment managers for the lowest fees possible, and from both boards coordinating to lower fees for managers they share in common. In June 2019, the Board engaged Novarca to review the investment fees of the assets under the Board's authority. The net fee savings Novarca was able to negotiate was \$83,400. This represented a 0.024% savings on the mandate and 0.002% for the PTFs. Novarca was not successful on any other mandates, which indicates the Board's trust fund fees remain industry competitive. This review included reviewing fund manager's who are shared between the Board and SIB to determine lower fees based upon combined deposits.

	Land Board		State Investment Board	
	2020	2019	2020	2019
Net Investment Assets	\$ 5,745,236,476	\$ 6,159,608,191	\$ 16,313,599,487	\$ 14,672,899,104
Investment Manager Fees	\$ 22,481,418 0.39%	\$ 22,663,157 0.37%	\$ 63,328,358 0.39%	\$ 60,391,710 0.41%
Investment Consultant Fees	\$ 172,988 0.003%	\$ 163,058 0.003%	\$ 596,272 0.004%	\$ 612,086 0.004%
Custodian Fees	\$ 118,792 0.002%	\$ 159,687 0.003%	\$ 1,433,874 0.009%	\$ 1,312,184 0.009%

During FY 2020 the PTFs paid \$22,335,336 in investment fees (including investment manager fees, custodial expenses, general consultant fees, and specialty consultant fees); this is a decrease of -1.7% from the \$22,711,405 in fees paid in FY 2019. The PTFs' average asset balance increased by 4.76% during the same period (including contributions and withdrawals), from \$4.63 billion in FY 2019 to \$4.85 billion in FY 2020. The primary driver of the decrease in fees is a result of lower incentive fees paid during the year.

Permanent Trust Fund

TABLE 1	2016	2017	2018	2019	2020
Investment Manager Fees	\$ 16,026,712	\$ 20,679,283	\$ 24,750,026	\$ 22,388,660	\$ 22,043,555
Custodial Fees	190,257	169,356	183,019	159,687	118,792
General Consultant Fees	147,917	145,000	148,625	163,058	157,633
Specialty Consultant Fees					15,355
Total Fees	\$ 16,364,886	\$ 20,993,639	\$ 25,081,670	\$ 22,711,405	\$ 22,335,336
Total Fee (bps)	46.3	53.7	57.4	49.0	46.1
Incentive Fees	\$ 1,375,889	\$ 3,513,737	\$ 5,819,245	\$ 1,810,455	\$ 898,695
Incentive Fees (bps)	3.9	9.0	13.3	3.9	1.4
Total Fees Ex Incentives	\$ 14,988,997	\$ 17,479,902	\$ 19,262,425	\$ 20,900,950	\$ 21,436,641
Total Fee Ex Incentives (bps)	42.4	44.7	44.1	45.1	44.6
Avg. Assets (\$ billion)	\$3.53	\$3.91	\$4.37	\$4.63	\$4.85

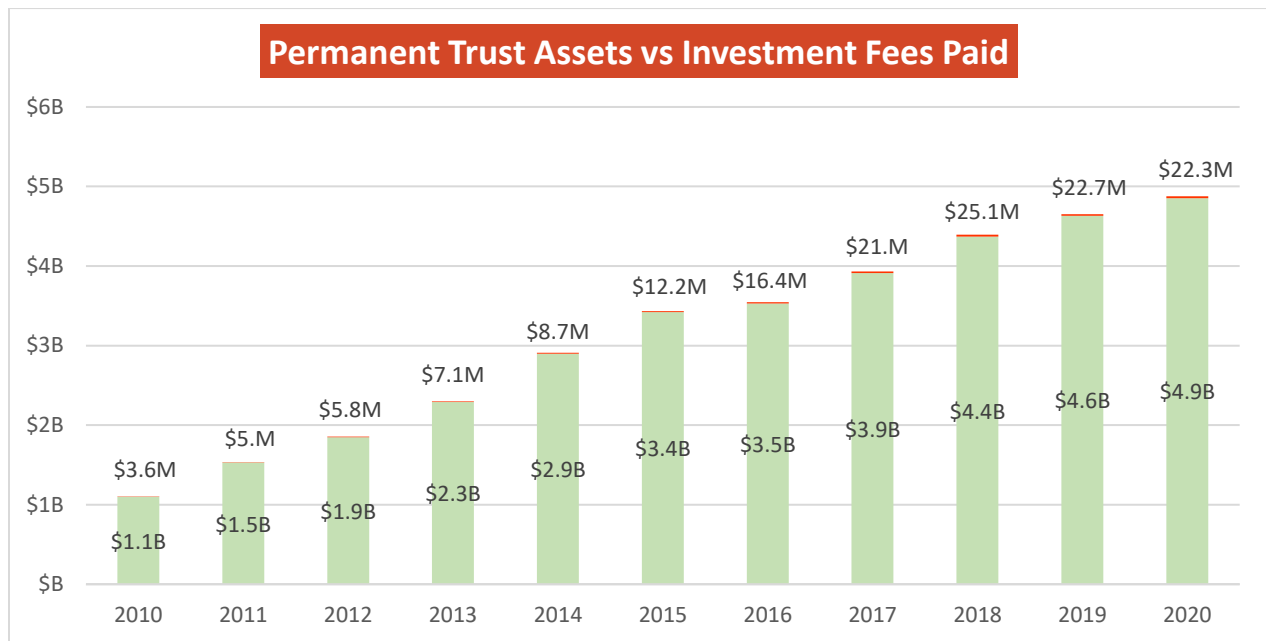
Table 1 summarizes the amount and effective rate of investment related expenses paid to manage the PTF's for each of the past five fiscal years. The increase in fees over the past five years is a result of several factors. During FY 2015 and FY 2016, the Board implemented a new strategic asset allocation for the PTFs. Three of these strategic asset allocation strategies (real estate, absolute return, and diversified inflation) required active investment which resulted in higher overall fees than the historically more passive, low cost strategy. Approximately 4 basis points from FY 2015 to FY 2016 were related to incentive fees on real estate.

From FY 2016 to FY 2018, expenses increased by \$8.7 million, of which \$4.4 million was a result of an increase in incentive fees paid to real estate portfolio managers. The remaining balance of \$4.3 million is due to trust growth, with a small portion of the increase due to minor changes made to the PTFs' asset allocation and investment structure over the past two years.

Table 1 also breaks out incentive fees paid for the past three years from the base cost (excluding incentive fees) of managing the investment program; it demonstrates that the base cost of managing the program has remained stable since the PTFs' current asset allocation was fully implemented in 2016. The minor increase in base costs during FY 2017 was a due to the real estate portfolio not being fully funded until June 30, 2016. The slight decrease in base costs during FY 2018 was driven by the addition of a low-cost mid-cap index fund to the PTFs' equity mix and other minor structural changes to the portfolio. Fees charged for some of the commingled funds in which the PTFs invest have also declined slightly.

Base management fees (excluding incentive fees) over the past five fiscal years have been consistently between 42 and 45 basis points. Total management fees, including incentive fees, have oscillated between 46 and 58 basis points owing to significant swings in incentive fees paid primarily to real estate managers. In FY 2017 and FY 2018, incentive fees accounted for 17% and 23% of total fees, respectively. Meanwhile, in FY 2016, FY 2019 and FY 2020 incentive fees accounted for 8%, 8% and 4% of total fees, respectively. Both FY 2019 and FY 2020 proved challenging for commercial real estate, which explained the lower incentive fees paid. From FY 2019 to FY 2020 total fees decreased by just -\$376,069 or -1.7%, due mostly to lower incentive fees paid.

All management fees that are negotiated as a "state" fee associated with investment funds will not decrease.



CUSTODIAN FEES

The custodian fees charged by Northern Trust would not change. Northern Trust currently charges the Board and SIB at the same fee rate per account and per transaction with consideration given to all of North Dakota's investment assets. Thus, moving investment accounts from the Board to SIB would result in zero savings on custodian fees.

CONSULTANT FEES

Similarly, investment consultant fees would not decrease. The Board's investment consultant fees have been slightly lower, but not significantly different, as a percent of assets compared to SIB's investment consultant fees in both fiscal years 2019 and 2020, per the audited financial statements for the Board and SIB. The Board would need to retain the consultant to aid in fund management decisions that constitutionally cannot be conveyed to SIB.

SIB ADMINISTRATIVE EXPENSES

In accordance with N.D.C.C. § 21-10-06.2, SIB charges its client accounts most of its administrative costs for managing the accounts. Based on SIB's FY 2020 financial statements that would come to around 0.01% of the Board's assets or an amount in excess of \$570,000. These monies would be paid by all of the funds the Board controls. The majority would come from the CSTF at over \$460,000 per year and reduce distributions by about 0.25%. The remainder would have a larger impact on the distributions of the smaller permanent trust funds, reducing distributions between 3% and 5% (please see chart below). And, as I will outline later this administrative expense will not have offsetting savings elsewhere.

School/University	2020 Assets	2020 Distribution	SIB Fee (est.)	Reduced Distribution	Negative Fee Impact
Common Schools	4,628,066,674	183,378,000	462,807	182,915,193	-0.3%
NDSU	73,118,794	252,791	7,312	245,479	-2.9%
School for Blind	13,058,151	47,725	1,306	46,419	-2.7%
School for Deaf	21,354,976	70,441	2,135	68,306	-3.0%
State Hospital	14,429,595	42,384	1,443	40,941	-3.4%
Ellendale	23,358,818	87,104	2,336	84,768	-2.7%
Valley City State	13,011,016	47,704	1,301	46,403	-2.7%
Mayville State	8,395,295	35,673	1,000	34,673	-2.8%
Industrial School	25,087,679	82,355	2,509	79,846	-3.0%
School of Science	18,832,991	74,276	1,883	72,393	-2.5%
School of Mines	22,470,496	78,895	2,247	76,648	-2.8%
Veterans Home	5,324,594	20,780	1,000	19,780	-4.8%
UND	35,394,338	132,701	3,539	129,162	-2.7%

INVESTMENT PERFORMANCE COMPARISON

The performance difference between the Board and SIB has not been significantly different over the years. As of FY 2020, the Board investments had a twenty year average annual performance of 5.02% and SIB's twenty year average annual performance was 5.70% for the Public Employees Retirement System and 5.28% for the Teachers' Fund for Retirement. More recently the PTF's performance has slightly lagged behind PERS, TFFR and Legacy Fund, mainly due to differences in asset allocation. Through its history the Board has had a greater reliance on fixed income than SIB. As recently as 2010 some fifty percent of the permanent trust assets were in fixed income. Since hiring the investment consultant RVK, the Board's investments have evolved into a more modern strategic asset allocation. In addition, the Department has recently hired two experienced investment professionals who have helped the Board make further changes to the PTF's asset allocation, and this transition continues today. Over time these changes are expected to improve investment performance.

It must also be noted that the PTFs asset allocation will and should differ from that of PERS, TFFR and Legacy Fund. Each of these funds have different strategic goals and cash flows, as such their asset allocations are designed to meet their unique structures, which means their performances will always vary from one another.

Permanent Trusts	Market Value as of 11/30/20	Asset Allocation	Return FYTD	Legacy Fund	Market Value as of 11/30/20	Asset Allocation	Return FYTD
Total Fund	5,280,369,340	100.00%	9.46%	Total Fund	7,894,446,185	100.00%	11.06%
US Equity	1,060,957,643	20.09%	20.42%	US Equity	2,437,604,947	30.88%	18.79%
International Equity	1,042,199,555	19.74%	17.58%	International Equity	1,670,883,793	21.17%	20.05%
Fixed Income	1,125,819,500	21.32%	3.32%	Fixed Income	2,590,019,588	32.81%	3.17%
Opportunistic	21,833,305	0.41%	11.82%	Opportunistic	725,515	0.01%	N/A
Absolute Return	784,016,888	14.85%	7.83%				
MLPs	106,589,735	2.02%	17.18%	TIPS & Infrastructure	746,765,497	9.46%	4.58%
Real Estate	731,764,330	13.86%	0.52%	Real Estate	344,181,873	4.36%	-0.16%
Cash - Transition	407,188,384	7.71%	0.16%	Cash	104,264,972	1.32%	0.03%

PEER COMPARISON

Alaska, Arizona, Idaho, New Mexico, Oklahoma, Texas, Utah and Wyoming all have similar PTFs, and all separate the investment management of their permanent funds from the management of other funds, such as their state's employee and teacher retirement funds. This is prudent given the liability each state has towards all funds under their authority and responsibility. One board managing all funds under similar asset allocations could expose the state to significant liability if the funds experience an extreme investment loss in a short period of time. Having funds managed by different boards varies the asset allocations of the funds and reduces the likelihood of all the funds experiencing significant loss at the same time.

ADDITIONAL CONSIDERATION

The Department's Investment Division is already run in a very conservative manner with only two full time employees (FTEs) dedicated to the daily management of the Board's investment assets. This is an exceptionally small investment staff by industry standards. Even if investment assets were moved to SIB, the Department would still need at least one of the two dedicated FTEs. The retained FTE would be needed to coordinate between the Department's accounting division and the Retirement and Investment Office (RIO) for cash management and reporting purposes, in addition to coordinating and administering the Board's various loan programs with the Bank of North Dakota. In the related fiscal note, under section 2.B, RIO would require at least two additional FTEs, either the transfer of the Department's FTEs or hiring two new FTEs to manage the additional investment assets.

Further, transferring investment assets from the Board to SIB would cause needless disruption in cash management. For example, the close coordination between the Department's Investment Division and the Department's Minerals Division made continuing allocations to the public school districts smoother after revenues fell precipitously during the 2020 oil market crash and the related mass shut-in of Board leased oil wells. That level of timely and smooth coordination would be more difficult if investment assets were moved to another agency.

Finally, transferring investment assets from the Board to SIB would cause needless duplication of effort by the two boards to ensure they are both in compliance with their fiduciary duties. The Board has a constitutionally mandated fiduciary duty to the perpetual trust funds and a statutorily mandated fiduciary duty, under N.D.C.C. § 15-03-04, to all funds under its control. Likewise, SIB has a statutorily mandated fiduciary duty, under N.D.C.C. § 21-10-07, to all funds under its control. Therefore, each board would have to approve the investment programs of any Board investment assets transferred to SIB. That would include both boards approving any changes to the investment policy statements, changes in asset allocation policies, hiring or firing investment managers, custodians and consultants, and receiving and approving all related investment reports. In addition, manager presentations to the boards would be duplicated, as would RIO staff presentations and reports regarding all Board investment assets. Also, the Board's annual audit of the Department's books and records would also require an audit of SIB and RIO investments of the Board's assets.

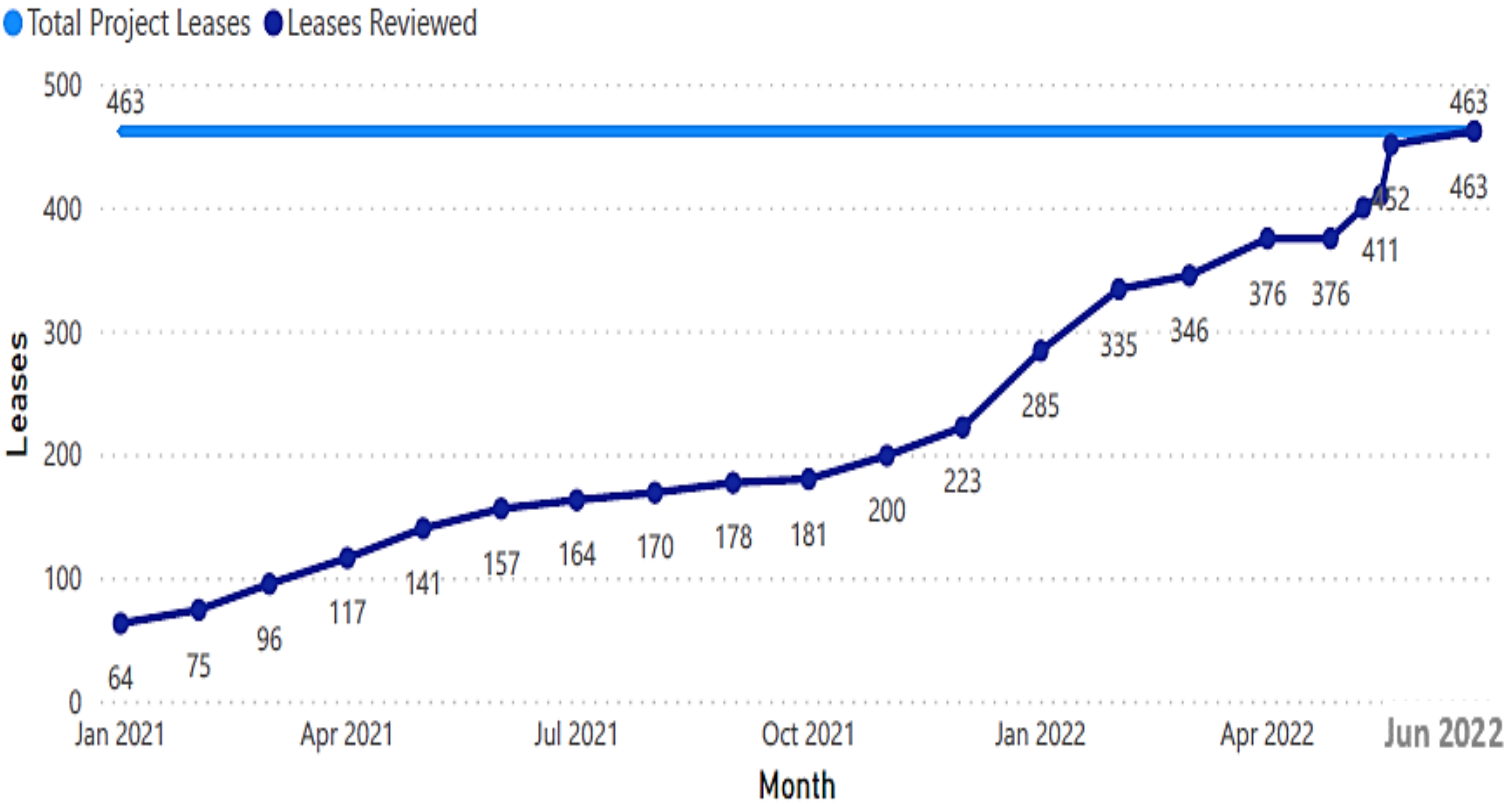
This duplication of effort at RIO, to comply with each boards' fiduciary duty, may well lead to additional staff requirements at RIO completely negating any staffing reductions at the Department. Indeed, in the related fiscal note, under section 2.B, RIO assumes the possibility of requiring a third additional FTE, in addition to the two mentioned above, to help manage the additional investment assets and reporting requirements.

In summary, the Board will not realize any savings by moving the investment assets to SIB. In fact, there is the strong potential for increased costs as a result of lost efficiencies for the Department. For these reasons the Board opposes House Bill 1202.

I look forward to working with the committee on this issue and would be happy to answer any questions.

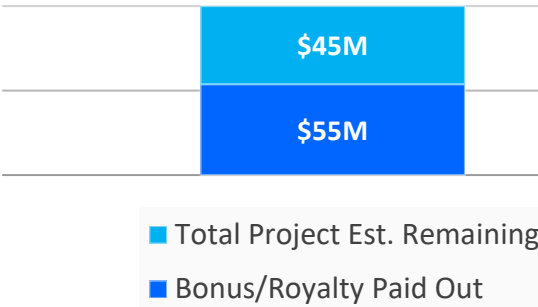
ACREAGE ADJUSTMENT SURVEY REPORT

PROJECT PROGRESSION

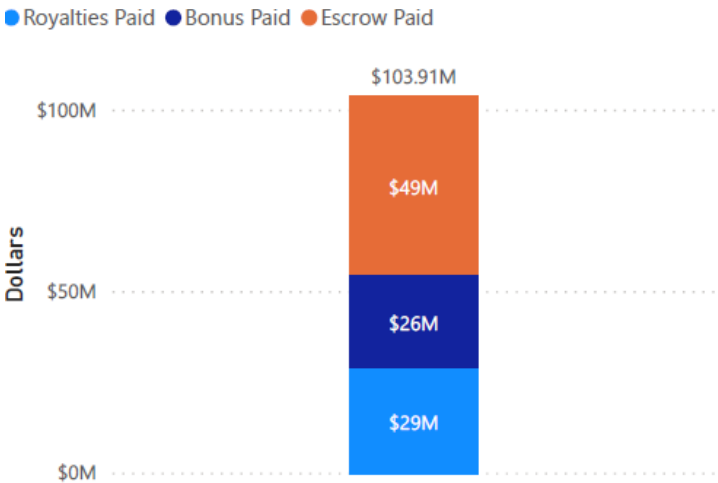


*5 Leases in Litigation Hold

PROGRESS TO ESTIMATED \$100M BUDGET PROJECT VALUE

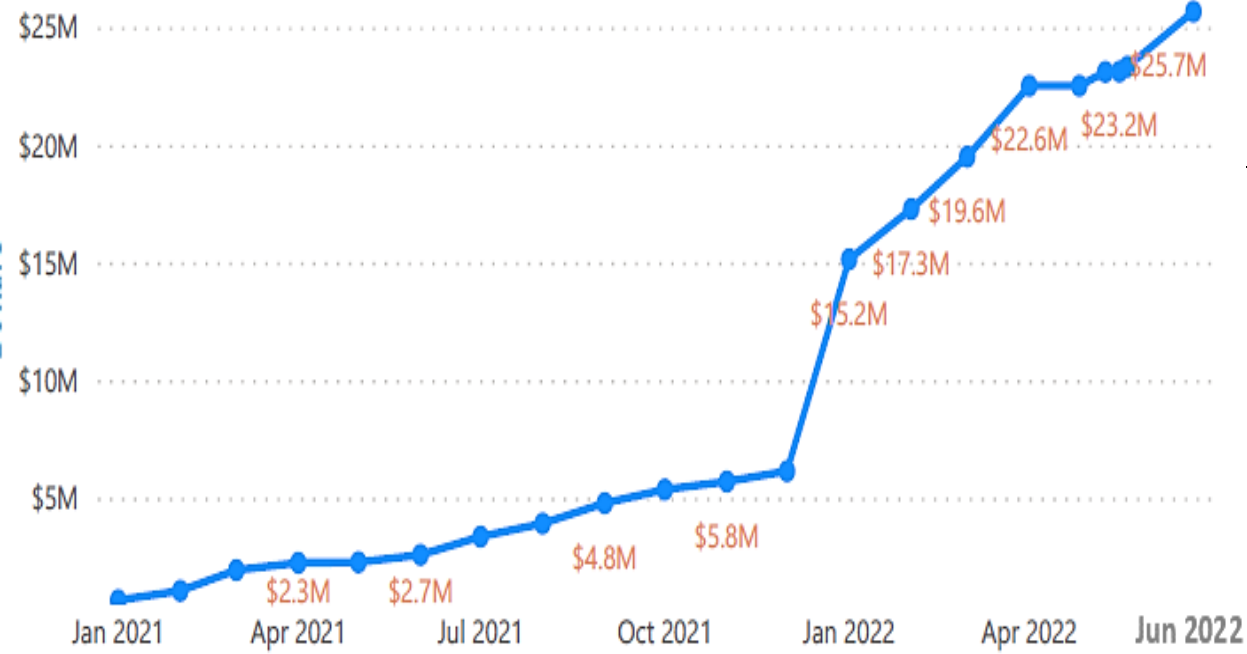


TOTAL REFUNDED/RELEASED TO OPERATOR

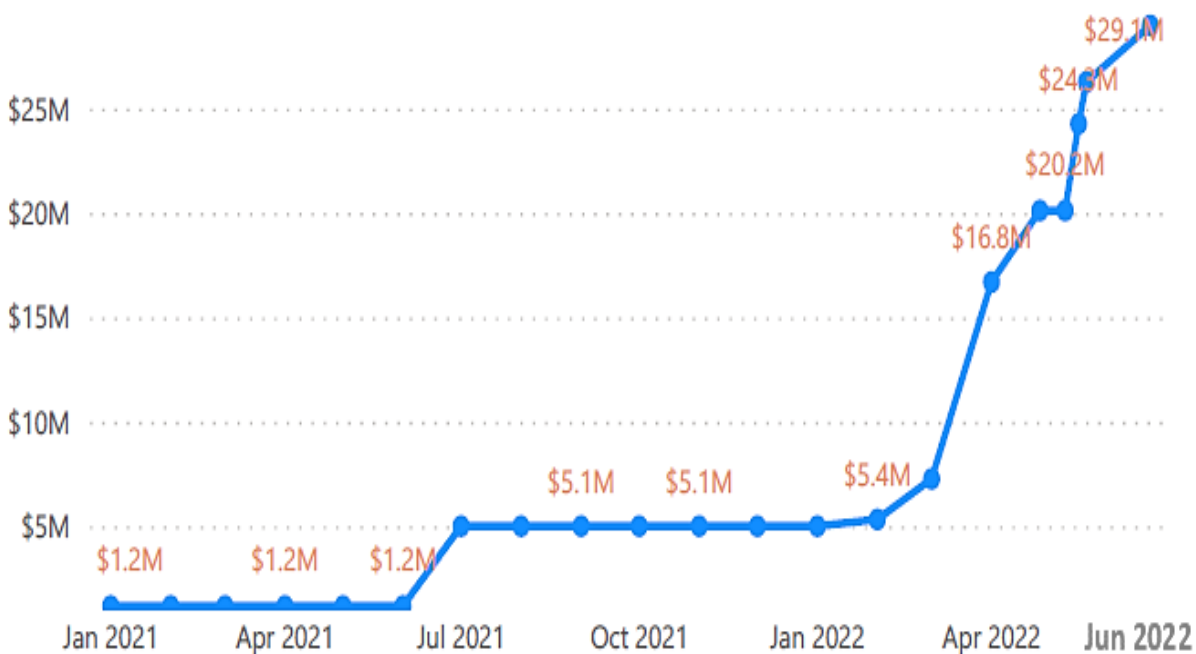


ACREAGE ADJUSTMENT SURVEY REPORT

BONUSES REFUNDED



ROYALTIES REFUNDED



RE: Litigation Update
(No Action Requested)

- EEE (OHWM title dispute / takings claim) – ND Federal District Court issued order May 31st granting Board’s motion to dismiss on all counts: federal preemption, sovereign immunity, takings. Plaintiffs appealed to 8th Circuit.
- Newfield (royalty deductions) – ND Supreme Court oral arguments June 30th
- Continental Interpleader (OHWM fed/state dispute) – “Acquired Federal Lands” issue briefing recently completed; awaiting ND Federal District Court decision
- Whitetail Wave (OHWM title dispute / takings claim) – Briefing complete; awaiting scheduling of ND Supreme Court oral arguments
- Wilkinson (OHWM title dispute / takings claim) – waiting for ND Supreme Court opinion; oral arguments - May 18th

Procedures for Executive Session regarding Attorney Consultation and Consideration of Closed Records

Overview

- 1) The governing body must first meet in open session.
- 2) During the meeting's open session the governing body must announce the topics to be discussed in executive session and the legal authority to hold it.
- 3) If the executive session's purpose is attorney consultation, the governing body must pass a motion to hold an executive session. If executive session's purpose is to review confidential records a motion is not needed, though one could be entertained and acted on. The difference is that attorney consultation is not necessarily confidential but rather has "exempt" status, giving the governing body the option to consult with its attorney either in open session or in executive session. Confidential records, on the other hand, cannot be opened to the public and so the governing body is obligated to review them in executive session.
- 4) The executive session must be recorded (electronically, audio, or video) and the recording maintained for 6 months.
- 5) Only topics announced in open session may be discussed in executive session.
- 6) When the governing body returns to open session, it is not obligated to discuss or even summarize what occurred in executive session. But if "final action" is to be taken, the motion on the decision must be made and voted on in open session. If, however, the motion would reveal "too much," then the motion can be abbreviated. A motion can be made and voted on in executive session so long as it is repeated and voted on in open session. "Final actions" DO NOT include guidance given by the governing body to its attorney or other negotiator regarding strategy, litigation, negotiation, etc. (See NDCC §44-04-19.2(2)(e) for further details.)

Recommended Motion to be made in open session:

Under the authority of North Dakota Century Code Sections 44-04-19.1 and 44-04-19.2, the Board close the meeting to the public and go into executive session for purposes of attorney consultation relating to:

- **Mandan, Hidatsa, and Arikara Nation v. United States Department of Interior Case No. 20-1928**

Action Record	Motion	Second	Aye	Nay	Absent
Secretary Jaeger					
Superintendent Baesler					
Treasurer Beadle					
Attorney General Wrigley					
Governor Burgum					

Statement:

“This executive session will be recorded and all Board members are reminded that the discussion during executive session must be limited to the announced purpose for entering into executive session, which is anticipated to last approximately one hour.

The Board is meeting in executive session to provide guidance or instructions to its attorneys regarding the identified litigation. Any formal action by the Board will occur after it reconvenes in open session.

Board members, their staff, employees of the Department of Trust Lands and counsel with the Attorney General staff will remain, but the public is asked to leave the room.

The executive session will begin at: _____AM, and will commence with a new audio recording device. When the executive session ends the Board will reconvene in open session.”

Statements upon return to open session:

State the time at which the executive session adjourned and that the public has been invited to return to the meeting room.

State that the Board is back in open session.

State that during its executive session, the Board provided its attorney with guidance regarding litigation relating to the sovereign lands' minerals claims.

[The guidance or instructions to attorney does not have to be announced or voted upon.]

State that no final action will be taken at this time as a result of the executive session discussion

-or- .

Ask for a formal motion and a vote on it.

Move to the next agenda item.