REGULAR MEETING OF THE
MONTANA BOARD OF INVESTMENTS
DEPARTMENT OF COMMERCE
2401 Colonial Drive, 3rd Floor, Helena, Montana
April 14, 2020
Conference Call Meeting

AGENDA

COMMITTEE MEETINGS

A. **Audit Committee** — **10:00 AM**
   1. Public Comment – *Public Comment on issues with Committee Jurisdiction*
   2. Custodial Bank Request for Proposals – ***Decision***

B. **Human Resources Committee   Upon Adjournment of Audit Committee**
   1. Public Comment – *Public Comment on issues with Committee Jurisdiction*
   2. Director of Fixed Income Hiring Recommendation – ***Decision***

C. **Loan Committee   Upon Adjournment of HR Committee**
   1. Public Comment – *Public Comment on issues with Committee Jurisdiction*
   2. Approval of Minutes
      a. February 11, 2020 Loan Committee Minutes
      b. March 24, 2020 Special Loan Committee Minutes
   3. INTERCAP Loan Requests – ***Decisions***
   4. MFFA Master Loan Program Request -
      Powell Memorial Hospital – Deer Lodge – ***Decision***

Tab 1 CALL TO ORDER – Karl Englund, Chairman — **11:00 AM**

A. Roll Call
B. Notice of Audio Recording
C. Public Comment – *Public Comment on issues with Board Jurisdiction*
D. Approval of Board Meeting Minutes
   1. February 11-12, 2020 Board Minutes
   2. March 17, 2020 Special Board Minutes
   3. March 24, 2020 Special Board Minutes
E. Administrative Business
   1. Audit Committee Report – ***Decision***
   2. HR Committee Report – ***Decision***
   3. Loan Committee Report – ***Decisions***
F. Comments from TRS and PERS Board Members
G. Comments from Board Legislative Liaisons

Tab 2 EXECUTIVE DIRECTOR REPORTS – Dan Villa — **11:20 AM**

A. Monthly Snapshot
B. Continuity Update

Tab 3 INVESTMENT POLICY REVISIONS – *Decisions* — **11:30 AM**

A. Montana State Fund - **CIO Jon Putnam, CFA, FRM, CAIA**
B. RE/NR Investment Policy Revision - **Ethan Hurley, CAIA**

Tab 4 PRIVATE INVESTMENTS - NEW COMMITMENTS –
Michael Nguyen, Thomas Winkler, CAIA — **11:50 AM**

Tab 5 NATURAL RESOURCES/REAL ESTATE – NEW COMMITMENTS –
Ethan Hurley, CAIA & Emily Kovarik, CPA — **12:00 PM**

RECAP OF STAFF TO DO LIST AND ADJOURNMENT – Karl Englund, Chairman — **12:10 PM**

Appendix

A. Annual Board Meeting Schedule
B. 24 Month Work Plan
C. Acronym Index
D. Terminology List

The Board of Investments makes reasonable accommodations for any known disability that may interfere with a person's ability to participate in public meetings. Persons needing an accommodation must notify the Board (call 444-0001 or write to P.O. Box 200126, Helena, Montana 59620) no later than three days prior to the meeting to allow adequate time to make needed arrangements.

MONTANA BOARD OF INVESTMENTS
DEPARTMENT OF COMMERCE
2401 Colonial Drive, 3rd Floor
Helena, Montana

MINUTES OF THE MEETING – February 11-12, 2020

BOARD MEMBERS PRESENT:
Karl Englund, Chair
Mark Noennig, Vice Chair *via telephone/Skype*
Terry Cohea
Jim Edwards
Jeff Greenfield
Bruce Nelson
Maggie Peterson
Jack Prothero
Diane Fladmo *(day one)*

LEGISLATIVE LIAISONS PRESENT:
Senator Fred Thomas
Representative Jim Hamilton

STAFF PRESENT:

Polly Boutin, Associate Financial Manager
Jason Brent, CFA, CAIA, Investment Officer Public Markets
Dana Chapman, Board Secretary
Frank Cornwell, CPA Associate Financial Manager
Roberta Diaz, Investment Accountant
Julie Feldman, CPA, Financial Manager
Kelsey Gauthier, CPA, Investment Accountant
Kirsten Haswell, Investment Analyst
Tim House, Investment Analyst
Doug Hill, Director of In-State Loan Programs
Ethan Hurley, CAIA Director of Real Estate/Natural Resources
Teri Kolnik, CFA, Investment Analyst
Emily Kovarik, CPA, Investment Analyst
Peggy MacEwen, Deputy Director
Savannah Morgan, Bond Program Officer
Rande Muffick, CFA Director of Public Market Investments
Michael Nguyen, Director of Private Equity
Mike Pettit, Director of Investment Operations
Jon Putnam, CFA, FRM, CAIA Director of Fixed Income
John Romasko, CFA Investment Officer, Fixed Income
Steve Strong, Investment Analyst
Dan Villa, Executive Director
Louise Welsh, Senior Bond Program Officer
Thomas Winkler, CAIA, Investment Analyst
Dan Zarling, CFA, CIPM Director of Risk Management

GUESTS:
Jim Voytko, President, Director of Research, Senior Consultant, Principal, RVK, Inc.
Dore Schwinden, Executive Director, Montana Public Employee Retirement Administration
William Holahan, Legal Counsel, Montana Public Employee Retirement Administration
Greg Gould, MBOI Counsel
Cliff Sheets

CALL TO ORDER

Board Chairman Karl Englund called the regular meeting of the Board of Investments (Board) to order at 11:49 a.m. As noted above a quorum of Board Members was present. Chairman Englund advised of video and audio recording of the meeting and asked for public comment on issues within Board jurisdiction. There was none.

Chairman Englund called for approval of the November 19-20, 2019 Board Meeting Minutes and asked if there were any changes or revisions.

Member Maggie Peterson made a motion to approve the November 19-20, 2019 Board Meeting Minutes. Member Jack Prothero seconded the motion. The motion carried.

ADMINISTRATIVE BUSINESS

Audit Committee Report

The Audit Committee met prior to the Board meeting. Committee Chair Maggie Peterson reported that Ms. Julie Feldman provided an update on the fiscal year 2019 Financial Audit. The Legislative Audit Division (LAD) issued unqualified audit opinions for both the Unified Investment and Enterprise Fund financial statements. Chair Peterson reported staff and LAD met for the exit interview on January 3rd which Chair Peterson attended via conference call. Chair Peterson commended staff and Executive Director Villa for their excellent work during the audit process. The BOI audit will be presented before the Legislative Audit Committee on April 27 or 28, 2020. LAD has posted the BOI audit to their website. The fiscal year 2020 LAD audit entrance conference will be held in March or April. The Fiscal Year 2019 BOI Annual Report was posted to the website by December 31, 2019 as required by law.

Ms. Feldman stated Wipfli staff will be on site in April for planning and testing in preparation for the SOC 1® Type 2 Report Audit. In December, Wipfli provided a management letter which included some recommendations, including physical building security, adherence to investment policies, ACH wire transfer, document shredding and emergency recovery procedures.

Ms. Feldman presented proposed policy revisions to the Governance Policy and two appendices. Appendix B - Code of Ethics has minor changes to remove reference to the Fun Committee which has been dissolved. Appendix N - Custodial Bank Policy has revisions regarding the Nationally Recognized Statistical Rating Organization (NRSRO). The proposed changes to the Governance Policy also include occasions where the Executive Director and Chief Investment Officer may pause decisions when there is an investment decision that requires Board input.

Committee Chair Peterson stated the Audit Committee approved all proposed policy revisions to the Governance Policy, Appendix B - Ethics Policy and Appendix N - Custodial Bank Policy, and made a motion for full Board approval. Member Bruce Nelson seconded the motion. The motion carried.

Human Resources (HR) Committee Report

The HR Committee met prior to the Board meeting. Committee Chair Terry Cohea thanked the Board members and staff who participated throughout the Chief Investment Officer (CIO) recruitment process.

Committee Chair Cohea made a motion to approve the hiring of Jon Putnam as CIO per the Committee approved contract. Member Maggie Peterson seconded the motion. The motion carried.

Committee Chair Cohea made a motion to approve the hiring of Rande Muffick as Deputy CIO per the terms and conditions of the Committee approved supplemental contract. Member Peterson seconded the motion. The motion carried.

Board Chairman Karl Englund echoed the compliments to staff for their help and thanked Committee Chair Terry Cohea on behalf of the Board.

Loan Committee Report

The Loan Committee met prior to the Board meeting. Committee Chair Jack Prothero stated the Committee approved three loan policies which require full Board approval. The three policies are the Commercial Loan Policy, the Infrastructure Loan Policy and the Value-Added Loan Policy.

Committee Chair Prothero made a motion to approve all three policies. Member Bruce Nelson seconded the motion. The motion carried.

Committee Chair Prothero noted the Loan Committee also reviewed a $7 million participation loan to Montana Craft Malt Company in Butte. TrailWest Bank in Missoula is a newly approved BOI lender and is participating 30% ($3 million) on the total amount of $10 million. The loan is fully federally guaranteed through the USDA Rural Business-Cooperative Service (RBS). Staff are authorized to approve federally guaranteed loans and Committee/Board approval is not required.

Committee Chair Prothero reported the Committee approved two INTERCAP loans. The first loan is to Sun Prairie Village County Water & Sewer District in the amount of $1,335,000 for interim financing in anticipation of (USDA) Rural Development Services (RD) long-term financing for wastewater system upgrades.

The second loan is to a new borrower, the Department of Corrections (DOC) in the amount of $2,750,000 to finance long range building at the Montana State Prison Facility (Prison) in Deer Lodge. The loan is for the expansion of the Prison's cook chill building. The loan is in the form of a general promise to pay with a 15-year term. DOC is contributing $250,000 to the total project cost of $3 million.

<u>Public Employees' Retirement System (PERS) and Teachers' Retirement System (TRS) Updates</u>
Member Jeff Greenfield reported the TRS Board met on December 6th. There was an update and discussion on the information system which has been underway for over three years. The work has been completed and the system is functional. The online forms are working well. The project came in under budget and creates more functionality to members for online changes and updates. The Board also completed the long-term strategic plan updates and is working on remodeling the space TRS vacated which will be rented or sold.

Member Maggie Peterson reported the MPERA Board met on December 12th. Two members, Marty Tuttle and Julie McKenna have resigned from the MPERA Board and a third member resigned last week. The Board has only seven members, so there will be three vacancies to fill.

The City of White Sulphur Springs and Plentywood have both joined the 457 Plan. The Board had an audit committee meeting and some recurring issues were raised. A total of 22 employers were audited and 15 had several issues. The largest was not offering retirement to employees which impacted 49 employees. Providing back contributions can be a major issue. There were also reporting errors for four employers. The Board also discussed three different litigation issues. Lastly the Board received an update on the new IT system. The system is up and running and the kinks are being worked out.

<u>Legislative Liaison Comments</u>
Senator Fred Thomas reported the legislature received an update last week on fiscal division revenues which remain strong.

Representative Jim Hamilton reported revenue is $80 million above estimates. During the legislative week all legislators were encouraged to attend a high-level presentation on pensions and there was a lot of interest. Many more legislators attended than had been expected. There were also presentations to the Legislative Finance Committee and Executive Director Villa reviewed the BOI processes for the SAVA Committee. There was also a deep dive presentation on risk assessment and the Pew Charitable Fund made a presentation. In February, Cavanaugh Macdonald will be providing a risk assessment.

Representative Hamilton noted study bill HB 715 provides for the Legislative Finance Committee to study long term budget stabilization including financial modernization and risk analysis.

EXECUTIVE DIRECTOR'S REPORT

<u>Overall Comments</u>
Executive Director Dan Villa noted in response to the question from Vice Chair Noennig at the November meeting on liquidity analysis, Mr. Jim Voytko would present a review later in the meeting. Director Villa added the report he presented to the State Administration and Veterans Affairs (SAVA) Committee is

included in the packet. The information includes the difference between expected returns as seen in asset allocation discussions and the actuarially required returns which staff talk about on a regular basis.

Mr. Voytko explained there is a lot of confusion about the actuary's estimate and the information that comes out of asset allocation studies. It would be a statistical oddity if they were the same. The reason is due to the different time horizons. The actuary looks over a much longer time period and factors in what an appropriate contribution level is to be sure the plan amortizes. The main purpose is to set plan contributions and meet normal costs using a different time horizon.

The expected rate of return from an asset allocation study is driven by a shorter-term horizon of 10+ years, much shorter than the actuary. The actuary is also spreading the costs of public service appropriately over the generations they have. The idea is to not push costs to future generations or to unfairly benefit the current generation while adhering to a prudent protection of assets.

Asset allocation considers a different time frame and has no connection to contributions. Investing is according to the prudent investor rule to create a diversified portfolio that, given the uncertainty of capital markets, will allow the fund to reap the benefits of what the market has to offer. The risk assessment you make must incorporate your obligation to protect the corpus. The actuary is not directly interested in that area. At times there may be cause to have a more conservative portfolio which may return below the expected actuary requirement. Other times, you may be comfortable with taking more risk and the assumed rate of return may be higher than the actuary rate. However, over the long term, they should be similar to each other.

Representative Hamilton asked for more information on the time frame boundaries used by RVK for capital market expectations.

Mr. Voytko noted the time frame previously was shorter at 10 years, although now the regression to the mean method is used. RVK uses a variety of methods to estimate the future, and often look at historical data and relative value standards. An asset may be high, and a regression to the mean assumed, but how long will that take? The gap extends beyond 10 years, but the timing is unknown; it can take a period of 10+ years. The time horizon used is always shorter than the actuary.

Executive Director Villa welcomed and introduced Peggy McEwen, BOI's new deputy director.

Short Term Investment Pool (STIP) Review

Ms. Kirsten Haswell provided an overview of STIP and noted the tagline is, safety first, liquidity second and income third. The goal is to preserve principal, provide participants with one day liquidity while adhering to the prudent principal, and managing for risk and liquidity.

STIP was nearly $4.5 billion at year end. Staff managed over 1,000 transactions worth more than $27 billion involving the work of several staff members. At December 31, 2019, the STIP Reserve equaled 1.16% of the STIP balance. The fundamental risk is breaking the buck, where a participant would be unable to redeem their dollar for a dollar.

Ms. Haswell explained there are four main risks associated with STIP, credit risk, market risk, liquidity risk and interest rate risk.

Credit risk is the risk a security will underperform; one default can make it difficult to return the dollar. This risk is mitigated by buying only approved names and conferring with risk management staff. For example, Boeing was downgraded at the end of last year. They were on BOI's approved list and totaled 2.5% of the portfolio value. Of that total, $90 million will roll off soon, and another $20 million runs out until November. Staff will not be buying more Boeing. As soon as Boeing was downgraded, staff removed it from the approved list.

Responding to a question from Chairman Englund, Mr. John Romasko explained anyone on the fixed income team can determine that a name be removed from the approved list.

Ms. Haswell added staff are not forced sellers when a downgrade occurs.

Ms. Haswell stated the second risk, market risk, includes factors due to the overall financial market environment. The best way to counter market risk is through diversification and to maintain maturity caps on different assets.

Ms. Haswell stated liquidity risk is linked very closely to market risk. You want to avoid any forced sales at unfavorable prices. Unique to BOI is the stability of state agency money. The accounting team advises when a local government is withdrawing a large amount of money and they must give a one day notice.

Ms. Julie Feldman added when staff have conducted outreach with local governments, they are requested to give ample notice of withdrawals up to $5 or $10 million.

Ms. Haswell explained the last risk, interest rate risk, is the risk of the portfolio value changing with fluctuations in the treasury rate.

Mr. John Romasko reviewed STIP performance. In recent years, performance has gone up due to the Federal Reserve increasing the effective funds rate. Treasury rates and risk premiums are a factor. The LIBOR (London interbank offered rate) has been replaced by the SOFR (Secured Overnight Financing Rate), which does not include a market risk premium. SOFR is in its infancy in building a forward curve, which is taking longer than anticipated. It started on pace, but LIBOR securities are still being issued, even past the sunset date, which is surprising.

Executive Director Villa noted Ms. Haswell has passed Level I of the CFA (Chartered Financial Analyst) and she is scheduled to take the Level II exam in June.

Mr. Romasko and Ms. Haswell then conducted a Bloomberg presentation detailing daily transaction procedures.

Investment Policy Revisions

Mr. Jon Putnam reviewed proposed STIP Investment Policy changes which consist mostly of clean up. One change clarifies language on rating agencies, removing references to specific rating agencies and substituting NRSRO (Nationally Recognized Statistical Rating Organization).

> Member Terry Cohea made a motion to approve the revised STIP Investment Policy. Member Diane Fladmo seconded the motion. The motion carried.

Mr. John Romasko presented proposed additional Schedules to the Separately Managed Investments Policy. The four new schedules are for the Department of Environmental Quality (DEQ) which would like to begin investing longer term. DEQ is now able to project with some reasonable certainty future expenditures which will enable them to invest in trust funds.

The four schedules include the Barker Hughesville St Response, Flying J CECRA Facilities Fund, Libby Asbestos Site State Cost and Luttrill Pitt – Oper & Maint.

> Member Maggie Peterson made a motion to approve the four new Schedules of the Separately Managed Investments Policy. Member Terry Cohea seconded the motion. The motion carried.

Mr. Jon Putnam presented the proposed changes to the Trust Funds Investment Pool (TFIP) Policy. The proposed revisions include revising the allocation to investment grade fixed income and cash from 82%-100% to 60%-100%. Yields have become low. Investment in equities is not allowed and most participants are very long term and cannot spend principal. Real estate provides a stable income stream with less volatility. RVK projections show better returns for real estate over 10 years, with low volatility and low standard deviation. Illiquidity is not an issue as participant funds are static. The real estate added would be core real estate which has an equity-like component to it. Real estate has steady returns through rents/leases and appreciation of buildings which grows the rent/lease payments. Staff are recommending an increase in the real estate allocation from 0%-8% to 0%-30%. It will take 3 to 5 years to increase to the higher level.

Mr. Voytko added RVK met with BOI staff as a team. Yields are low, and there is not much prospect for that to change. Staff have experience with real estate. There are two factors: it interjects some equity beta into the Trust Funds portfolio, and it can add additional return to the Fund. The tracking of equity beta of the fund would be monitored for risk. Additionally, it is a long term 3+ year project and RVK is supportive.

Member Prothero asked if the change had been discussed with fund participants.

Mr. Putnam replied no; however, they are mainly interested in the income received each year. There is a wide disparity of interest among participants. Participants want to know the income expected over the next year and they have been concerned with decreasing income over the past few years.

Responding to a question from Chairman Englund, Mr. Romasko noted participants already own shares in the Trust Fund which includes core real estate.

Director Villa added similar to private and other investments, staff has set an aspiration for higher illiquids, it's directional. An increase in real estate acts to counter the diminishing participant yields.

Mr. Putnam explained the real estate will be mostly core, although may include some debt-oriented strategies. The core real estate will be Class A properties and properties with steady return potential. Participants cannot handle a great deal of volatility. Most core real estate is U.S. oriented.

Mr. Ethan Hurley added core real estate is less than 2% international and is North American centric. It is highly stabilized with great credit, durable income yields and long-term leases.

> Member Terry Cohea made a motion to approve the proposed Trust Funds Investment Pool Investment Policy. Member Jack Prothero seconded the motion. The motion carried.

Mr. Putnam presented proposed changes to the Montana State Fund Investment Pool Investment (SFIP) Policy; final approval will occur at the April Board Meeting. Staff are proposing the addition of the high yield asset class with a range of 0%-7%. Currently the portfolio has no high yield and the buildup will be gradual. Reviewing the last several years of peer reviews, the vast majority have an allocation to high yield, averaging 3%. Staff have discussed the addition of high yield with State Fund. They are aware of and comfortable with the impacts.

Other proposed revisions include changing the fixed income benchmark from the Bloomberg/Barclays Intermediate Government/Credit Index to the Bloomberg/Barclays Intermediate Aggregate Index. The difference is there are no securitized assets in the Government/Credit Index. Staff like securitized over corporates as they are better priced. It is not an easier benchmark to beat, in fact it may be a bit more difficult. Staff will go before the State Fund Board in March to present the changes and will come before the BOI Board in April for final approval.

Mr. Voytko added for State Fund it is less about investment risk than regulatory risk. All insurance companies have an examiner; risk mitigation and assessment are on their side. Although asset liability risk is a factor, risk assessment is on their side.

In State Loan Program

Mr. Doug Hill presented the commercial and residential loan portfolios. The Commercial loan portfolio totaled $166,957,256 as of January 2, 2020. There are four loan reservations that total $16.7 million and nine loan commitments that total $56,428,132. The loan program yield, excluding the Veterans Home Loan Program (VA) is 3.0%. The Springs of Bozeman is complete and occupancy is ahead of schedule.

The Residential loan portfolio balance as of January 20, 2020 was $3,261,276 which represents 85 loans and has a yield of 6.58%. There is no activity except for payments. One loan is 90 days past due with an FHA guarantee. The VA loan portfolio as of January 20, 2020 had a balance of $45,771,427 representing 260 loans. Portfolio yield is at 1.88%. There are 10 reservations totaling $1,907,558 with a projected yield of 1.70%. There is one loan over 90 days past due totaling $172,131. As of January 31, 2020 there was just $1.1 million in remaining available funds.

BOND PROGRAM REPORTS

Activity Report

Ms. Savannah Morgan presented the INTERCAP Activity Summary and staff approved loans. There were three staff approved loans, two from repeat borrowers, Ronan and McCone County.

Chairman Englund asked why program activity was so slow.

Ms. Morgan stated at the end of the year, a lot of people are out for holidays, and many are aware of the INTERCAP interest rate change in February and could be waiting for that.

Ms. Welsh added one factor has been short-term interest rates are the same as the 5- or 10-year rates and borrowers may be locking in fixed rates with their banks. Staff expect the new rate will be around the Treasury rate. Staff are redeeming the 2005 Bond Series early. U of M did a large pay down of $11.5 million which it refinanced. BOI will take one series back that was tendered at 77%, which is normal. Remarketing will be successful; the tendered bonds are just under $70 million. If bond buy back is required, it can be managed. Piper Jaffray, the remarketing agent, recently merged with Sandler O'Neill & Partners, L.P. to become Piper Sandler Companies and they added 300 employees. The final INTERCAP rate will be determined February 24 and staff will know then if there are any bonds that are not remarketed. The spread is then added on, with a maximum spread of 1.5%.

Member Maggie Peterson asked if the pay down from U of M has hurt.

Ms. Welsh replied yes, it was a lot of cash and now there is too much; although staff usually redeems bonds two years before maturity.

LITIGATION DISCUSSION

The meeting was closed to the public for a litigation discussion at 3:15 p.m.

The regular meeting was called back to order at 4:24 p.m.

> Member Jack Prothero made a motion to authorize MBOI counsel, Luxan & Murfitt, PLLP, to file an amicus brief on behalf of the Montana Public Employees Retirement Board on case #OP 20-0063. Member Diane Fladmo seconded the motion. The Motion carried.

With no further business before the Board, the meeting was adjourned for the day at 4:27 p.m.

BOARD MEETING DAY 2

CALL TO ORDER
Board Chairman Karl Englund called the regular meeting of the Board of Investments (Board) to order at 8:30 a.m. A quorum of Board Members was present. Chairman Englund advised of video and audio recording of the meeting and asked for public comment on issues within Board jurisdiction. There was none.

Private Investments – New Commitments
Mr. Michael Nguyen reported there was one new commitment of $45 million on November 27, 2019 to Ascendent Capital Partners Fund III. Ascendent is a China manager which staff first met with in 2018 and again in 2019. The team came from JP Morgan and D. E. Shaw & Co.

Ascendent has a high-level focus on the macro theme of the upgrade consumption of the middle class in China. An example of that is with a focus on education for kids. A lot of households have four grandparents, two parents, and one child. The future prestige of the family is on that one child. Another theme is health care with the growing elderly population, along with millennial spending and technology. The largest coffee chain in China only accepts payment via app, not cash. Ascendent has a value investor tilt rather than high growth. China multiples have been very high compared to the U.S. and they have been involved in these areas for a while. Their track record is very good; they have completed 15 deals with no losses.

Member Peterson asked whether, as a limited partner where BOI acts as an observer only, it is valuable.

Mr. Nguyen replied yes, there is value in sitting in and participating. Ascendent is reserving LPAC membership for much larger investors and did not want to make an exception for BOI. However, staff have a good relationship with them and although we have no formal vote, we still have a voice.

Chairman Englund asked if there were concerns with China due to tariffs and the Coronavirus.

Mr. Nguyen agreed, timing was not great with the virus, although he didn't believe the tariffs were an issue. Ascendent is more involved with domestic consumption within China; the virus impacts retail and travel more than consumption. No one knows yet what the long-term impact of the virus will be, it's too early to tell. There have been differing projections on how the virus will impact China GDP, 3% vs. 5%. Staff have received status updates and forecasts from other resources, such as economists.

Real Estate and Natural Resources – New Commitments
Ms. Emily Kovarik presented the commitment to Walton Street Real Estate Debt Fund II. Staff have been actively considering private real estate debt and have looked at over 65 funds. The key attributes of Walton Street include the tenured team, that they have a real estate equity side and have the ability to take back an asset in case of default. Staff committed $100 million on December 20, 2019. They have a core plus and debt platform and have closed on $2.8 billion over the last two years. The loans are secured by income producing assets, and they only lend in U.S. markets. Walton Street has an experienced real estate platform and a great team.

Responding to a question from Member Prothero, Ms. Kovarik stated Walton Street focuses on major metropolitan areas, such as Chicago, LA, and those on the east coast. They focus on multifamily and industrial as a mezzanine lender. They are not buying on the secondary market and they sell off the senior piece of the loan.

Member Jim Edwards asked for more information on the mezzanine portion of the loan.

Mr. Hurley explained the partner along with the bank originates the whole loan, which has a Part A and Part B piece. They sell the senior piece of the loan value to the bank and they hold on to the B which earns a higher yield. The borrower may not have the 35%-40% of equity required for a bank loan, so the equity sponsor goes to alternative sources of capital, such as a debt fund, to originate the part of the loan which the bank will not fund. It is a structural issue due to the bad loans during the Great Financial Crisis.

Ms. Kovarik presented the staff commitment to Oak Street Real Estate Fund V. Staff committed $30 million on January 23, 2020, a re-up of a manager with a proven track record. Oak Street is institutional and registered with the SEC. They have had strong returns on their funds. They source through a proprietary system with a focus on best return. BOI was able to be part of the first close of Fund V. Oak Street is just finishing up Fund IV which has a net IRR of 8%; earlier funds were even higher.

Oak Street invests in assets with a triple net lease. The manager buys the asset then leases it back to the tenant, who is responsible for maintenance and taxes. Oak Street is involved with tracking the care of the assets.

Ms. Kovarik presented the staff commitment to DRA Growth and Income Fund X, LLC. A re-up with an existing manager, staff committed $30 million on November 26, 2019. DRA has a proven track record in value added non-core real estate. BOI has invested in DRA since 2007 and has invested in Funds VI, VII, VIII and IX with an average net IRR of 14.5%. DRA is a highly institutional manager and they are also registered with the SEC. DRA has a strong culture with experience over many market cycles; they manage large and small deals. They limit downside risk and two thirds of return is cash flow.

Senator Fred Thomas asked about staff reporting preferred return vs. actual return to the Board.

Mr. Hurley stated staff can easily include returns on the briefs which may be helpful, particularly on serial re-up managers. DRA has been very consistent with double digit returns.

Chairman Karl Englund asked if the management fees for DRA are less.

Ms. Kovarik explained DRA approaches fees differently than other managers. Fees are based on gross asset cost, which is not the same as committed capital. Staff analyzed it and found 1.5% is the average, therefore the fees are market comparable.

Mr. Hurley presented the staff commitment to Ecosystem Investment Partners IV, LP. Staff committed $45 million on December 5, 2019. EIP uses a mitigation banking/environmental restoration strategy and have solid, steady performance. They are 100% founder/employee owned and each of them invests in the funds. Their approach to partnership uses good communication, accountability, and they are disciplined. Mr. Hurley noted he is looking forward to seeing fund performance, adding he has followed the firm since Fund II and has talked to them over the years.

Mr. Hurley presented the staff commitment to Mountain Capital Partners II, LP. Mountain Capital is a re-up manager. Staff committed $30 million in January 2020. Mountain Capital uses a leveraged buyout approach, investing in distressed companies. They don't buy debt or take control; they source deals from hedge funds with exploration and production using a focus on upstream companies. They use a deep value approach and run a concentrated portfolio. They are uniquely situated for the current environment; bankruptcies have continued to rise. They have a solid team, with good returns through a downturn in the oil and gas industry. Return has been 10.7% net IRR since inception. Oil and gas are never going away. While ESG (Environmental, Social and Governance) is contributing to oil and gas apathy, it remains a cyclical industry and will cycle back. Now is a good time to invest.

Staff conducted an onsite visit and met all team members. As part of the process of assessing teams, staff met with each person separately to assess the culture of the organization.

CONSULTANT REPORT

Quarterly Performance Report – RVK, Inc. – Mr. Jim Voytko

Mr. Jim Voytko reviewed the Executive Summary of the December 31, 2019 quarterly performance. The fund is doing well, although not quite hitting on all cylinders. Calendar year to date performance has been astounding for capital markets; a bit of a surprise given the high valuations. Large cap equity markets have had great performance, small caps a bit less, although still good absolute performance. On the international side, the MSCI EAFE has had good absolute returns. The bond markets interest rate decline over the most recent quarter means a dependence on yields which are very low. The U.S. market outperformance over foreign markets is a 10-year phenomenon with double digit returns over 10 years on an annualized basis. Valuations are historically high in equity markets with a big gap in U.S. vs. international markets.

Real estate market returns are going down, although the fund has benefited from being in the NCREIF ODCE market; over more recent periods the annualized rate of return has gone down.

For one-year absolute returns, many asset classes exceeded the actuarial rate of return, which is good for valuation and funding ratios of the pension plans. The yield curve is flat, and was inverted slightly for a period, penalizing long term investing. The fund is doing well, although not as well as recent years.

There are three ways to look at performance: vs. the actuarial rate of return, vs. benchmark returns and vs. peers. Investment performance of the fund has exceeded the actuarial expected rate of return over the 3-, 7- and 10-year periods. Performance execution vs. the benchmarks for each asset class and the total fund have fallen a bit short, and in the last year, a lot short. This is partly attributable to the illiquid private investments which are benchmarked to the public equity market. Public markets went up 31% in 2019 and it was tough for private equity to catch up. However, it is not too concerning, and the lag effect washes out over time. The third measurement is how the fund is performing vs. peer plans. This is the least important given that other plans have different liabilities, risk preference, and different asset classes. Although it is the least useful measurement, it is still worth reviewing. The plan fares well vs. peers, which includes plans at $3 billion and above. Over 5-, 7- and 10-years the plan is doing well, although not as well recently, ranking just above the median. It is difficult to stay at the top; the downward trend is not concerning. To get into the top quartile or decile, you need to be consistently above the median over time. The plan gravitates higher vs. the long-term rankings.

Mr. Voytko explained risk is tracked through how volatile fund performance is. Returns are fine, but it's best to avoid too much risk. For return vs. risk, the benchmark has more risk than the median plan. Actual recorded volatility of the portfolio is less than the benchmark, which is a good sign. Plan returns are above the median, although you took less risk less than the median; the best place to be. Some funds are the opposite.

Mr. Voytko reviewed returns for the Trust Funds Investment Pool. Returns have seen a gradual decline with the exception of capital gains due to the interest rate decline. Low returns last quarter prompted staff to look at investment exposure to increase yield. The execution of the Trust Funds Investment Pool has been excellent, and it has beaten the Bloomberg US Aggregate Bond Index consistently.

Mr. Voytko reviewed performance for domestic and international equity. Absolute returns have been good, although there has been a bit of an execution return difference. Over the 1-, 3-, 5-, 7- and 10-year, the portfolio has done better than the international benchmark, which is not true for domestic equity. Domestic equity from an execution point of view has fallen short of the benchmark, but outperformed peers; ranking above the median. BOI has been better at pursuing domestic equities than median plans.

Mr. Voytko noted the opposite is true in the case of international equities; BOI has performed better than the benchmark, but ranked below peers. For international equity and emerging markets, the median manager outperformed your fund.

Mr. Voytko explained although there is downside risk in all categories, equity is the most volatile. In a financial crisis, the market can decline 20%. It is difficult for private equity and bond markets to decline that much. Total fund sensitivity to the U.S. equity market indicates harm if a big downturn occurs. The fund's sensitivity has been declining since about 2014, which is a good sign. Although it would not protect the fund value, you are not in a position to be exceptionally harmed. Other fund allocations which provide diversification help the total fund. If the U.S. equity market falls 10%, the total portfolio should fall more like 5.5%, due to the fund sensitivity. You have been able to invest heavily in the equity market, but the total fund has some protection in a downturn. All diversifying assets have very little sensitivity to U.S. equity markets. Uncorrelated exposures help.

Illiquid Asset Allocation Risk Analysis

Executive Director Villa stated in response to Vice Chairman Mark Noennig's question in October asking how illiquid the pension fund can be and still make benefit payments, staff met with RVK for discussions on liquidity and risk.

Mr. Voytko added it was a classic example of good collaboration with staff. This question is coming up with a lot of institutional investors. Assets have been moving into less liquid assets which raises the question, why invest in illiquids? To avoid risk, you buy T-Bills; however, there is little return. The capital market is where the risks are, and return is generally associated with risk. When you take a risk premium with domestic equity, the result is generally higher equity values. Over time, a premium return is provided over non-risk assets. For private equity and real estate, you should get paid for the added risk, and over time there has been a premium for tying up your money. This Board has gradually increased illiquid asset classes, real estate and private equity, and although they provide the benefit, there is a risk if you need cash immediately. You may face a penalty, or it is not possible at all. There are various types of risk pursuing an illiquidity premium. If you have cash tied up and need to make payments, you would need to take cash out of the portfolio and if other areas of the market are at low valuations, you may need to sell at loss.

Member Terry Cohea asked if there would be enough cash and fixed income if needed.

Mr. Voytko replied yes, you would be able to meet your liquidity needs, although it depends on how long of a drawdown and whether it persisted for years. For example, if you ramp up the allocation of illiquid assets to 40% from the current 27%, you would expect a greater effect, but there would still be enough cash/core fixed income to survive without having to sell public equities. It would also mean a significant decline in public equity. It could be dealt with by rebalancing and you could meet liquidity needs and not have to sell public equity. In that case, you could add to public equity. Illiquids would approach half of the portfolio, but a downturn is unlikely to last years.

Executive Director Villa noted benefits payments are around 3% of the portfolio.

Mr. Voytko reviewed portfolio volatility. Volatility is the enemy of long-term compound returns, although it is very difficult to determine. One question is the various levels of illiquids, and whether they increase expected volatility risk to the portfolio. Based on assumptions, yes. Ramping up illiquids causes portfolio risk to increase, although it is difficult to determine by how much, and it seems less volatile due to the lag.

Another risk in the illiquid space is the dispersion of returns among managers is much larger. There is always risk in manager selection, which may leave you short. The gains and benefit and risks are much different in private investments. You may have managers who have historically outperformed but have recently underperformed. The difference between top and bottom quartile equity managers is 133 basis points in small cap; while meaningful, it is not large. In private real estate and private equity, the gap between top and bottom managers is 2000 basis points, extremely higher than equities.

The risk of illiquid investments is first in manager selection, which is very important in this asset class. Due diligence is very appropriate for addressing risk. Portfolio volatility is the next risk, although it is masked and has a greater penalty to returns. Forced selling is also a risk but is the one of least concern; over long periods, it doesn't compare to adverse manager selection.

INVESTMENT UPDATE (Quarter Ending 12/31/19)

CIO Update

Mr. Jon Putnam reviewed the retirement plans. Value was added over the last year, minus cash outflows for benefit payments. Returns were very good across the board for all asset classes and significant value added to pensions over the last year. There was a significant boost to pension plans over the 5- and 10-year periods and returns overall are good over the last 10 years.

Pension plan returns are all similar due to the CAPP (Consolidated Asset Pension Pool) allocations. Since inception in July 1994, over 25 years, the plans are hitting actuarial returns over the long term. Asset class breakdowns as of December 31, 2019 reflect the six fixed income categories that were combined back into the core fixed income asset class, which was completed in the fourth quarter.

Mr. Putnam noted good returns across the board. Compared to the current midpoints, the portfolio is slightly overweight domestic equity and a bit over in international equity. Core fixed income will come down, and staff are looking to increase midpoints for private equity and real estate over time. All asset classes are within policy ranges. The higher cash levels have been coming down and are close to the goals staff set. Core fixed income will be used over the next several months to fund benefit payments. Staff may use cash to add to domestic equity if there are opportunities.

Mr. Putnam noted total plan and asset class cash at December 31, 2019 was 2.55% and is closer to 2.0% currently. Staff are working on a risk management dashboard.

Risk Management

Mr. Dan Zarling presented a summary of risk management. Price to earnings (P/E) data from MSCI, the benchmark provider, includes a valuation of ranges for all benchmarks assigned to asset classes. The P/E is calculated for each benchmark monthly, and over the long term of 25-30 years shows the dispersion of valuations from lowest to highest and the median valuation vs. the current index valuation. The lows occur around recession periods and the highs around market peaks, but valuation extremes can persist, so they are not good signals for market timing. Typically, value investment managers believe low valuations will eventually revert upwards to the mean. If the current valuation is above or below the mean, it might indicate that there is increasing valuation risk (overvalued) or an opportunity to buy (undervalued) assets. Staff look at both extremes.

For fixed income, core and non-core, investment grade and high yield, the spread (OAS) for US Corporates is a good proxy for risk. Fixed income ranges are wider than you'd expect as spreads widened out during the Great Financial Crisis. Bond valuations get cheap during recessions which mean spreads are wide to compensate investors for the risk of default. One important metric not shown is the ten year treasury yield and the yield curve, which are at historic lows and trending lower.

Mr. Zarling stated illiquid investments currently make up 23% of the portfolio, or $2.8 billion. There is adequate liquidity based on the current illiquid $2.8B net asset value (NAV). The back of the envelope 50/50 rule of relating total illiquid NAV to unfunded commitments and calculating potential capital calls equates to $750 million of required liquidity per year. The key assumption is having enough liquidity to cover 50% of the projected unfunded commitments if called in one year. There needs to be enough daily liquidity to avoid forced selling to cover potential capital calls and pension benefit payments for one year. In stressed market environments, fixed income securities trade at unappealing wide spreads such that selling is unwise. Keeping a strict definition of liquidity to cash, money-market instruments and treasuries avoids accepting un-natural wide spreads for fixed income transactions.

Cash Asset Class

Mr. Mike Pettit stated staff monitors cash daily. In July, staff started a review of cash balances and discussed it with RVK. Retirement plan STIP was at 2.97% as of June 30, 2019. The balance was slowly reduced and in January we reached the target of 0.75%. The cash asset class includes the State Street STIF account, a very liquid daily sweep vehicle, and STIP within the asset class. As of December 31, 2019 there was 25% in STIP and 75% in STIF. From June 30, 2019 to December 31, 2019 total plan and asset class cash was reduced from 5.92% to 2.55%. Staff is exploring different cash vehicles at State Street. STIF has an early deadline each day and staff are seeking a late day vehicle.

Private Investments

Mr. Michael Nguyen stated the private environment is generally fully valued, although there was some cooling off in 2019 with a 20% reduction in the number and value of deals. Valuations are still fully valued for buyouts driven by cheap debt. The leverage is 5.9 times for buyouts, driving valuations. The portfolio is well positioned. Staff are very stringent with new relationships; we are looking for value not just growth.

Portfolio performance has been strong. Staff are very selective as we continue to increase the credit allocation and are looking at sector specialists. It has been busy so far this year. Staff expect three or four more deals for the next meeting. Through the first quarter staff have completed about half of the pacing for the year. We continue to give preference to existing managers. Cash flow was negative $12.82 million for the quarter ending December 31, 2019. We expect cash flow to be negative moving forward due to the J curve and ramping up of the portfolio. Staff are starting to look at more European opportunities. Staff have not spent much time in Europe and do not have many contacts. Mr. Nguyen added he will head Berlin soon and will meet with larger cap managers as well as some smaller managers.

Real Estate

Mr. Ethan Hurley stated real estate fundamentals are healthy, although moderating. Deal flow remains robust, with $800 billion globally last year. REITS have done well and fundraising is high. Staff are adding to the existing REITS exposure and will become more income reliant going forward. Real estate performance is good on both absolute returns and relative to the benchmark.

The portfolio is North American centric, and staff are not looking to global areas, such as Asia. Returns show no real need to invest there; the additional risk is not worth the investment. The U.S. is still the largest and deepest market in the world and provides sufficient diversity. Portfolio leverage constraints are good; cash flow is negative for the quarter ending December 31, 2019 due to investments.

The portfolio is broadly diversified with a core focus on high conviction managers. Staff are looking at separate accounts for portfolio structure. The real estate industry is geared towards creating value and trading away, realizing value. The BOI fund is a perpetual vehicle. If we can create prudent diversification with moderate leverage it would create long term durable cash flows. Rather than trade it away, we could continue to manage and collect the income streams over time. Staff are having conversations with managers who have property management leasing staff, construction, and financing staff which could manage assets long term on our behalf. This would provide more control and lower fees in the future and we may move out of funds. This offers a better way to manage the real estate portfolio longer term and would provide durable cash flows through income distribution. We could still sell the assets at any time.

Member Maggie Peterson asked if operation and maintenance would be factors.

Mr. Hurley replied selling when faced with functional obsolescence is an issue. We can develop a management plan and budget for maintenance.

Representative Jim Hamilton asked what turnover would look like on a separately managed account if the life of a fund was 15 years.

Mr. Hurley replied most real estate funds have a fund life of 7-10 years. In the case of a separate account, the terms of the agreement are created from scratch. It could be a closed end or open fund in perpetuity, where you could hold or sell and recycle in and out on another separate account. You buy deals, create value, generate an 8-9% yield and actively manage and maintain it through time. One benefit is the reduction of frictional costs, as you source new deals with bigger, stronger relationships

Mr. Hurley stated staff time would increase initially, but over time would stabilize as relationships were built. There are investors who are doing this where entire staffs are dedicated to due diligence on managers and entering into separate account relationships. Some manage funds and some manage real estate directly through the purchase.

Mr. Hurley noted staff will present a redefined investment policy statement for real estate in April to specifically address the sizing, prudent diversification, and individual size limits for managers. There is a cap on natural resource managers of 1% for any one manager; staff will propose no more than 2% for a single real estate manager.

Natural Resources

Mr. Hurley reviewed natural resources. The key takeaway is oil prices have recently sold off, some due to Iran, some due to the Coronavirus. OPEC continues to discuss production cuts and U.S. production continues to grow. Fundamentals for MLP remain strong and the fundraising market remains steady. Staff are hoping for a reversion to the mean.

The portfolio is North American centric; mitigation banking and aggregates strategies are growing as staff continue to look for other strategies. The portfolio is energy heavy. Cash flow was negative for the quarter ending December 31, 2019 due to recent large capital calls.

Core Fixed Income

Mr. Jon Putnam reviewed core fixed income which has been rolled back up. The U.S. Treasury curve remained mostly flat and was down about 100 basis points over the year. Inflation was subdued with no dramatic moves. Spreads have been tight on the low end on corporates. Staff have added more to securitized assets which are looking a bit more favorable. The markets are open with good volumes and corporate issues continue to be healthy. Staff rebalanced the portfolio in December. Some treasuries and TIPS were sold to reallocate mostly into mortgages, some corporates and long treasuries. There was a bit of a selloff in December; the portfolio is under yielding the index. Yield drives what we do; there will be modest underperformance over the start of the year.

Non-Core Fixed Income

Mr. Rande Muffick reviewed non-core fixed income which includes the three high yield managers. Return was nearly 14% for the calendar year. Managers are outperforming investment grade corporates and treasuries. High yield spreads are still tight. All three managers use defensive strategies and lag a bit in strong markets.

Domestic Equity

Mr. Muffick stated the domestic equity large cap index returned 30.75% for the calendar year, although small caps lagged. The China tariffs were a factor. Staff do not anticipate any upcoming manager changes. Results for managers were mixed for the calendar year, underperforming the benchmark by about 40 basis points. Higher valuation stocks generally outperformed. Big tech stocks have done well; the big four make up about 20% of the S&P 500. Even with mixed results, staff have confidence in our managers. Returns vs. peers are good due to the high allocation to passive and manager selection. Large cap active is now 23% and staff have reduced active management exposure.

International Equity

Mr. Muffick reviewed international equity. Staff are generally pleased with international equity which lagged U.S. markets in the last year. The lighter portfolio allocation vs. peers paid off; return was 22.86% for the year. Although the portfolio is doing better vs. the benchmark, performance is not as good vs.

peers. The portfolio was restructured a few years ago. All managers except one outperformed their benchmark for the calendar year.

STIP (Short Term Investment Pool)
Ms. Haswell noted STIP was covered earlier, and added the growth in STIP was due mostly to the increase in the General Fund.

Montana State Fund
Mr. Jon Putnam presented a summary of State Fund. Performance has been good with a return of 9.60% for 2019. Staff have been working towards reducing corporate bonds and moving more into mortgages. Staff made a modest increase in core real estate to JP Morgan Core Real Estate Fund which is gradually replacing UBS.

Trust Funds Investment Pool (TFIP)
Mr. Putnam reviewed the Trust Funds Investment Pool. The Board has approved the policy changes. Returns have been solid; total portfolio outperformed the benchmark as of December 31, 2019 by 26 basis points. With maturities, staff will move more into mortgages and shorter maturities.

Executive Director Villa reviewed items on the “to do” list for the next Board meeting:

1. Domestic Equity Review
2. Benchmark Review
3. Vote on State Fund Policy revisions
4. Investment Policy revisions
5. Update on Director of Fixed Income and Fixed Income Analyst positions
6. Begin 2021 Budget process
7. Staff will include returns from prior funds for re-up managers in private investment briefs

Having no further business before the Board, the meeting adjourned at 12:25 p.m.

Next Meeting
The next regular meeting of the Board will be April 14, 2020 in Helena, Montana. Complete copies of reports presented to the Board are on file with the Board of Investments.

MONTANA BOARD OF INVESTMENTS

APPROVE: ______________________________
Karl J. Englund, Chairman

ATTEST: ________________________________
Dan Villa, Executive Director

DATE: __________________________________

BOI/drc 4/1/2020

MONTANA BOARD OF INVESTMENTS
2401 Colonial Drive, 3rd Floor
Helena, Montana

MINUTES OF THE SPECIAL CONFERENCE CALL MEETING – March 17, 2020

BOARD MEMBERS PRESENT *via telephone:*
Karl Englund, Chair
Mark Noennig, Vice Chair
Terry Cohea
Jim Edwards
Jeff Greenfield
Bruce Nelson
Maggie Peterson
Jack Prothero
Diane Fladmo

LEGISLATIVE LIAISONS PRESENT *via telephone:*
Senator Fred Thomas
Representative Jim Hamilton

STAFF PRESENT *via telephone:*

Polly Boutin, Associate Financial Manager
Dana Chapman, Board Secretary
Frank Cornwell, CPA
Associate Financial Manager
Julie Feldman, CPA, Financial Manager
Kirsten Haswell, Investment Analyst
Doug Hill, Director of In-State Loan Programs
Tim House, Investment Analyst
Ethan Hurley, CAIA
Director of Natural Resources/Real Estate
Sheli Jacoby, Administrative Assistant
Teri Kolnik, CFA, Investment Analyst
Emily Kovarik, CPA, Investment Analyst
Tammy Lindgren, Investment Accountant
Peggy MacEwen, Deputy Director
April Madden, Investment Accountant
Savannah Morgan, Bond Program Officer
Rande Muffick, CFA,
Deputy CIO/Director of Public Markets
Michael Nguyen, Director of Private Equity
Mike Pettit, Director of Investment Operations
Jon Putnam, CFA, FRM, CAIA,
Chief Investment Officer
John Romasko, CFA, Investment Officer
Steve Strong, Investment Analyst
Dan Villa, Executive Director
Louise Welsh, Senior Bond Program Officer
Dan Zarling, CFA, CIPM
Director of Risk Management

GUESTS:
Sherri Scurr, Legislative Services *via telephone*

CALL TO ORDER

Board Chairman Karl Englund called the special conference call meeting of the Board of Investments (Board) to order at 10:33 a.m. As noted above a quorum of Board Members was present. Chairman Englund advised of audio recording of the meeting and asked for public comment on issues with Board jurisdiction. There was none.

Continuity of Operations Update

Chairman Englund asked Executive Director Dan Villa for an update on operations continuity.

Director Villa provided a summary of recent activity on emergency preparedness. On February 24th staff updated the COOP (continuity) Plan. Staff utilized the plan last year during the power outage which lasted several hours. After that event, staff made improvements and revisions to the Plan. More recently staff have updated the Plan in case of emergencies lasting for ten days or more. As of today, all staff are teleworking, except for Rande Muffick who is working in the office and Roberta Diaz who is working from the backup location downtown in the Department of Revenue building. All others are using the Citrix system and office phones are forwarded to staff cell phones.

This morning at 9:00 a.m. staff met via conference call. All critical functions are up and running. STIP is operating as expected. On March 4th, Director Villa sent out a memo to staff detailing how we will address teleworking. Staff will have two daily conference calls, which will be conducted at 9:00 a.m. and 1:00 p.m. until further notice. Staff are asked to keep a record of teleworking expenses to track how much the effort will cost. Staff were directed to test technology and each received an emergency packet. On March 12th all staff travel was restricted and staff are asked to notify management of any planned personal travel. Concluding any personal travel, staff will be expected to self-quarantine.

Director Villa noted all functions are up and running and asked if there were any questions.

Member Terry Cohea commended staff on an excellent job.

Short Term Investment Pool Reserve Deposits

Chairman Englund asked Director Villa to review the changes to the Short-Term Investment Pool Reserve deposits.

Director Villa explained following the Great Financial Crisis the Board implemented the STIP Reserve, which has a daily deposit out of yield. Director Villa stated he has directed the deposits to the Reserve be suspended until further notice. The Reserve is over the minimum level required by policy which is 1.15% of the STIP balance. The goal is to increase the yield for participants as rates are near zero and could go negative in the future. The move will provide some yield to participants. The STIP Reserve policy allows if there is a loss, the Reserve funds would be used; however, for now it looks like that is not a likelihood.

Member Jack Prothero asked if there was any dislocation in the markets.

Chief Investment Officer Jon Putnam stated staff are seeing dislocation in the short term markets, but also a strong response from the Federal Reserve. Commercial paper has been opened up, which was also the case in late 2009. Corporations and others can go directly to the Fed to sell commercial paper, which provides a back stop to the markets and allows banks to go to a discount window to provide liquidity to the market.

Director Villa asked Mr. Putnam to explain the steps staff have taken.

Mr. Putnam explained staff have been aware markets were becoming stressed. STIP is in a different place than back in 2008-2009. There are more stringent requirements with a nice liquidity buffer at all times. There was not a whole lot of value coming into this and STIP was conservatively positioned. Currently there is roughly one third in treasuries, agencies and money market funds, with immediate liquidity. Staff have not been going out long and taking credit risk and we are prepared if participants need cash in response to the Coronavirus. We are positioned well.

Chairman Englund asked what kind of inquiries staff are receiving.

Director Villa noted staff have received around seven or eight inquiries and added he will reach out to leadership after this meeting to assure members there is no liquidity crunch at this time. Staff do not expect to see withdrawals as happened in the Great Financial Crisis. Cash will continue to flow.

Chairman Englund asked if policy was clear the suspension of deposits to the STIP Reserve is delegated to staff.

Director Villa stated yes, it is a staff decision and added the Reserve is still within policy. However, if the Reserve balance falls below 1.15% of the total STIP balance, staff would be required to restart contributions.

Decrease in INTERCAP Interest Rates
Chairman Englund asked Director Villa to review the decrease to the INTERCAP interest rates.

Director Villa stated in February staff conducted the INTERCAP bond remarketing and secured a 1.0% interest rate. The 1.5% spread was then added for a total INTERCAP rate of 2.5% for the year. Staff intend to reduce the 1.5% spread taken by the Board. The reduction in revenue will be made up through other avenues. This step will ensure capital is available to local governments for any projects. For matters related to the Coronavirus or other public health issues this can act as a bridge loan. Any loans will still undergo the full underwriting process, it is simply another step to help local governments.

Member Jim Edwards asked if this reduction means taking away the full 1.5% spread, and that the rate will now be 1.0%.

Director Villa replied yes, that is correct. INTERCAP borrowers make two payments per year and this change will be in effect for the August payment only. At that point, staff will reassess the situation. The total loss of revenue, which will be made up from other areas, is estimated between $380,000 and $450,000.

Member Prothero asked if the lower rate applies only to existing eligible borrowers.

Director Villa confirmed yes, it does.

Chairman Englund asked if staff have the authority to set the new rate and Director Villa replied yes, staff have the authority.

Chairman Englund asked if there were any other items for discussion.

Director Villa stated all incoming questions should funnel through him as the point of contact. The team will be as responsive as possible. Staff are available through email, cell phones or office landlines.

Chairman Englund clarified, as Board Members occasionally call other senior staff members, protocol now is for all inquiries to be directed to Director Villa.

With no further business before the Board, the meeting was adjourned at 10:53 a.m.

BOARD OF INVESTMENTS

APPROVE: ______________________________
Karl J. Englund, Chairman

ATTEST: ________________________________
Dan Villa, Executive Director

DATE: _________________________________

BOI/drc 4/1/20

MONTANA BOARD OF INVESTMENTS
SPECIAL BOARD MEETING CONFERENCE CALL
2401 Colonial Drive, 3rd Floor
Helena, Montana

March 24, 2020
Upon Adjournment of the Special Loan Committee Meeting

PRESENT:
- Karl Englund, Board Chair
- Mark Noennig, Board Vice Chair
- Jack Prothero, Board Member
- Jim Edwards, Board Member
- Bruce Nelson, Board Member
- Terry Cohea, Board Member
- Maggie Peterson, Board Member
- Jeff Greenfield, Board Member
- Diane Fladmo, Board Member
- Dan Villa, Executive Director
- Peggy MacEwen, Deputy Director
- Julie Feldman, CPA, Financial Manager
- Doug Hill, Director of In-State Loan Programs
- Louise Welsh, Senior Bond Program Officer
- Frank Cornwell, CPA, Associate Financial Manager
- April Madden, Investment Accountant
- Steve Strong, Investment Analyst
- Dana Chapman, Office Manager/Board Secretary

Call to Order – Karl Englund, Board Chair

Board Chairman Karl Englund called the Special Board Meeting to order at 11:18 a.m. and advised of audio recording of the meeting. Chairman Englund noted for the record that all Board Members were present, minus the two legislative liaisons.

Public Comment – *Public Comment on issues with Board Jurisdiction*

Chairman Englund asked for public comment. There was none.

Loan Committee Resolution – Motion

Chairman Englund noted there was one issue on the agenda. The Loan Committee approved a Resolution which now needs full Board approval.

"Pursuant to the Charter of the Board of Investments Loan Committee, specifically Section VII. A. 6-7, I move Board staff be directed to negotiate with approved participating lenders and borrowers to accommodate no more than a six month deferment, forbearance, or interest adjustments on outstanding In-State loans. All provisions of the Charter and individual loan policies remain in full effect. The provisions of the Loan Charter, Section VI. are in full effect and staff shall present any recommended write-downs to the Loan Committee for review and approval."*

> Loan Committee Chairman Jack Prothero made a motion to approve the Resolution as approved by the Loan Committee. Member Bruce Nelson seconded the motion. With no further discussion, the motion carried.

Chairman Englund asked if there were any additional issues before the Board.

Executive Director Villa stated staff will report to the Board on a real time basis any actions that occur pursuant to this motion.

Chairman England stated as issues are discussed with Director Villa and staff regarding this difficult situation, if it appears special Board meetings are called for, we will continue to meet as necessary.

Chairman Englund thanked Director Villa and staff.

With no further business before the Board the meeting adjourned at 11:23 a.m.

For reference: * Loan Committee Charter

MONTANA BOARD OF INVESTMENTS

Department of Commerce

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TO: Members of the Board of Directors
FROM: Dan Villa, Executive Director
DATE: 4/2/2020
RE: April Executive Directors Report

1. Monthly Snap Shot – attachment

2. Continuity Update

The Board's Continuity Plans have worked well during the COVID-19 pandemic. Our response was quick and effective. For instance:

a. BOI team members migrated to telework status sooner than most, if not all, state agencies and local governments. This helped us avoid many IT issues as the remainder of government moved to telework status.

b. We have developed a process to track expenses for possible reimbursement that may be made available from state or federal resources. This could include additional data expenses for home office connectivity, remote hardware needs, and postage. In addition, we are tracking employee telework time through SABHRS for possible reimbursement.

c. We've modified procedures to accommodate extended out of office operations, including remote deposit, mail collection and distribution, and others. Our procedures are being updated as necessary.

d. All staff join two conference calls daily to ensure coordination and information distribution across teams.

e. Chairman Englund and I have discussed special Board meetings. We will continue to err on the side of more special meetings in order to keep everyone informed and solicit input.

MBOI Snapshot
Asset Management View
2/29/2020 Unaudited
Assets Under Management $20,148,457,501

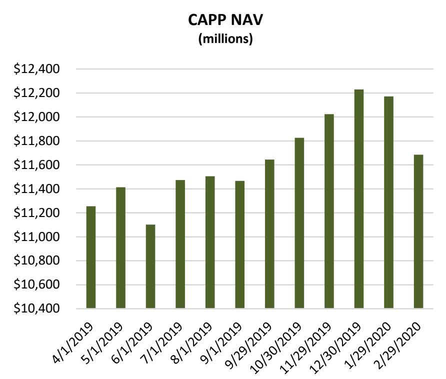
CAPP	NAV		%
DOMESTIC EQUITY	$	3,480,462,847	29.8%
CORE FIXED INCOME	$	2,731,886,365	23.4%
INTERNATIONAL EQUITY	$	1,989,593,511	17.0%
PRIVATE EQUITY	$	1,550,130,514	13.3%
REAL ESTATE	$	967,357,508	8.3%
HIGH YIELD	$	426,351,112	3.6%
NATURAL RESOURCES	$	376,438,644	3.2%
CASH EQUIVALENTS	$	162,299,836	1.4%
CAPP Total	**$**	**11,684,520,338**	**100.0%**

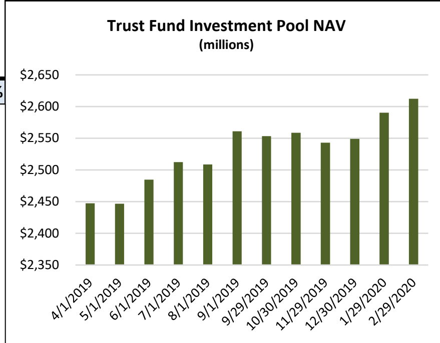
TFIP	NAV		%
Fixed Income	$	2,390,612,070	91.51%
Real Estate	$	151,416,367	5.80%
STIP	$	70,307,089	2.69%
Total	**$**	**2,612,335,526**	**100.00%**

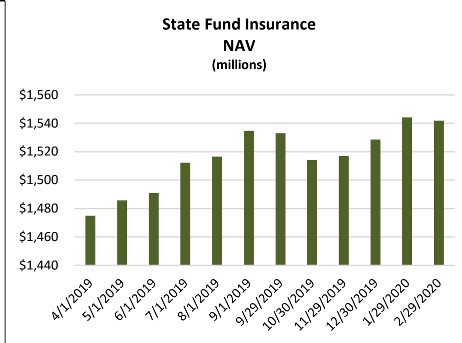
State Fund	NAV		%
Fixed Income	$	1,263,026,028	81.92%
Equity	$	165,030,444	10.70%
Real Estate	$	81,742,626	5.30%
STIP	$	32,000,805	2.08%
State Fund Total	**$**	**1,541,799,903**	**100.00%**

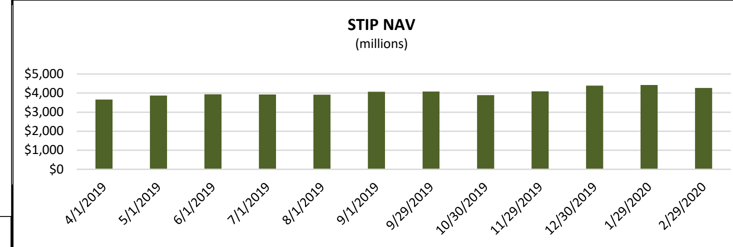
Non-Pool Fixed Income & Pending Activity	$	44,547,681

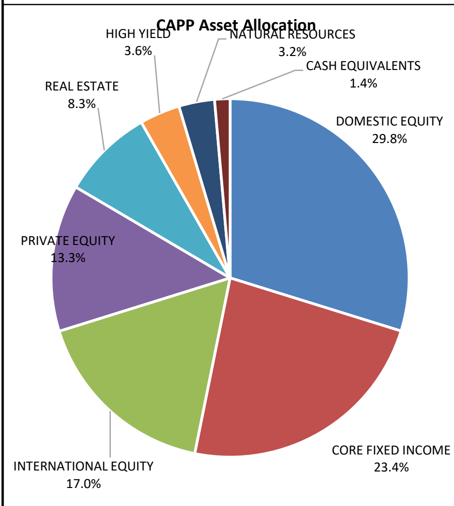
STIP*	NAV	%
ASSET BACKED COMMERCIAL PAPER	$1,482,081,197	34.75%
FEDERAL AGENCIES	$880,861,678	20.65%
CORPORATE COMMERCIAL PAPER	$628,315,510	14.73%
TREASURIES	$549,082,467	12.87%
CERTIFICATES OF DEPOSITS	$373,419,174	8.75%
CORPORATE NOTES	$326,987,912	7.67%
MONEY MARKET FUNDS	$24,506,114	0.57%
STIP Total	**$4,265,254,053**	**100.00%**

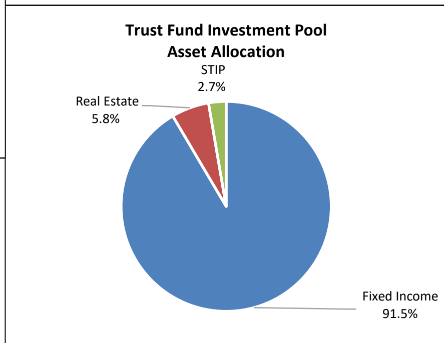


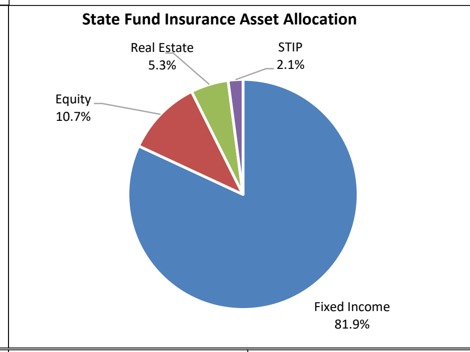


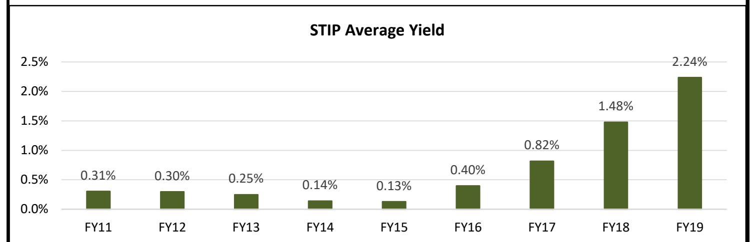


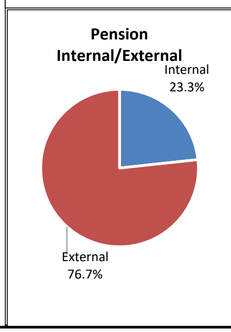


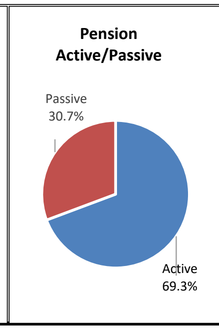


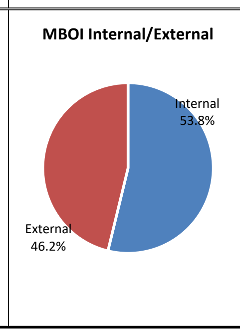


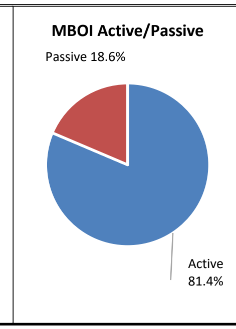


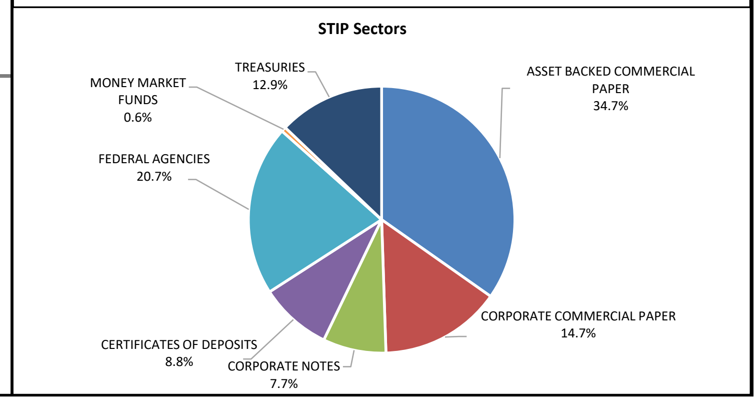












Definition of NAV: Net Asset Value is the total value of the account including assets held, adjusted for payables, receivables and liabilities

(1) Other Holdings column on page two represents the value of securities, receivables, payables and liabilities that comprise the Net Asset Value for the asset owner.

*Difference of $145,874,841 is attributable the portion of STIP held within CAPP ($75,637,395) and and TFIP ($70,237,435) as a cash investment. Such value is represented in the NAV for the CAPP and STIP columns.

MBOI Snapshot
Asset Ownership View
2/29/2020 Unaudited

	CAPP Holdings	CAPP %	STIP Holdings*	STIP %	TFIP Holdings	TFIP %	Other Holdings [1]	Other %	Total Net Asset Value
Total Fund $(000)	**$ 11,684,520**	**57.99%**	**$ 4,119,379**	**20.45%**	**$ 2,612,336**	**12.97%**	**$ 1,732,222**	**8.60%**	**$ 20,148,458**

Pensions	CAPP	%	STIP	%	TFIP	%	Other	%	Total
FIREFIGHTER'S RETIREMENT	$ 455,805	99.25%	$ 3,427	0.75%	$ -	0.00%	$ -	0.00%	$ 459,232
GAME WARDEN'S RETIREMENT	$ 208,281	99.22%	$ 1,628	0.78%	$ -	0.00%	$ -	0.00%	$ 209,909
HIGHWAY PATROL RETIREMENT	$ 149,761	98.98%	$ 1,541	1.02%	$ -	0.00%	$ -	0.00%	$ 151,301
JUDGE'S RETIREMENT	$ 104,238	99.17%	$ 870	0.83%	$ -	0.00%	$ -	0.00%	$ 105,108
PUBLIC EMPLOYEES' RETIREMENT	$ 5,805,467	99.23%	$ 45,085	0.77%	$ -	0.00%	$ -	0.00%	$ 5,850,552
SHERRIF'S RETIREMENT	$ 377,600	99.22%	$ 2,981	0.78%	$ -	0.00%	$ -	0.00%	$ 380,581
POLICE RETIREMENT	$ 431,356	99.25%	$ 3,254	0.75%	$ -	0.00%	$ -	0.00%	$ 434,611
TEACHER'S RETIREMENT	$ 4,114,178	99.19%	$ 33,462	0.81%	$ -	0.00%	$ -	0.00%	$ 4,147,640
VOL. FIREMANS' RETIREMENT	$ 37,834	99.24%	$ 291	0.76%	$ -	0.00%	$ -	0.00%	$ 38,125
Total	**$ 11,684,520**	**99.21%**	**$ 92,539**	**0.79%**	**$ -**	**0.00%**	**$ -**	**0.00%**	**$ 11,777,059**

Trust Funds $(000)	CAPP	%	STIP	%	TFIP	%	Other	%	Total
ABANDONED MINE TRUST	$ -	0.00%	$ 6,637	99.87%	$ -	0.00%	$ 9	0.13%	$ 6,646
BELT WATER TREATMENT PLANT	$ -	0.00%	$ 1,600	6.05%	$ 24,802	93.73%	$ 58	0.22%	$ 26,460
BPA MITIGATION TRUST FUND	$ -	0.00%	$ 3,683	32.06%	$ 5,271	45.88%	$ 2,534	22.06%	$ 11,488
BUTTE AREA ONE RESTORATION	$ -	0.00%	$ 1,066	13.99%	$ 6,537	85.80%	$ 16	0.21%	$ 7,619
BUTTE SILVER BOW	$ -	0.00%	$ 1,867	12.53%	$ 13,004	87.26%	$ 32	0.21%	$ 14,903
CLARK FORK RIVER RESTORATION	$ -	0.00%	$ 7,486	23.91%	$ 23,765	75.89%	$ 64	0.20%	$ 31,314
CLARK FORK SITE RAA	$ -	0.00%	$ 6,495	8.47%	$ 70,048	91.32%	$ 167	0.22%	$ 76,710
COAL TAX CULTURAL TRUST FUND	$ -	0.00%	$ 745	4.56%	$ 15,571	95.22%	$ 36	0.22%	$ 16,353
COAL TAX PARK ACQUISITION	$ -	0.00%	$ 1,715	5.67%	$ 28,440	94.11%	$ 66	0.22%	$ 30,221
EAST HELENA COMPENSATION	$ -	0.00%	$ 3,865	63.12%	$ 2,248	36.72%	$ 10	0.17%	$ 6,123
ENDOWMENT FOR CHILDREN	$ -	0.00%	$ 65	4.53%	$ 1,364	95.25%	$ 3	0.22%	$ 1,433
FWP REAL PROPERTY TRUST	$ -	0.00%	$ 416	5.61%	$ 6,983	94.17%	$ 16	0.22%	$ 7,415
HAROLD HAMM ENDOWMENT	$ -	0.00%	$ 4	8.30%	$ 45	91.49%	$ 0	0.22%	$ 50
MONTANA HISTORICAL SOCIETY	$ -	0.00%	$ 553	13.65%	$ 3,490	86.14%	$ 9	0.21%	$ 4,051
MONTANA POLE	$ -	0.00%	$ 6,410	21.88%	$ 22,832	77.92%	$ 60	0.20%	$ 29,302
OLDER MONTANANS TRUST	$ -	0.00%	$ 16	1.58%	$ 1,022	98.20%	$ 2	0.22%	$ 1,041
POTTER TRUST FUND	$ -	0.00%	$ 20	8.10%	$ 224	91.68%	$ 1	0.22%	$ 244
RESOURCE INDEMNITY TRUST	$ -	0.00%	$ 23	0.02%	$ 117,604	99.76%	$ 265	0.23%	$ 117,893
SMELTER HILL UP RESTORATIVE	$ -	0.00%	$ 2,991	30.46%	$ 6,809	69.34%	$ 19	0.20%	$ 9,819
STREAMSIDE TAILINGS OPERABLE UNIT	$ -	0.00%	$ 2,235	11.43%	$ 17,280	88.36%	$ 42	0.21%	$ 19,557
TOBACCO TRUST FUND	$ -	0.00%	$ 7,655	2.97%	$ 249,327	96.81%	$ 573	0.22%	$ 257,555
TRUST AND LEGACY ACCOUNT	$ -	0.00%	$ 7,336	0.91%	$ 800,448	98.87%	$ 1,817	0.22%	$ 809,601
UCFRB ASSESS/LITIG COST REC.	$ -	0.00%	$ 1,633	7.58%	$ 19,871	92.20%	$ 47	0.22%	$ 21,551
UCFRB RESTORATION FUND	$ -	0.00%	$ 3,379	3.94%	$ 82,149	95.84%	$ 190	0.22%	$ 85,718
UPPER BLACKFOOT RESPONSE	$ -	0.00%	$ 2,917	88.05%	$ 392	11.83%	$ 4	0.13%	$ 3,313
WEED CONTROL TRUST	$ -	0.00%	$ -	0.00%	$ 11,457	99.77%	$ 26	0.23%	$ 11,483
WILDLIFE HABITAT TRUST	$ -	0.00%	$ 1,083	6.81%	$ 14,792	92.97%	$ 35	0.22%	$ 15,910
Z/L LT H2O TRUST FD	$ -	0.00%	$ 20,202	99.87%	$ -	0.00%	$ 27	0.13%	$ 20,229
ZORTMAN/LANDUSKY LT H2O	$ -	0.00%	$ 15,534	99.87%	$ -	0.00%	$ 21	0.13%	$ 15,554
Total	**$ -**	**0.00%**	**$ 107,630**	**6.49%**	**$ 1,545,775**	**93.14%**	**$ 6,149**	**0.37%**	**$ 1,659,555**

Coal Severence $(000)	CAPP	%	STIP	%	TFIP	%	Other	%	Total
BIG SKY ECON DEV FD	$ -	0.00%	$ 3,170	2.53%	$ 121,929	97.25%	$ 279	0.22%	$ 125,378
PERMANENT COAL TRUST FUND	$ -	0.00%	$ 24,440	4.12%	$ 395,918	66.81%	$ 172,202	29.06%	$ 592,559
SCHOOL FACILITIES FUND	$ -	0.00%	$ 6,233	10.83%	$ 51,225	88.96%	$ 121	0.21%	$ 57,580
TREASURE ST. REG. WATER SYSTEM	$ -	0.00%	$ 1,192	1.14%	$ 102,926	98.63%	$ 234	0.22%	$ 104,351
TREASURE STATE ENDOWMENT	$ -	0.00%	$ 3,225	1.07%	$ 297,130	98.66%	$ 796	0.26%	$ 301,151
Total	**$ -**	**0.00%**	**$ 38,260**	**3.24%**	**$ 969,128**	**82.06%**	**$ 173,632**	**14.70%**	**$ 1,181,020**

Operating Funds $(000)	CAPP	%	STIP	%	TFIP	%	Other	%	Total
FWP LICENSE ACCOUNT	$ -	0.00%	$ 44,619	82.53%	$ 7,361	13.62%	$ 2,082	3.85%	$ 54,063
LOCAL AGENCIES	$ -	0.00%	$ 1,562,006	99.86%	$ -	0.00%	$ 2,151	0.14%	$ 1,564,157
MONTANA STATE UNIVERSITY	$ -	0.00%	$ 204,746	91.82%	$ 17,912	8.03%	$ 326	0.15%	$ 222,984
MT TECH-UM AGENCY FUNDS	$ -	0.00%	$ 10,694	95.40%	$ 500	4.46%	$ 15	0.14%	$ 11,209
STATE AGENCIES	$ -	0.00%	$ 605,984	99.87%	$ -	0.00%	$ 806	0.13%	$ 606,790
TREASURER'S FUND	$ -	0.00%	$ 1,188,881	99.03%	$ -	0.00%	$ 11,664	0.97%	$ 1,200,546
UNIV OF MONTANA	$ -	0.00%	$ 70,261	63.69%	$ 32,278	29.26%	$ 7,785	7.06%	$ 110,324
Total	**$ -**	**0.00%**	**$ 3,687,191**	**97.80%**	**$ 58,051**	**1.54%**	**$ 24,830**	**0.66%**	**$ 3,770,073**

Insurance Reserves $(000)	CAPP	%	STIP	%	TFIP	%	Other	%	Total
MUS WORKERS COMPENSATION	$ -	0.00%	$ 10,720	70.84%	$ 4,388	29.00%	$ 24	0.16%	$ 15,132
PERS DEFINED CONT DISABILITY	$ -	0.00%	$ 553	10.15%	$ -	0.00%	$ 4,894	89.85%	$ 5,446
STATE FUND INSURANCE	$ -	0.00%	$ 31,941	2.07%	$ -	0.00%	$ 1,509,859	97.93%	$ 1,541,800
SUBSEQUENT INJURY FUND	$ -	0.00%	$ 732	99.86%	$ -	0.00%	$ 1	0.14%	$ 733
GROUP BENEFITS	$ -	0.00%	$ 77,695	73.06%	$ 20,981	19.73%	$ 7,671	7.21%	$ 106,348
MUS GROUP INSURANCE	$ -	0.00%	$ 72,118	79.00%	$ 14,012	15.35%	$ 5,163	5.66%	$ 91,292
Total	**$ -**	**0.00%**	**$ 193,759**	**11.00%**	**$ 39,381**	**2.24%**	**$ 1,527,611**	**86.76%**	**$ 1,760,751**

Short Term Investment Pool

Account	# Accounts	Total Market Value	%
Total State	336	2,703,247,798.45	63.4%
Total Local	172	1,562,006,254.40	36.6%
Total STIP	**508**	**$ 4,265,254,053**	**100.0%**
STIP Reserve		$ 51,857,726	
Average February 2020 STIP Yield		1.6666%	

Intercap Statistics

Loans Outstanding	$ 67,738,427
Bonds Outstanding	$ 90,670,000
Number of Borrowers	171
Loan Rate	1.00%

MONTANA BOARD OF INVESTMENTS

Department of Commerce

Street Address:
2401 Colonial Drive, 3rd Floor
Helena, MT 59601

Mailing Address:
PO Box 200126
Helena, MT 59620-0126

Phone: 406/444-0001
Facsimile: 406/449-6579
Website: www.investmentmt.com

To: Members of the Board

From: Jon Putnam, Director of Fixed Income
John Romasko, Investment Officer

Date: February 11, 2020

Subject: Proposed Changes to SFIP Investment Policy

State Fund Investment Pool

We are proposing several changes to the State Fund investment policy statement. We are asking the board to consider these changes and would ask for a vote at the April board meeting. The State Fund board will review the proposed changes at their March meeting. We have worked with State Fund staff to ensure that these changes are consistent with State Fund maintaining strong capital levels with their insurance regulator.

Important changes:

- Update to new IPS format
- Addition of a High Yield Asset Class in a range of 0 -7%
- Change the fixed income benchmark from the Bloomberg/Barclays Intermediate Government/Credit Index to the Bloomberg/Barclays Intermediate Aggregate Index

We are requesting an allocation to High Yield bonds in order to further diversify State Fund's portfolio. In addition, an allocation to High Yield is expected to modestly enhance portfolio return over the long term. Finally, the addition of High Yield is consistent with the asset composition of State Fund's peers.

We are also asking for a change in the fixed income performance benchmark for State Fund. We believe the change is more indicative of State Fund's portfolio composition and better reflects the broad fixed income market. It allows staff to achieve greater diversity across fixed income sectors. **(See Table 1)**

In addition, the Bloomberg/Barclays Intermediate Aggregate Index has presented a slightly higher return hurdle over time. However, staff is confident that they can continue to outperform the benchmark over the long term. **(See Table 2)**

Table 1

PORT Characteristics Report 12/31/19			Percentage Weight		Market Value
		Portfolio	Current Benchmark	Proposed Benchmark	Port
STATE FUND (MU26)		***100.00***	***100.00***	***100.00***	***1,263,866,491***
CORPORATES		**49.09**	**30.88**	**19.74**	**620,378,423**
	FINANCIAL INSTITUTIONS	21.44	12.17	7.78	271,002,577
	INDUSTRIALS	26.97	17.23	11.02	340,805,477
	UTILITIES	0.68	1.48	0.94	8,570,369
SECURITIZED		**14.70**	**0.00**	**36.00**	**185,776,291**
	ABS	4.81		0.55	60,757,410
	CMBS	5.64		2.48	71,310,878
	MBS / CMO	4.25		32.97	53,708,003
GOVERNMENT RELATED		**10.90**	**4.52**	**2.88**	**137,729,658**
	AGENCY	9.75	3.84	2.45	123,191,996
	LOCAL AUTHORITY	1.15	0.68	0.43	14,537,662
TREASURY		22.56	61.13	39.10	285,104,820
SOVEREIGN/SUPRANATIONAL		0.00	3.47	2.22	0
CASH		2.75	0.00	0.00	34,877,297

Table 2

	1 Year Return (Annualized)	3 Year Return (Annualized)	5 Year Return (Annualized)	10 Year Return (Annualized)	20 Year Return (Annualized)
Bloomberg Barclays Intermediate U.S. Aggregate Index	6.67%	3.26%	2.59%	3.15%	4.61%
Bloomberg Barclays Intermediate U.S. Govt/Credit Index	6.80%	3.24%	2.57%	3.05%	4.48%
Difference	-0.13%	0.02%	0.02%	0.10%	0.13%

MONTANA STATE FUND
STATE FUND INVESTMENT POOL
INVESTMENT POLICY

Proposed April 14, 2020

Table of Contents

Page

1. Introduction:

Montana State Fund (MSF or State Fund) provides Montana employers with an option for workers' compensation and occupational disease insurance coverage and guarantees available coverage for all employers in Montana. The State Fund Investment Pool (SFIP) seeks to attain investment returns that assist State Fund in meeting liabilities as well as maintaining stable, cost effective rates for workers' compensation insurance. Workers' compensation benefit payments typically require immediate medical payments and then ongoing medical and indemnity benefits that can span four decades. Therefore, it is important to have a well-diversified, high quality portfolio that is positioned for the long term. The State Fund Investment Pool invests directly in the underlying Asset Classes. Each Asset Class has an underlying set of investment objectives and investment guidelines.

This policy is effective upon adoption and supersedes all previous Investment Policies related to the investment management of the State Fund Investment Pool.

2. Purpose:

The purpose of this policy statement is to provide a broad strategic framework for the State Fund Investment Pool investments under the guidance of the Board of Investments.

3. Legal and Constitutional Authority:

The Montana Constitution, Article VIII, Section 13, requires that the Legislature provide for a Unified Investment Program for public funds and State Fund assets. Section 17-6-201, MCA, established the Unified Investment Program, created the Montana Board of Investments (the "Board") and gave the Board sole authority to invest state funds, in accordance with state law and the state constitution.

The Unified Investment program for public funds must be administered by the Board in accordance with the "prudent expert principle," defined as:

1) discharging its duties with the care, skill, prudence, and diligence, under the circumstances then prevailing, that a prudent person acting in a like capacity with the same resources and familiar with like matters exercises in the conduct of an enterprise of like character with like aims;
2) diversifying the holdings of each fund to minimize the risk of loss and maximize the rate of return, unless under the circumstances it is clearly prudent not to do so; and
3) discharging its duties solely in the interest of and for the beneficiaries of the funds managed.

The Montana Constitution, Article VIII, Section 13 (4) requires:

> *"Investment of state compensation insurance fund assets shall be managed in a fiduciary capacity in the same manner that a prudent expert acting in a fiduciary capacity and familiar with the circumstances would use in the conduct of a private insurance organization. State compensation insurance fund assets may be invested in private corporate capital stock. However, the stock investments shall not exceed 25 percent of the book value of the state compensation insurance fund's total invested assets."*

State Fund investments are subject to Title 33, Chapter 12 of the Montana Code. The purpose of Chapter 12 (Insurer Investments) *"is to protect the interests of insureds by promoting insurer solvency and financial strength."*

The Board, as the investment fiduciary, is responsible for establishing the investment parameters for the State Fund Investment Pool.

4. Strategic Investment Objectives

The Board's primary objective is to provide investment income that assists the State Fund in meeting claim benefit liabilities as well as maintaining stable, cost effective rates for workers' compensation insurance. The Board's secondary objective is to achieve long term capital appreciation in excess of inflation. Both objectives must be compatible with the Board's risk tolerance and prudent investment practices. The Board seeks to maintain a long-term perspective in formulating and implementing investment policies and evaluating investment performance.

5. Time Horizon

The Board expects to meet or exceed these objectives over a long-term investment horizon. Over shorter periods, the anticipated market volatility and specific actions, including risk mitigation efforts of the Board, may lead to unfavorable, but expected, deviation from the objectives.

6. Performance Measurement

Success in achieving these objectives will be measured by comparing the risk and return of the SFIP account to the return on the **Bloomberg Barclays Intermediate Aggregate Index** (fixed income), the return on the **S&P 500 index** (domestic equity), the return on the **MSCI ACWI Ex U.S. Index** (international equity), and the return of the **NCREIF ODCE index** (real estate), each weighted proportionately to the portfolio's holdings. Performance results will be monitored and evaluated quarterly. However, success in achieving the objective will be measured on a three-year, five-year, and ten-year annualized basis.

7. Roles and Responsibilities

a) **Board of Investments** – The Board is responsible for approving the State Fund Investment Pool Investment Policy and has the authority to manage the SFIP as it considers prudent, and subject to such limitations as contained in this Policy, the law and the Constitution. The Board reviews this document periodically and, as needed, approves any changes to the policy.

   As described in the Board of Investments Governance Manual, the Board delegates authority to the Executive Director, Chief Investment Officer, and other Staff to execute the day to day duties required to carry out the Board's mission.

b) **Executive Director** – The Executive Director is empowered by the Board to sign any and all documents required to conduct Board business, unless there are specific written policies or instructions from the Board to the contrary. The Executive Director is responsible for the oversight of the State Fund Investment Pool and the establishment of the financial reporting procedures and the collection and reporting of all income.

c) **Chief Investment Officer** – The Chief Investment Officer (CIO) is empowered by the Board to serve as the principal Staff person responsible for overseeing the investment activities under the

Board's jurisdiction in compliance with the Board's policies. The CIO, with the support of other Staff, is responsible for recommending investment policy changes for Board approval.

d) **Staff** – The Staff is responsible for:

   I. Managing day-to-day operations and delegating work to external resources as appropriate;
   II. Monitoring allocations and overseeing all investment manager due diligence activities and recommending changes to the CIO;
   III. Monitoring and reporting to the Board the performance of each asset class and the individual managers' performance;
   IV. Informing the Board of any new managers or terminations; and
   V. Reporting any deviations from this Investment Policy to the Board and the State Fund;
   VI. Coordinating with the State Fund to provide financial data necessary for their quarterly reporting and calendar year closing cycle.

e) **Investment Consultant** – The investment consultant assists the CIO and Staff with policy recommendations and provides advice to the Board. The investment consultant shall provide assistance to Staff as requested in conjunction with the management of the State Fund Investment Pool.

f) **External Managers** – Managers are responsible for all aspects of portfolio management as set forth in the contract specific to each manager. Managers must communicate with Staff as needed, regarding investment strategies and results. Managers must also cooperate fully with Staff regarding administrative, accounting, and reconciliation issues as well as any requests from the investment consultant and the master custodian.

8. Strategic Asset Allocation

The current asset allocation ranges for the State Fund Investment Pool are in **Appendix I**. The asset allocation ranges are subject to change as modifications are adopted by the Board, at which time **Appendix I** will be revised to reflect these changes.

9. Rebalancing

The actual asset allocation mix may deviate from time to time from the approved asset allocation ranges due to financial market performance, cash flows, and manager performance. Material deviations from the asset allocation ranges can alter the expected return and risk of the separate accounts. Rebalancing to remain within the Board-approved allocation ranges is delegated to Staff in consultation with the CIO and the Executive Director. Any necessary rebalancing will be made in a timely manner and will take into consideration associated costs and current market conditions.

10. Risk Management

a) **Evaluation of Investment Managers**
   The Investment Manager Evaluation Policy is a distinct policy that is regularly reviewed and updated separate from the SFIP Investment Policy because Staff utilizes the Investment Manager Evaluation Policy to oversee and manage other assets in addition to the State Fund

Investment Pool assets.

b) **Liquidity**
The total liquidity needs for the State Fund Investment Pool are generally low in relation to total invested assets and State Fund capital is not expected to change dramatically on short notice. However, illiquidity risk still needs to be monitored and managed by Staff on a regular basis to ensure that assets are not required to be sold too quickly, or at an unfavorable time, and potentially at a discount to fair value to meet the cash needs of State Fund.

A significant percentage of the investment in Core Real Estate and High Yield Asset Classes is considered illiquid. Due to the limited liquidity of these assets, it will typically be impractical to fund cash needs or correct deviations from policy ranges through the purchase or sale of these assets.

The investments held in Equities and Investment Grade Asset Classes are categorized as publicly traded securities. In "normal market" conditions, many of the underlying assets can be liquidated in a relatively short period to accommodate both expected and unexpected withdrawals as well as any repositioning of the asset allocation to stay within approved ranges.

c) **Monitoring/Reporting – Transparency**
Managers shall submit periodic reports to facilitate Staff's monitoring of the Managers' conformance to investment restrictions and performance objectives.

Staff shall provide regular reporting to the Board regarding the asset allocation and performance of the State Fund Investment Pool to confirm these items are known and adhere to all Investment Policy requirements and expectations.

d) **Leverage**
Leverage is a significant risk factor. Investment managers may utilize leverage only when permitted in the manager's investment guidelines approved by Staff. Staff shall monitor the use of leverage and its impact on risk and return.

The use of derivative securities can generate additional leverage even if the derivative is being used to reduce the risk in other investments. Investment managers may only use derivatives when permitted in the manager's investment guidelines approved by Staff.

e) **Cash Investments**
Cash investments held within the State Fund Investment Pool entail an element of credit risk. Thus, only approved cash investment vehicles are permitted. These include the custodian's STIF vehicle, STIP, or any SEC-registered money market fund all of which specifically address credit risk in their respective investment guidelines.

11. Securities Lending

Section 17-1-113, MCA, authorizes the Board to lend securities held by the state. The Board may lend its publicly traded securities through an agent, to other market participants in return for compensation. Currently, through an explicit contract, State Street Bank and Trust, the state's custodial bank, manages the state's securities lending program. The Board seeks to assess counterparty and reinvestment risk, associated with each aspect of its securities lending program. The Board requires borrowers to maintain collateral at 102 percent for domestic securities and 105 percent for international securities. To ensure that the collateral ratio is maintained, securities on loan are marked to market daily and the borrower must provide additional collateral if the value of the collateral falls below the agreed-upon ratio of over-collateralization. In addition to the strict collateral requirements imposed by the Board, the credit quality of approved borrowers is monitored continuously by the contractor. From time to time, Staff may restrict a security or borrowing counterparty from the lending program upon notification to State Street Bank. Staff will monitor the securities lending program, and the CIO will periodically report to the Board on the status of the program. The Board's participation in securities lending may change over time given account activity, market conditions and the agent agreement.

12. Exercise of Shareholder Rights

The Board recognizes that publicly traded securities and other assets of the State Fund Investment Pool include certain ancillary rights, such as the right to vote on shareholder resolutions at companies' annual shareholders' meetings, and the right to assert claims in securities class action lawsuits or other litigation. The Board will prudently manage these assets for the exclusive purpose of enhancing the value of the State Fund Investment Pool through such means as adopting and implementing a proxy voting policy and undertaking productive, cost- effective action to exercise its rights as shareholders or claimants in litigation.

a) **Proxy Voting**

Active voting of proxies is an important part of the Board's investment program. Under the contractual arrangements between the Board and its investment managers, the responsibility for voting proxies on the investments is delegated to the managers. Managers are contractually required to establish a proxy voting program in coordination with Board Staff and are required to vote proxies, excluding shares on loan on record date unless recalled under the Board's securities lending program, in the interest of the Plans' beneficiaries. Records of proxy votes shall be maintained by the Managers, and/or its third-party designee, and submitted to Staff and/or an external service provider annually.

Staff will monitor the proxy voting practices of the Board's external investment managers. External service providers may be retained by either the Board or the Managers to assist in monitoring efforts. This monitoring will be coordinated with each manager to reasonably assure the Staff that Managers are fulfilling their fiduciary responsibilities with respect to proxy voting.

b) **Class Action Litigation**

Claims arising out of losses on securities under the Board's management under U.S. state and federal securities laws are assets subject to the Board's fiduciary duty of prudent management. The Board shall take reasonable, cost effective steps to identify, pursue and collect upon claims under securities laws for losses suffered by the Board on its investment. Accordingly, the Board maintains a detailed litigation policy, including process steps, outlined in the Montana Board of Investments Governance Manual, Appendix F.

13. Investment Policy Review

The Board intends to keep this Policy updated as it modifies or amends the underlying contents. As stated in the Governance Policy, "the Board shall review this Investment Policy at least annually or more frequently at the request of Board Staff. Statements may only be revised in a public meeting. All Statements shall be posted on the Board's web site for review by the public."

Appendix I: State Fund Investment Pool Allocation Ranges

Permitted Ranges:

Proposed April 14, 2020

State Fund Investment Pool Asset Class		
Asset Class	**Range Low**	**Range High**
Public Equity	**0**	**15**
Real Estate	**0**	**8**
High Yield	**0**	**7**
Investment Grade Fixed Income	**70**	**100**

Appendix II: Investment Objectives and Guidelines

Schedule II-A:
Investment Objectives and Guidelines
Public Equity Asset Class

Proposed Date of Schedule: April 14, 2020

This Schedule is effective upon adoption by the Board of Investments and supersedes all previous Investment Objectives and Guidelines for Equities.

Statement of Purpose:
The purpose of these objectives and guidelines is to:

1. Establish the investment objectives and performance standards of the Public Equity Asset Class; and
2. Provide diversified exposure to the equity market in a prudent and cost-effective manner.

Investment Objective:

Strategic:
The objective of the Public Equity Asset Class is to attain the highest possible total return within the parameters of the Investment Guidelines set forth below.

Performance:
Success in achieving this objective will be measured by comparing the risk and after-fee return of the Equity Asset Class to the **S&P 500 Index and ACWI ex. U.S. Index** (the "Benchmark") each proportionately weighted to the portfolio's domestic and international equity holdings. Performance results will be monitored and evaluated quarterly. However, the success in achieving the objective will be measured on a three-year, five-year, and ten-year annualized basis.

Investment Guidelines:

Staff will have full discretion to manage this Asset Class consistent with the investment guidelines stated below. Compliance with the following guidelines for permitted investments and other restrictions is the sole responsibility of the Staff. Any exceptions or compliance violations are to be reported to the Board of Investments at the next scheduled quarterly Board meeting. State Fund will be notified of any exceptions or compliance violations within five days.

Most of the Public Equity Asset Class investments will be managed by external investment managers.

It is expected that the Public Equity Asset Class shall invest in public market investments that provide liquidity and meaningful transparency to portfolio characteristics and risk exposures.

Permitted Investments:

The Public Equity Asset Class may invest only in the following:

1. Securities and derivatives held in separate accounts, commingled funds, limited partnerships, or limited liability companies managed by external investment managers and governed by their respective investment management contracts and investment guidelines;
2. Exchange-Traded Funds (ETFs) based on an equity index that is approved by the Chief Investment Officer and purchased and monitored by Staff.

Other Restrictions:

1. A maximum of 15% of the market value of the State Fund Investment Pool will be invested in public equities;
2. A maximum of 4% of the market value of the State Fund Investment Pool will be invested in in international equities.

If at any time, due to market fluctuations or any other circumstances, any of the guidelines are not maintained, Staff will use its best efforts to conform to these limits in a timely manner, while considering current market conditions and the associated costs of rebalancing. At the Board's next regularly scheduled quarterly meeting, the CIO shall inform the Board of any cases that the Public Equity Asset Class allocations were outside of the limits and either inform the Board of the actions that were taken to return the Public Equity Asset Class back within guidelines or a plan to do so. State Fund will be notified of any exceptions or compliance violations within five days.

Schedule II-B:
Investment Objectives and Guidelines
Real Estate Asset Class

Proposed Date of Schedule: April 14, 2020

This Schedule is effective upon adoption by the Board of Investments and supersedes all previous Investment Objectives and Guidelines for Core Real Estate.

Statement of Purpose:

The purpose of these objectives and guidelines is to:

1. Establish the investment objectives and performance standards of the Real Estate Asset Class; and
2. Provide diversified exposure to Real Estate in a prudent and cost-effective manner.

Investment Objective:

Strategic:
The objective of the Real Estate Asset Class is to attain the highest possible return within the parameters of the Investment Guidelines set forth below.

Performance:
Success in achieving this objective will be measured by comparing the risk and after-fee return of the Real Estate Asset Class to the **NCREIF ODCE Index** (the "Benchmark"). Performance results will be monitored and evaluated quarterly. However, the success in achieving the objective will be measured on a five-year, and ten-year annualized basis.

Investment Guidelines:

Staff will have full discretion to manage the Real Estate Asset Class consistent with the investment guidelines stated below. Compliance with the following guidelines for permitted investments and other restrictions is the sole responsibility of the Staff. Any exceptions or compliance violations are to be reported to the Board of Investments at the next scheduled quarterly Board meeting. State Fund will be notified of any exceptions or compliance violations within five days.

Most of the Real Estate Asset Class investments will be managed by external investment managers.

Real Estate is classified as "Core" if it is an investment in operating, substantially leased, and positively cash flowing institutional quality real estate across property types, geographies and markets.

Permitted Investments:

The Real Estate Asset Class may invest only in the following:

1. Separate Accounts, Open-Ended Funds, Closed-Ended Funds, Exchange-Traded Funds (ETFs), Real Estate Investment Trusts (REITs), or Master Limited Partnerships (MLPs) managing publicly traded Real Estate, where the investments are approved by the Chief Investment Officer and purchased and monitored by Staff;
2. Private Investment partnership interests. These private partnerships may be direct limited partnerships, limited liability companies, or vehicles that primarily invest in partnerships, including Fund-of-Funds and Secondary Funds;
3. Individual public or private securities received as distributions from funds are also permitted to be held in the Real Estate Asset Class.

<u>Other Restrictions</u>

The following restrictions are preferred structures and limitations, recognizing precision relative to current market value or net asset value may not be feasible due to their illiquid nature.

1. No less than 75% of the aggregate of the Core Real Estate Asset Class net asset value plus capital shall be invested in "Core" Real Estate;
2. Separate Accounts, Open-Ended Funds, Closed-Ended Funds, Exchange-Traded Funds (ETFs), or Master Limited Partnerships (MLPs) managing publicly traded Real Estate may not exceed 25% of the aggregate of the Real Estate Asset Class net asset value plus uncalled committed capital;
3. The Core Real Estate Asset Class market value invested in any single mandate/portfolio shall be no greater than 5% of the State Fund Investment Pool Assets;
4. Individual public securities received as distributions will be liquidated over a reasonable time period dependent on market conditions.
5. Leverage will be monitored on an individual fund level. Total Real Estate Asset Class leverage shall not exceed 50%.

If at any time, due to market fluctuations or any other circumstances, any of the guidelines are not maintained, Staff will use its best efforts to conform to these limits in a timely manner, while considering current market conditions and the associated costs of rebalancing. At the Board's next regularly scheduled quarterly meeting, the CIO shall inform the Board of any cases that the Core Real Estate Asset Class allocations were outside of the limits and either inform the Board of the actions that were taken to return the Core Real Estate Asset Class back within guidelines or a plan to do so. State Fund will be notified of any exceptions or compliance violations within five days.

While no formal diversification ranges are set forth for property type diversification or regional diversification within the United States, it is expected that the Core Real Estate Asset Class shall remain diversified across these factors. These and other factors shall be monitored and reported to the Board at least annually.

Schedule II-C:
Investment Objectives and Guidelines
High Yield Asset Class

Proposed Date of Schedule: April 14, 2020

This Schedule is effective upon adoption by the Board of Investments and supersedes all previous Investment Objectives and Guidelines for High Yield.

Statement of Purpose:
The purpose of these objectives and guidelines is to:

1. Establish the investment objectives and performance standards of the High Yield Asset Class; and
2. Provide diversified exposure to the High Yield markets in a prudent and cost-effective manner.

Investment Objective:

Strategic:
The objective of the High Yield Asset Class is to attain the highest possible total return within the parameters of the Investment Guidelines set forth below.

Performance:
Success in achieving this objective will be measured by comparing the risk and after-fee return of the High Yield Asset Class to the **Bloomberg Barclays US High Yield - 2% Issuer Cap Index** (the "Benchmark"). Performance results will be monitored and evaluated quarterly. However, the success in achieving the objective will be measured on a three-year, five-year, and ten-year annualized basis.

Investment Guidelines:

Staff will have full discretion to manage the High Yield Asset Class consistent with the investment guidelines stated below. Compliance with the following guidelines for permitted investments and other restrictions is the sole responsibility of the Staff. Any exceptions or compliance violations are to be reported to the Board of Investments at the next scheduled quarterly Board meeting. State Fund will be notified of any exceptions or compliance violations within five days.

Permitted Investments:

The High Yield Asset Class may invest only in the following:

1. Securities and derivatives held in separate accounts, commingled funds, limited partnerships, or limited liability companies managed by external investment managers and governed by their respective investment management contracts and investment guidelines.

Other Restrictions

1. A maximum of 10% of the market value of the High Yield Asset Class shall be held in Non-U.S. securities if they are denominated in a foreign currency;
2. The average duration of the High Yield Asset Class will be maintained in a range of + or – 25% of the index duration;
3. A maximum of 25% of the market value of the High Yield Asset Class shall be in securities rated more than 6 notches below investment grade as defined by the average rating of the nationally recognized statistical rating organizations (NRSRO).

If at any time, due to market fluctuations or any other circumstances, any of the guidelines are not maintained, Staff will use its best efforts to conform to these limits in a timely manner, while considering current market conditions and the associated costs of rebalancing. At the Board's next regularly scheduled quarterly meeting, the CIO shall inform the Board of any cases that the High Yield Asset Class allocations were outside of the limits and either inform the Board of the actions that were taken to return the High Yield Asset Class back within guidelines or a plan to do so. State Fund will be notified of any exceptions or compliance violations within five days.

Schedule II-D:
Investment Objectives and Guidelines
Investment Grade Fixed Income Asset Class

Proposed Date of Schedule: April 14, 2020

This Schedule is effective upon adoption by the Board of Investments and supersedes all previous Investment Objectives and Guidelines for Investment Grade Fixed Income Asset Class.

Statement of Purpose:
The purpose of these objectives and guidelines is to:

1. Establish the investment objectives and performance standards of the Investment Grade Fixed Income Asset Class; and
2. Provide diversified exposure to the Investment Grade Fixed Income markets in a prudent and cost-effective manner.

Investment Objective:

Strategic:
The objective of the Investment Grade Fixed Income Asset Class is to attain the highest possible total return within the parameters of the Investment Guidelines set forth below.

Performance:
Success in achieving this objective will be measured by comparing the risk and after-fee return of Investment Grade Fixed Income Asset Class to the **Bloomberg Barclays Intermediate US Aggregate Bond Index** (the "Benchmark"). Performance results will be monitored and evaluated quarterly. However, the success in achieving the objective will be measured on a three-year, five-year, and ten-year annualized basis.

Investment Guidelines:

Staff will have full discretion to manage the Investment Grade Fixed Income Asset Class consistent with the investment guidelines stated below. Compliance with the following guidelines for permitted investments and other restrictions is the sole responsibility of the Staff. Any exceptions or compliance violations are to be reported to the Board of Investments at the next scheduled quarterly Board meeting. State Fund will be notified of any exceptions or compliance violations within five days.

Permitted Investments:

The Investment Grade Fixed Income Asset Class may invest only in the following:

1. Debt obligations of the U.S. Government, including its agencies and instrumentalities;
2. Dollar denominated debt obligations of Quasi and Foreign Government entities;
3. Dollar denominated debt obligations of domestic and foreign corporations;

4. Dollar denominated securitized assets, including U.S. Agency mortgage backed securities (MBS), U.S. Agency collateralized mortgage obligations (CMOs), commercial mortgage backed securities (CMBS), and asset backed securities (ABS);
5. Cash – either an investment in the Short-Term Investment Pool (STIP), a vehicle available through the Custodian, or an SEC registered money market fund that is considered a "US Treasury" or "US Government" money market fund per the SEC regulations.

Other Restrictions

1. A minimum of 20% of the market value must be held in U.S. Treasury/Agency securities;
2. A maximum of 10% of the market value may be held in dollar denominated quasi and foreign government securities;
    a. Quasi and foreign government securities must be rated a minimum of the 7th highest rating by any nationally recognized statistical rating organization (NRSRO) at the time of purchase;
3. A maximum of 50% of the market value may be held in corporate bonds;
4. A maximum of 50% of the market value may be held in U.S. Agency mortgage backed securities (MBS & CMO);
5. A maximum of 5% of the market value may be held in asset backed securities (ABS);
6. A maximum of 10% of the market value may be held in commercial mortgage backed securities (CMBS);
7. The average duration will be maintained in a range of + or – 20% of the index duration;
8. The average life for individual fixed income securities will be less than 12 years;
9. A maximum of 3% of the market value may be held in a single parent company issuer, foreign/quasi government issuer or ABS specific pool at the time of purchase; there is no limit on U.S. Government/Agency securities;
    a. Exposure to a single parent company issuer, foreign/quasi government issuer or ABS specific pool will be limited to 4% of the market value regardless of when securities were purchased;
10. Securities must be rated investment grade by at least two nationally recognized statistical rating organizations (NRSRO), with the exception of securities issued or guaranteed by agencies or instrumentalities of the U.S. Government. In the case of split-rated securities, the lower rating is used;
11. Securities that drop below investment grade as defined above may be held to maturity. However, the Investment Grade Fixed Income Asset Class may not hold more than 5% below investment grade;
12. Fixed income securities rated lower than the 7th highest rating by any nationally recognized statistical rating organization (NRSRO) are limited to 25% of the market value of the SFIP;
    a. In the case of split rated securities, the lowest rating will apply;
13. Securitized assets must be rated a minimum of the 4th highest rating by any nationally recognized statistical rating organization (NRSRO) at the time of purchase;
    a. Securities that drop below the 4th highest rating by any NRSRO may be held to maturity. However, the Investment Grade Fixed Income Asset Class may not hold more than 4% in these securities;
14. A minimum of 1% of the Investment Grade Fixed Income Asset Class will be held in cash investments;
15. The use of derivatives is prohibited;
16. The use of leverage is prohibited.

If at any time, due to market fluctuations or any other circumstances, any of the guidelines are not maintained, Staff will use its best efforts to conform to these limits in a timely manner, while considering current market conditions and the associated costs of rebalancing. At the Board's next regularly scheduled quarterly meeting, the CIO shall inform the Board of any cases that the Investment Grade Fixed Income Asset Class allocations were outside of the limits and either inform the Board of the actions that were taken to return the Investment Grade Fixed Income Asset Class back within guidelines or a plan to do so. State Fund will be notified of any exceptions or compliance violations within five days.

MONTANA BOARD OF INVESTMENTS
MONTANA STATE FUND
INVESTMENT POLICY STATEMENT

LEGAL AND CONSTITUTIONAL AUTHORITY

The Montana Constitution, Article VIII, Section 13, requires that the Legislature provide for a Unified Investment Program for public funds. Section 17-6-201, MCA established the Unified Investment Program, created the Montana Board of Investments (the "Board) and gave the Board sole authority to invest state funds, including Montana State Fund in accordance with state law and the state constitution.

INTRODUCTION

The purpose of this policy statement is to provide a broad strategic framework for Montana State Fund investments under the guidance of the Board. The Board manages the assets under the prudent expert principle (Section 17-6-201 MCA), which provides:

> *that the Board shall manage a portfolio*
> a) *With the care, skill, prudence, and diligence, under the circumstances then prevailing, that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims;*
> b) *Diversify the holdings of each fund within the unified investment program to minimize the risk of loss and to maximize the rate of return unless, under the circumstances, it is clearly prudent not to do so; and*
> c) *Discharge the duties solely in the interest of and for the benefit of the funds forming the unified investment program*

The Montana Constitution, Article VIII, Section 13 (4) requires:

> *"Investment of state compensation insurance fund assets shall be managed in a fiduciary capacity in the same manner that a prudent expert acting in a fiduciary capacity and familiar with the circumstances would use in the conduct of a private insurance organization. State compensation insurance fund assets may be invested in private corporate capital stock. However, the stock investments shall not exceed 25 percent of the book value of the state compensation insurance fund's total invested assets."*

Montana State Fund investments are subject to Title 33, Chapter 12 of the Montana Code. The purpose of Chapter 12 (Insurer Investments) *"is to protect the interests of insureds by promoting insurer solvency and financial strength."*

OBJECTIVES

Strategic: Attaining investment returns that assist Montana State Fund in meeting liabilities as well as maintaining stable, cost effective rates for workers' compensation insurance. Montana State Fund is the guaranteed provider of workers' compensation insurance. Workers' compensation benefit payments typically require immediate medical payments and then ongoing medical and indemnity benefits that can span 40 years. Therefore, it is important to have a well-diversified, high quality portfolio that is positioned for the long term.

MONTANA BOARD OF INVESTMENTS
MONTANA STATE FUND
INVESTMENT POLICY STATEMENT

Primary investment objectives:

1. Provide investment income by assuming a prudent amount of risk
2. Preserve principal by diversifying the portfolio across risk factors

Secondary investment objective:

1. Long term capital appreciation in excess of inflation

Performance:
Success in attaining the return objectives will be measured against:

1. The income component of the Barclays Capital Government / Credit Intermediate Term Index versus the income component of the State Fund Investment Pool.

2. The return on the Barclays Capital Government / Credit Intermediate Term Index, the return on the S&P 500 index and the return on the MSCI ACWI Ex U.S. Index (international equity index), and the return of the NCREIF ODCE index (real estate), each weighted proportionately to the portfolio's holdings, over a five-year moving average.

The Board expects to meet or exceed these objectives over a long-term investment horizon. Over shorter periods, the anticipated market volatility and specific actions, including risk mitigation efforts of the Board may lead to unfavorable, but expected, deviation from these objectives.

ASSET ALLOCATION – STATE FUND INVESTMENT PORTFOLIO (SFIP)

Fixed Income: A minimum of 75% of the market value of the SFIP will be invested in an internally managed fixed income portfolio.

Public Equities: A maximum of 15% of the market value of the SFIP will be invested in public equities. The allocation to public equities is targeted at 10% of total SFIP market value. Investment will be in publicly-traded stocks of domestic and international companies via the use of passive index funds.

- A maximum of 12% will be invested in an S&P 500 Index Fund
- A maximum of 4% will be invested in an ACWI ex. U.S. Index Fund

Core Real Estate: A maximum of 8% of the market value of the SFIP will be invested in core real estate. The allocation to core real estate is targeted at 5% of total SFIP market value. Investment will be in commingled funds which own and operate institutional quality real estate in the traditional property types (i.e. multi-family, office, retail and industrial).

Cash Investments: A minimum of 1% and a maximum of 5% of the market value of the SFIP will be held in cash investments. Cash investments held at the pool level, any managed account within it, or any separate account entail an element of credit risk. Thus, only approved cash investment vehicles are permitted. These include STIP, the custodian's STIF vehicle or any SEC-registered money market fund employed by our external asset manager's all of which specifically address credit risk in their respective investment guidelines.

MONTANA BOARD OF INVESTMENTS
MONTANA STATE FUND
INVESTMENT POLICY STATEMENT

PERMITTED FIXED INCOME INVESTMENTS

The fixed income portfolio may only invest in the following:

- Debt obligations of the U.S. Government, including its agencies and instrumentalities.
- Dollar denominated debt obligations of Quasi and Foreign Government entities.
- Dollar denominated debt obligations of domestic and foreign corporations.
- Dollar denominated securitized assets, including U.S. Agency mortgage backed securities (MBS), U.S. Agency collateralized mortgage obligations (CMOs), commercial mortgage backed securities (CMBS), and asset backed securities (ABS).

OTHER RESTRICTIONS – FIXED INCOME ALLOCATION

1. A minimum of 20% of the market value of the SFIP must be held in U.S. Treasury/Agency securities.
2. A maximum of 10% of the market value of the SFIP may be held in dollar denominated quasi and foreign government securities.
    a. Quasi and foreign government securities must be rated equal to or higher than A3 by Moody's or A- by S&P at the time of purchase.
3. A maximum of 60% of the market value of the SFIP may be held in corporate bonds.
4. A maximum of 20% of the market value of the SFIP may be held in dollar denominated, international corporate bonds.
    a. Exposure to a single foreign jurisdiction may not exceed 10% of the market value of the SFIP.
5. A maximum of 20% of the market value of the SFIP may be held in U.S. Agency mortgage backed securities (MBS & CMO).
6. A maximum of 5% of the market value of the SFIP may be held in asset backed securities (ABS).
7. A maximum of 5% of the market value of the SFIP may be held in commercial mortgage backed securities (CMBS).
8. The average duration of the fixed income portfolio will be maintained in a range of + or – 20% of the index duration.
9. The average life for individual fixed income securities will be less than 12 years.
10. A maximum of 3% of the market value of the SFIP may be held in a single parent company issuer, foreign/quasi government issuer or ABS specific pool at the time of purchase; there is no limit on U.S. Government/Agency securities.
    a. Exposure to a single parent company issuer, foreign/quasi government issuer or ABS specific pool will be limited to 4% of the market value of the SFIP regardless of when securities were purchased.
11. Fixed income securities must be investment grade at the time of purchase as determined by Moody's (Baa3 or higher) or S&P (BBB- or higher).
    a. Securities in the portfolio that drop below investment grade may be held to maturity at the discretion of the manager. However, the SFIP may not hold more than 5% below investment grade.
12. Fixed income securities rated lower than A3 by Moody's or A- by S&P are limited to 25% of the market value of the SFIP.
    a. In the case of split rated securities, the lowest rating will apply.

MONTANA BOARD OF INVESTMENTS
MONTANA STATE FUND
INVESTMENT POLICY STATEMENT

13. A maximum of 15% of the market value of the SFIP may be held in Rule 144a securities, including a 10% maximum allocation to 144a securities without registration rights.
14. Securitized assets must be rated a minimum of Aa3 by Moody's and AA- by S&P at the time of purchase.
    a. Securities in the portfolio that drop below Aa3/AA- may be held to maturity at the discretion of the manager. However, the SFIP may not hold more than 4% below Aa3/AA-.
15. Companion/Residual/Equity tranches of securitized assets are prohibited.
16. Interest only (IO) and principal only (PO) mortgage strips are prohibited.
17. Collateralized Bond / Debt / Loan Obligations (CBO's/CDO's/CLO's) are prohibited.
18. The use of derivatives is prohibited.
19. The use of leverage is prohibited.
20. Convertible securities or securities with an equity component are prohibited.
21. Securities with an inverse floating coupon are prohibited.

MBOI will notify Montana State Fund of any issues out of compliance within 5 days. Should the portfolio fall out of compliance, a reasonable cure period will be allowed so that compliance can be obtained through normal maturities or transactions at fair market value if deemed prudent by Staff in light of prevailing market conditions.

ADMINISTRATIVE

Securities Lending: Section 17-1-113, MCA, authorizes the Board to lend securities held by the state. The Board may lend its publicly traded securities held in the investment pools, through an agent, to other market participants in return for compensation. Currently, through an explicit contract, State Street Bank and Trust, the state's custodial bank, manages the state's securities lending program. The Board seeks to assess the risks, such as counterparty and reinvestment risk, associated with each aspect of its securities lending program. The Board requires borrowers to maintain collateral at 102 percent for domestic securities and 105 percent for international securities. To ensure that the collateral ratio is maintained, securities on loan are marked to market daily and the borrower must provide additional collateral if the value of the securities on loan increases. In addition to the strict collateral requirements imposed by the Board, the credit quality of approved borrowers is monitored continuously by the contractor. From time to time, Staff or the investment manager may restrict a security from the loan program upon notification to State Street Bank. Staff will monitor the securities lending program, and the CIO will periodically report to the Board on the status of the program.

MONTANA BOARD OF INVESTMENTS

Department of Commerce

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To: Members of the Board

From: Ethan Hurley, Director of Real Estate and Natural Resources

Date: April 14, 2020

Subject: Proposed Changes to the Natural Resources and Real Estate Asset Class Investment Policy Statements

Natural Resources and Real Estate Asset Classes

We are proposing several changes to the Natural Resources and Real Estate investment policy statements.

Important changes:

<u>Natural Resource</u>

- Updating the investment restrictions to clarify the policy range and limits for each strategy
- Updating the leverage section to more clearly express how we monitor leverage at the private partnership fund investment level
- Administrative and grammatical changes for consistency

<u>Real Estate</u>

- Changing the benchmark from the MSCI US REIT Index to the NCREIF ODCE Index to more accurately reflect performance relative to a benchmark that more closely aligns with underlying holdings
- Updating the permitted investments to include separate accounts investing in private real estate direct investments
- Updating the investment restrictions to clarify the policy range and limits for each strategy
- Updating the leverage section to more clearly express how we monitor leverage at the private partnership fund investment level
- Administrative and grammatical changes for consistency

MONTANA PUBLIC RETIREMENT PLANS INVESTMENT POLICY

Approved April 5, 2017
Revised November 19, 2019
Revised April 14, 2020

Appendix I: Montana Public Retirement Plans Asset Allocation Ranges

Permitted Ranges:

Approved November 19, 2019

Asset Class Allocations		
Asset Class	**Range Low**	**Range High**
Domestic Equities	**24**	**36**
International Equities	**11**	**21**
Private Investments	**11**	**17**
Natural Resources	**1**	**7**
Real Estate	**5**	**13**
Core Fixed Income	**15**	**25**
Non-Core Fixed Income	**3**	**7**
Cash[1]	**0**	**4**
Total		

[1] The combined cash at the plan level and the CAPP level is subject to the range.

[2] ~~CAPP~~ Montana Public Retirement Plans shall have no greater than 5% of ~~its~~ the Net Asset Value managed by any one external manager using an active investment strategy.

Schedule II-D:
Investment Objectives and Guidelines
Natural Resources Asset Class

Effective Date of Schedule: ~~May 1, 2018~~April 14, 2020

This Schedule is effective upon adoption by the Board of Investments and supersedes all previous Investment Objectives and Guidelines for Natural Resources.

Statement of Purpose:
The purpose of these objectives and guidelines is to:

1. Establish the investment objectives and performance standards of the Natural Resources Asset Class; and
2. Provide diversified exposure to the Natural Resources markets in a prudent and cost-effective manner.

Investment Objective:

Strategic:
The objective of the Natural Resources Asset Class is to attain the highest possible return within the parameters of the Investment Guidelines set forth below.

Performance:
There is no generally accepted performance comparisons benchmark index for private partnership investments in Natural Resources. Characteristically, private partnership investments are impacted by the “j~~J~~-curve” effect, in which fees and transaction costs create negative returns during the initial investment years before distributions are realized. Private partnership investments usually require a long-time horizon to realize the value provided by the creation or ~~restructuring~~ enhancement of private companies.

The long-term performance objective for the Natural Resources Asset Class is the achievement of ~~long-term~~ net returns (after management fees and general partner’s carried interest) above a benchmark reflecting public equity Natural Resources market returns.

Success in achieving this objective will be measured by comparing the long-term net return of the Natural Resources Asset Class to the **MSCI ACWI Commodity Producers Index** (the “Benchmark”) on an annualized basis. Performance results will be monitored quarterly. However, the success in achieving the objective will be measured on a five-year and ten-year annualized basis.

Investment Guidelines:

Staff will have full discretion to manage the Natural Resources Asset Class consistent with the investment guidelines stated below. Compliance with the following guidelines for permitted investments and other restrictions is the sole responsibility of the Staff. Any exceptions or compliance violations are to be reported to the Board of Investments at the next scheduled quarterly Board meeting.

Most of the Natural Resources Asset Class investments will be managed by external investment managers via private investment partnerships in which the Montana Board of Investments will have a limited partnership interest; however, ~~T~~the Natural Resources Asset Class may also utilize public long-only and long/short strategies.

Permitted Investments:

The Natural Resources Asset Class (for the purpose of these guidelines, "Natural Resources" includes investments in t~~T~~imber, e~~E~~nergy, a~~A~~griculture, w~~W~~ater, and other c~~C~~ommodities) may invest only in the following:

1. Private i~~I~~nvestment partnership interests in Natural Resources. These private investment partnerships may be direct limited partnerships, limited liability companies, or vehicles that primarily invest in partnerships, including f~~F~~und-of-f~~F~~unds and s~~S~~econdary f~~F~~unds;
2. The Natural Resources Asset Class may co-invest with private investment managers in transactions that are suitable for inclusion into a Natural Resources private investment partnership;
3. Individual public or private securities received as distributions from funds;

4. Separately managed a~~A~~ccounts, o~~O~~pen-e~~E~~nded f~~F~~unds, c~~C~~losed-e~~E~~nded f~~F~~unds, or e~~E~~xchange-t~~T~~raded f~~F~~unds (ETFs), ~~or Master Limited Partnerships (MLPs)~~ managing publicly traded Natural Resources related investments, where the investments are approved by the Chief Investment Officer and purchased and monitored by Staff; and
5. Cash – either an investment in the Short-Term Investment Pool (STIP), a vehicle available through the c~~C~~ustodian, or an SEC registered money market fund that is considered a "US Treasury" or "US Government" money market fund per the SEC regulations.

Other Restrictions

~~1. The CAPP (Consolidated Asset Pension Pool) percentage of Net Asset Value invested in Timber investments shall be no greater than 2%;~~

~~2.~~1. The ~~CAPP (Consolidated Asset Pension Pool)~~Montana Public Retirement Plan assets as a percentage of Net Asset Value invested in a single investment within Natural Resources Asset Class shall be no greater than ~~1~~2.0%;

~~3.~~2. No more than 30% of the aggregate of the Natural Resources Asset Class N~~n~~et A~~a~~sset V~~v~~alue plus uncalled committed capital should be considered "Non-U.S." exposure based on the primary objective of the f~~F~~und, p~~P~~artnership, s~~S~~eparately managed a ~~A~~ccount, or i~~I~~ndex;

~~4.~~3. No more than 10% of the aggregate of the Natural Resources Asset Class N~~n~~et A~~a~~sset V~~v~~alue shall be invested in direct co-investments; and

~~5. Cash held at the Natural Resources Asset Class level (not including cash held in the underlying partnership interests, funds, or accounts, or cash that is equitized) is limited to 5% of the Natural Resources Asset Class Net Asset Value; and~~

~~6.~~4. Individual public securities received as distributions will be liquidated over a reasonable time- period dependent on market conditions.

The following table provides a guideline range with respect to the Natural Resources Asset Class strategy diversification. It is important to note that these ranges reference the sum of the Natural

Resources Asset Class Net Asset Value and uncalled commitments.

Strategy	Policy Range
Energy	30% - 75%
Timber	0% - 45%
Broad Natural Resources	0% - 50%
Public Natural Resource Securities	0% - 40%

For funds with exposure across categories, the fund will be classified in the category that is most reflective of the underlying investments in the funds.

Timber Fund Leverage

Leverage is a significant risk factor. On an individual fund basis, the leverage level can range up to 30.0%~~ percent~~. It is important to note; however, that in aggregate, ~~L~~leverage consists of the combined borrowing at the property level and the fund level. On a select basis, the leverage may exceed 30.0% ~~percent~~ at the combined property and fund investment level, ~~for a given investment,~~ if it is determined to be reasonable to do so, particularly in the early stages of the fund investment cycle when a fund level credit facility is utilized to finance early fund investments on a short-term basis prior to committed capital being drawn. While Staff will monitor leverage on this combined basis, the leverage statistic Staff will focus on most for purposes of compliance with this policy is the stabilized long-term leverage at the overall fund investment level once it has completed its acquisition phase, paid down outstanding short-term credit facility balances used to fund capital calls and the investment period has ended. ~~Leverage shall be monitored on an individual fund level and n~~New investments shall be made with the intention that the total timber fund investment leverage shall not exceed 30%.

Strategy	*Leverage Policy Range*
Timber ~~Fund Investments~~	*0% - 30%*

If at any time, due to market fluctuations or any other circumstances, any of the guidelines are not maintained, Staff will use its best efforts to conform to these limits in a timely manner, while considering current market conditions and the associated costs of rebalancing. At the Board's next regularly scheduled quarterly meeting, the CIO shall inform the Board of any cases ~~that~~ when the Natural Resources allocations were outside of the limits and either inform the Board of the actions that were taken to return the ~~Pool~~ Natural Resources Asset Class back within guidelines or a plan to do so.

Schedule II-E:
Investment Objectives and Guidelines
Real Estate Asset Class

Effective Date of Schedule: ~~May 1, 2018~~April 14, 2020

This Schedule is effective upon adoption by the Board of Investments and supersedes all previous Investment Objectives and Guidelines for Real Estate.

Statement of Purpose:
The purpose of these objectives and guidelines is to:

1. Establish the investment objectives and performance standards of the Real Estate Asset Class; and
2. Provide diversified exposure to Real Estate in a prudent and cost-effective manner.

Investment Objective:

Strategic:
The objective of the Real Estate Asset Class is to attain the highest possible return within the parameters of the Investment Guidelines set forth below.

Performance:
Success in achieving this objective will be measured by comparing the risk and after-fee return of the Real Estate Asset Class to the ~~MSCI US REIT Index~~**NCREIF Fund Index – Open End Diversified Core Equity (NFI-ODCE)** (the "Benchmark"). Performance results will be monitored and evaluated quarterly. However, the success in achieving the objective will be measured on a five-year, and ten-year annualized basis.

Investment Guidelines:

Staff will have full discretion to manage the Real Estate Asset Class consistent with the investment guidelines stated below. Compliance with the following guidelines for permitted investments and other restrictions is the sole responsibility of the Staff. Any exceptions or compliance violations are to be reported to the Board of Investments at the next scheduled quarterly Board meeting.

Most of the Real Estate Asset Class investments will be managed by external investment managers via ~~a~~ private investment partnerships in which the Montana Board of Investments will have a limited partnership interest~~.~~; however, the Real Estate Asset Class may also utilize public long-only and long/short strategies.

~~The Real Estate Asset Class may utilize public long-only and long/short strategies.~~

Permitted Investments:

The Real Estate Asset Class may invest only in the following:

1. Separate a~~A~~ccounts, o~~O~~pen-e~~E~~nded f~~F~~unds, c~~C~~losed-e~~E~~nded f~~F~~unds, e~~E~~xchange-t~~T~~raded f~~F~~unds (ETFs), or r~~R~~eal Estate i~~I~~nvestment t~~T~~rusts (REITs)~~, or Master Limited Partnerships (MLPs)~~ managing publicly traded r~~R~~eal e~~E~~state, where the investments are approved by the Chief Investment Officer and purchased and monitored by Staff;
2. Private i~~I~~nvestment partnership interests. These private partnerships may be direct limited partnerships, limited liability companies, or vehicles that primarily invest in partnerships, including f~~F~~und-of-f~~F~~unds and s~~S~~econdary f~~F~~unds;~~.~~
3. The Real Estate Asset Class may co-invest with private investment managers in transactions that are suitable for inclusion into a private r~~R~~eal e~~E~~state investment partnership;

~~3.~~4. Separate accounts investing in private real estate direct investments;

~~4.~~5. Individual public or private securities received as distributions from funds are also permitted to be held in the Real Estate Asset Class; and

~~5.~~6. Cash – either an investment in the Short-Term Investment Pool (STIP), a vehicle available through the c~~C~~ustodian, or an SEC registered money market fund that is considered a "US Treasury" or "US Government" money market fund per the SEC regulations.

Other Restrictions

1. ~~No less than 30% of the aggregate of the Real Estate Asset Class net asset value plus capital shall be invested in "Core" Real Estate. Real Estate is classified as "Core" if it is an investment in operating, substantially leased, and positively cash flowing institutional quality real estate across property types, geographies and markets;~~

~~1.~~2. The Montana Public Retirement Plan assets as a ~~CAPP (Consolidated Asset Pension Pool)~~ percentage of Net Asset Value invested in a single investment within the Real Estate Asset Class shall be no greater than 2.0%;

~~2. No more than 7.5% of the aggregate of the Real Estate Asset Class net asset value plus uncalled committed capital should be in a single "Non-Core" Fund, Partnership, or Separate Account;~~

~~3. Separate aAccounts, oOpen-eEnded fFunds, cClosed-eEnded fFunds, or eExchange-tTraded fFunds (ETFs), or Master Limited Partnerships (MLPs) managing publicly traded Real Estate or Timberland related investments may not exceed 420% of the aggregate of the Real Estate Asset Class net asset value plus uncalled committed capital;~~

~~4.~~3. No more than 30% of the aggregate of the Real Estate Asset Class N~~n~~et A~~a~~sset V~~v~~alue plus uncalled committed capital should be considered "Non-U.S." exposure based on the ~~primary objective~~dominant geographic exposure of the Fund, Partnership, Separate Account, or Index;

~~5.~~4. No more than 10% of the aggregate of the Real Estate Asset Class N~~n~~et A~~a~~sset V~~v~~alue shall be invested in direct co-investments; and

~~6. Cash held at the Real Estate Asset Class level (not including cash held in the underlying partnership interests, funds, or accounts) is limited to 5% of the Real Estate Asset Class Net Asset Value; and~~

~~7.~~5. Individual public securities received as distributions will be liquidated over a reasonable time~~-~~ period dependent on market conditions.

The following table provides a guideline range with respect to the Real Estate Asset Class strategy diversification. It is important to note that these ranges reference the sum of the Real Estate Asset Class Net Asset Value and uncalled commitments.

Strategy	Policy Range
Core Real Estate	20% - 50%
Core-plus/Non-Core Real Estate	25% - 65%
Real Estate ~~Credit~~Debt	10% - 40%
Public Real Estate Securities	0% - 40%

For funds with exposure across these categories, the fund will be classified in the category that is most reflective of the underlying investments in the funds.

Leverage

Leverage is a significant risk factor. On an individual fund basis, the leverage level can range up to 75.0% ~~percent~~. It is important to note; however, that in aggregate, l~~L~~everage consists of the combined borrowing at the property level and the fund level. On a select basis, the leverage may exceed 75.0% ~~percent for a given~~ at the combined property and fund investment level, if it is determined to be reasonable to do so, -particularly in the early stages of the fund investment cycle when a fund level credit facility is utilized to finance early fund investments on a short-term basis prior to committed capital being drawn. While Staff will monitor leverage on this combined basis at the fund investment level , the leverage statistic Staff will focus on most for purposes of compliance with this policy is the stabilized long-term leverage at the overall fund investment level once it has completed its acquisition phase, paid down outstanding short-term credit facility balances used to fund capital calls and the investment period has ended.~~Leverage shall be monitored on an individual fund level and~~ N~~n~~ew investments shall be made with the intention that the total Real Estate Asset Class leverage shall not exceed 60%.

Strategy	Leverage Policy
Core Real Estate Investments	0% - 50%
Core-plus/Non-Core Real Estate ~~Investments~~	0% - 75%
~~Private~~ Real Estate ~~Credit~~Debt	0% – 75%

If at any time, due to market fluctuations or any other circumstances, any of the guidelines are not maintained, Staff will use its best efforts to conform to these limits in a timely manner, while considering current market conditions and the associated costs of rebalancing. At the Board's next regularly scheduled quarterly meeting, the CIO shall inform the Board of any cases that the Real Estate Asset Class allocations were outside of the limits and either inform the Board of the actions that were taken to return the Real Estate Asset Class back within guidelines or a plan to do so.

While no formal diversification ranges are set forth for property type diversification or regional diversification within the United States, it is expected that the Real Estate Asset Class shall remain diversified across these factors. These and other factors shall be monitored and reported to the Board at least annually.

MONTANA PUBLIC RETIREMENT PLANS
INVESTMENT POLICY

Approved April 5, 2017
Revised November 19, 2019
Revised April 14, 2020

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1. Introduction:

Montana Public Retirement Plan assets are commingled for investment purposes into a Consolidated Asset Pension Pool (CAPP) created by the Board. The use of a commingled pool allows for simplified investing and accounting, broader diversification and thus less risk than would otherwise be available for the smaller Plans and provides additional opportunities for fee savings. The Consolidated Asset Pension Pool invests directly in the underlying Asset Classes. Each Asset Class has an underlying set of investment objectives and investment guidelines. Each of the nine Plans, CAPP, and each of the Asset Classes are separately identified for accounting and record keeping purposes.

This policy is effective upon adoption and supersedes all previous Investment Policies related to the investment management of the Montana Public Retirement Plans.

2. Purpose:

The purpose of this policy statement is to provide a broad strategic framework for the Montana Public Retirement Plans' investments under the guidance of the Board of Investments.

3. Legal and Constitutional Authority:

The Montana Constitution, Article VIII, Section 13, requires that the Legislature provide for a Unified Investment Program for public funds. Section 17-6-201, MCA, established the Unified Investment Program, created the Montana Board of Investments (the "Board") and gave the Board sole authority to invest state funds, including the public retirement plans (Plans) in accordance with state law and the state constitution.

The Unified Investment program for public funds must be administered by the Board of Investments in accordance with the "prudent expert principle," defined as:

1) discharging its duties with the care, skill, prudence, and diligence, under the circumstances then prevailing, that a prudent person acting in a like capacity with the same resources and familiar with like matters exercises in the conduct of an enterprise of like character with like aims;
2) diversifying the holdings of each fund to minimize the risk of loss and maximize the rate of return, unless under the circumstances it is clearly prudent not to do so; and
3) discharging its duties solely in the interest of and for the beneficiaries of the funds managed.

MCA section 17-6-201 (2) (a) states… "Retirement funds may be invested in common stocks of any corporation."

MCA section 17-6-201 (3) (b) states… "The Board is urged under the prudent expert principle to invest up to three percent (3%) of retirement funds in Venture Capital companies. Whenever possible, preferences should be given to investments in those Venture Capital companies which demonstrate an interest in making investments in Montana."

MCA section 17-6-201 (3) (c) states… "In discharging its duties, the board shall consider the preservation of purchasing power of capital during periods of high monetary inflation."

The Board, as the investment fiduciary of the Plans, is responsible for establishing the investment parameters for the Plans. The Board has the authority to allocate portfolios to any previously board-approved asset class in the proportions it considers prudent, under the prudent expert rule. There are currently no statutory or constitutional restrictions on the investment of the Plans. Asset allocation decisions made by the Board must be made in a public meeting.

4. Strategic Investment Objectives

The Board's overall objective is to achieve the highest level of investment performance that is compatible with its risk tolerance and prudent investment practices. Because of the long-term nature of the state's various pension liabilities, the Board maintains a long-term perspective in formulating and implementing its investment policies, and in evaluating its investment performance.

5. Time Horizon

The Board expects to meet or exceed these objectives over a long-term investment horizon. Over shorter periods, the anticipated market volatility and specific actions, including risk mitigation efforts of the Board, may lead to unfavorable, but expected, deviation from these objectives.

6. Performance Measurement

Investment performance is measured by three integrated long-term return objectives:

a) The ***actuarial target rate of return*** is the key actuarial assumption affecting future funding rates and liabilities. Investment performance that exceeds or underperforms the target rate may materially impact future funding rates and liabilities. The Board seeks to generate long-term investment performance that will exceed the maximum actuarial annual target rate of return of 7.65%, as determined by the governing boards of the public retirement systems, net of all investment and administrative expenses. There may be years, or a period of years, when the Plans do not achieve this goal followed by years when the goal is exceeded. But over a long period, the Board seeks to achieve an average net rate of return of 7.65%, as determined by the governing boards of the public retirement systems, at risk levels (measured by expected volatility) broadly consistent with other public fund peers.

b) The ***investment policy benchmark*** for the Retirement Plans is calculated by applying the investment performance of the benchmarks to any of the underlying asset classes to the Plans' actual allocation to these investments during the measurement period. The investment policy benchmark represents the return that would be achieved if the Plan implemented a passively managed portfolio. Deviations from the policy benchmark measure the contribution of active management, rebalancing policy and its execution, and investment implementation generally.

c) The Board also compares each Plan's total performance, before all fees, to appropriate ***public plan sponsor universes***. This process permits the Board to compare its total performance to other public pension plans. While the Board seeks to rank consistently in the top half of comparable public pension plans, the Board recognizes that other plans may have investment objectives and risk tolerances that differ substantially from the Board's.

7. Roles and Responsibilities

a) **Board of Investments** – The Board is responsible for approving the Investment Policy Statement for the Montana Public Retirement Plans and has the authority to allocate portfolios to any asset class in the proportions it considers prudent, subject to such limitations as contained in law and the Constitution. The Board reviews this document periodically and, as needed, approves any changes to the policy.

As described in the Board of Investments Governance Manual, the Board delegates authority to the Executive Director, Chief Investment Officer, and other Staff to execute the day to day duties required to carry out the Board's mission.

b) **Executive Director –** The Executive Director is empowered by the Board to sign all documents required to conduct Board business, unless there are specific written policies or instructions from the Board to the contrary. The Executive Director and the Chief Investment Officer are authorized jointly to contract for investment manager services and if deemed appropriate, terminate them.

c) **Chief Investment Officer –** The Chief Investment Officer (CIO) is empowered by the Board to serve as the principal staff person responsible for overseeing the investment activities under the Board's jurisdiction in compliance with the Board's policies. The CIO, with the support of other staff, is responsible for recommending investment policy changes for Board approval.

d) **Staff –** The staff is responsible for:

I. Managing day-to-day operations and delegating work to external resources as appropriate;
II. Monitoring allocations and overseeing all investment manager due diligence activities and recommending changes to the CIO;
III. Monitoring and reporting to the Board the performance of each asset class and the individual managers' performance;
IV. Informing the Board of any new managers or terminations; and
V. Reporting any deviations from this Investment Policy to the Board.

e) **Investment Consultant** – The investment consultant assists the CIO and staff with policy recommendations and provides advice to the Board. The investment consultant also assists staff in monitoring all external managers and reports to the Board independently.

f) **External Managers** – Managers are responsible for all aspects of portfolio management as set forth in the contract specific to each manager. Managers must communicate with staff as needed, regarding investment strategies and results. Managers must also cooperate fully with staff regarding administrative, accounting, and reconciliation issues as well as any requests from the investment consultant and the master custodian.

8. Strategic Asset Allocation

The Board finds that it is in the best interest of the state's nine retirement Plans to set out investment policies for the Plans in one comprehensive document.

<u>Nine Public Retirement Plans:</u>
Public Employees Retirement System
Teachers Retirement System
Police Officers Retirement
Firefighters Retirement
Sheriffs Retirement
Highway Patrol Retirement
Game Wardens Retirement
Judges Retirement
Volunteer Firefighters Retirement

The current asset allocation ranges for the Plans are in **Appendix I**. The asset allocation ranges are subject to change as modifications are adopted by the Board, at which time **Appendix I** will be revised to reflect these changes. The Board will formally affirm or revise the asset allocation ranges for the Plans at least annually.

9. Rebalancing

The actual asset allocation mix may deviate from time to time from the approved asset allocation ranges due to financial market performance, cash flows, and manager performance. Material deviations from the asset allocation ranges can alter the expected return and risk of the Plans. Rebalancing the Plans' assets to remain within the Board-approved allocation ranges is delegated to the Chief Investment Officer (CIO), in consultation with the Executive Director. Any necessary rebalancing will be made in a timely manner and will take into consideration associated costs and current market conditions. In addition to maintaining actual allocations within the ranges, the CIO will also consider contractual investment commitments to private investments, the liquidity necessary to meet benefit payments and administrative costs for the Plans, and current market conditions. This may prompt asset rebalancing when asset allocations fall within the established ranges. The CIO shall inform the Board of rebalancing activity at the Board's next regularly scheduled quarterly meeting.

10. Risk Management

a) **Evaluation of Investment Managers**
The Investment Manager Evaluation Policy is a distinct policy that is regularly reviewed and updated separate from the Retirement Plans Investment Policy because staff utilizes the Investment Manager Evaluation Policy to oversee and manage other assets in addition to the retirement plan assets.

b) **Liquidity**

Based on the percentage of total plan assets necessary for ongoing benefit payments and other plan expenses, the liquidity needs for the Retirement Plans are generally low and participant capital is not expected to change dramatically on short notice. However, illiquidity risk still needs to be monitored and managed by staff on a regular basis to ensure that assets are not required to be sold too quickly, or at an unfavorable time, and potentially at a discount to fair value to meet the cash needs of the Retirement Plans.

A significant percentage of the investments in the Real Estate, Natural Resources and Private Investments Asset Classes are considered illiquid. Due to the limited liquidity of these assets, it will typically be impractical to fund plan cash needs or correct deviations from policy ranges through the purchase or sale of these assets.

The investments held in the Domestic Equity, International Equity, Core Fixed Income, and Non-Core Fixed Income Asset Classes are categorized as publicly traded securities. In "normal market" conditions many of the underlying assets from these Asset Classes can be liquidated in a relatively short period to accommodate both expected and unexpected withdrawals as well as any repositioning of the asset allocation to stay within approved ranges.

To improve liquidity and manage both the expected and unexpected Retirement Plans need for cash, this Investment Policy specifies a strategic allocation to the Cash Asset Class, which invests in approved investments including the Short-Term Investment Pool (STIP).

c) **Monitoring/Reporting – Transparency**

Managers shall submit periodic reports to facilitate Staff's monitoring of the Managers' conformance to investment restrictions and performance objectives.

Staff shall provide regular reporting to the Board regarding the asset allocation and performance of the pension plans as well as the characteristics and performance of the Asset Classes to confirm these items are known and adhere to all Investment Policy requirements and expectations.

Staff will discuss and communicate any key information discovered due to the ongoing Manager monitoring process that might assist the Board in understanding the underlying investment manager structure or risks embedded in the investment characteristics of the Retirement Plan asset allocations.

d) **Leverage**

Leverage is a significant risk factor. Investment managers may utilize leverage only when permitted in the manager's investment guidelines approved by Staff. Staff shall monitor the use of leverage and its impact on risk and return.

The use of derivative securities can generate additional leverage even if the derivative is being used to reduce the risk in other investments. Investment managers may only use derivatives when permitted in the manager's investment guidelines approved by Staff.

e) **Cash Investments**

Cash investments held at the Retirement Plan, CAPP level, or any managed account within it, entail an element of credit risk. Thus, only approved cash investment vehicles are permitted. These include the custodian's STIF vehicle, STIP, or any SEC-registered money market fund approved by the CIO, all of which specifically address credit risk in their respective investment guidelines.

11. Securities Lending

Section 17-1-113, MCA, authorizes the Board to lend securities held by the state. The Board may lend its publicly traded securities through an agent, to other market participants in return for compensation. Currently, through an explicit contract, State Street Bank and Trust, the state's custodial bank, manages the state's securities lending program. The Board seeks to assess counterparty and reinvestment risk, associated with each aspect of its securities lending program. The Board requires borrowers to maintain collateral at 102 percent for domestic securities and 105 percent for international securities. To ensure that the collateral ratio is maintained, securities on loan are marked to market daily and the borrower must provide additional collateral if the value of the collateral falls below the agreed-upon ratio of over-collateralization. In addition to the strict collateral requirements imposed by the Board, the credit quality of approved borrowers is monitored continuously by the contractor. From time to time, Staff or the investment manager may restrict a security from the loan program upon notification to State Street Bank. Staff will monitor the securities lending program, and the CIO will periodically report to the Board on the status of the program. The Board's participation in securities lending may change over time given Plan activity, market conditions and the agent agreement.

12. Exercise of Shareholder Rights

The Board recognizes that publicly traded securities and other assets of the Plans include certain ancillary rights, such as the right to vote on shareholder resolutions at companies' annual shareholders' meetings, and the right to assert claims in securities class action lawsuits or other litigation. The Board will prudently manage these assets of the Plans for the exclusive purpose of enhancing the value of the Plans for its participating systems' members and beneficiaries through such means as adopting and implementing a proxy voting policy and undertaking productive, cost-effective action to exercise its rights as shareholders or claimants in litigation.

a) **Proxy Voting**

Active voting of proxies is an important part of the Board's investment program. Under the contractual arrangements between the Board and its investment managers, the responsibility for voting proxies on the investments is delegated to the managers. Managers are contractually required to establish a proxy voting program in coordination with Board Staff and are required to vote proxies, excluding shares on loan under the Board's securities lending program, in the interest of the Plans' beneficiaries. Records of proxy votes shall be maintained by the Managers, and/or its third-party designee, and submitted to Staff and/or an external service provider annually.

Staff will monitor the proxy voting practices of the Board's external investment managers. External service providers may be retained by either the Board or the Managers to assist in monitoring efforts. This monitoring will be coordinated with each manager to reasonably assure the Staff that Managers are fulfilling their fiduciary responsibilities with respect to proxy voting.

b) **Class Action Litigation**

Claims under state and federal securities laws arising out of losses on securities under the Board's management are assets subject to the Board's fiduciary duty of prudent management. The Board shall take reasonable, cost effective steps to identify, pursue and collect upon claims under securities laws for losses suffered by the Board on its investment. Accordingly, the Board maintains a detailed litigation policy, including process steps, outlined in the Montana Board of Investments Governance Manual, Appendix F.

13. Investment Policy Review

The Board intends to keep this Policy updated as it modifies or amends the underlying contents. As stated in the Governance Policy, "the Board shall review this Investment Policy at least annually or more frequently at the request of Board staff. Statements may only be revised in a public meeting. All Statements shall be posted on the Board's web site for review by the public."

Appendix I: Montana Public Retirement Plans Asset Allocation Ranges

Permitted Ranges:

Approved November 19, 2019

Asset Class Allocations		
Asset Class	**Range Low**	**Range High**
Domestic Equities	**24**	**36**
International Equities	**11**	**21**
Private Investments	**11**	**17**
Natural Resources	**1**	**7**
Real Estate	**5**	**13**
Core Fixed Income	**15**	**25**
Non-Core Fixed Income	**3**	**7**
Cash[1]	**0**	**4**
Total		

[1] The combined cash at the plan level and the CAPP level is subject to the range.

[2] Montana Public Retirement Plans shall have no greater than 5% of the Net Asset Value managed by any one external manager using an active investment strategy.

Appendix II: Investment Objectives and Guidelines

Schedule II-A:
Investment Objectives and Guidelines
Domestic Equities Asset Class

Effective Date of Schedule: by May 1, 2018

This Schedule is effective upon adoption by the Board of Investments and supersedes all previous Investment Objectives and Guidelines for Domestic Equities.

Statement of Purpose:
The purpose of these objectives and guidelines is to:

1. Establish the investment objectives and performance standards of the Asset Class; and
2. Provide diversified exposure to the domestic equity market in a prudent and cost-effective manner.

Investment Objective:

Strategic:
The objective of the Domestic Equities Asset Class is to attain the highest possible total return within the parameters of the Investment Guidelines set forth below.

Performance:
Success in achieving this objective will be measured by comparing the risk and after-fee return of the Domestic Equity Asset Class to the **MSCI USA Investable Market Index** (the "Benchmark"). Performance results will be monitored and evaluated quarterly. However, the success in achieving the objective will be measured on a three-year, five-year, and ten-year annualized basis.

Investment Guidelines:

Staff will have full discretion to manage this Asset Class consistent with the investment guidelines stated below. Compliance with the following guidelines for permitted investments and other restrictions is the sole responsibility of the Staff. Any exceptions or compliance violations are to be reported to the Board of Investments at the next scheduled quarterly Board meeting.

Most of the Domestic Equity investments will be managed by external investment managers.
The Domestic Equities Asset Class may utilize public long-only and long/short strategies.

It is expected that Domestic Equities Asset Class shall invest in public market investments that provide liquidity and meaningful transparency to portfolio characteristics and risk exposures.

Permitted Investments:

The Domestic Equities Asset Class may invest only in the following:

1. Securities and derivatives held in separate accounts, commingled funds, limited partnerships, or limited liability companies managed by external investment managers and governed by their respective investment management contracts and investment guidelines;
2. Exchange-Traded Funds (ETFs) based on a domestic equity index that is approved by the Chief Investment Officer and purchased and monitored by Staff; and
3. Cash – either an investment in the Short-Term Investment Pool (STIP), a vehicle available through the Custodian, or an SEC registered money market fund that is considered a “US Treasury” or “US Government” money market fund per the SEC regulations.

Other Restrictions:

1. The Domestic Equities Asset Class percentage of Net Asset Value invested in “small-cap” equities shall not exceed +10% above the Benchmark weight in “small cap”;
2. The Domestic Equities Asset Class percentage of Net Asset Value invested in passive/index strategies shall be greater than 45%; and
3. Cash held at the Domestic Equities Asset Class level (not including cash held by external managers in separate accounts or commingled funds) is limited to 5% of the Domestic Equities Asset Class Net Asset Value.

If at any time, due to market fluctuations or any other circumstances, any of the guidelines are not maintained, Staff will use its best efforts to conform to these limits in a timely manner, while considering current market conditions and the associated costs of rebalancing. At the Board’s next regularly scheduled quarterly meeting, the CIO shall inform the Board of any cases that the Domestic Equity Asset Class allocations were outside of the limits and either inform the Board of the actions that were taken to return the Domestic Equities Asset Class back within guidelines or a plan to do so.

Schedule II-B:
Investment Objectives and Guidelines
International Equities Asset Class

Effective Date of Schedule: May 1, 2018

This Schedule is effective upon adoption by the Board of Investments and supersedes all previous Investment Objectives and Guidelines for International Equities.

Statement of Purpose:
The purpose of these objectives and guidelines is to:

1. Establish the investment objectives and performance standards of the Asset Class; and
2. Provide diversified exposure to the international and global equity markets in a prudent and cost-effective manner.

Investment Objective:

Strategic:
The objective of the International Equities Asset Class is to attain the highest possible total return within the parameters of the Investment Guidelines set forth below.

Performance:
Success in achieving this objective will be measured by comparing the risk and after-fee return of the International Equities Asset Class to the **MSCI All Country World ex-US Investable Market Index** (the "Benchmark"). Performance results will be monitored and evaluated quarterly. However, the success in achieving the objective will be measured on a three-year, five-year, and ten-year annualized basis.

Investment Guidelines:

Staff will have full discretion to manage the International Equities Asset Class consistent with the investment guidelines stated below. Compliance with the following guidelines for permitted investments and other restrictions is the sole responsibility of the Staff. Any exceptions or compliance violations are to be reported to the Board of Investments at the next scheduled quarterly Board meeting.

Most of the International Equities Asset Class investments will be managed by external investment managers.

The International Equities Asset Class may utilize public long-only and long/short strategies.

It is expected that the International Equities Asset Class shall invest in public market investments that provide liquidity and meaningful transparency to portfolio characteristics and risk exposures.

Permitted Investments:

The International Equities Asset Class may invest only in the following:

1. Securities and derivatives held in separate accounts, commingled funds, limited partnerships, or limited liability companies managed by external investment managers and governed by their respective investment management contracts and investment guidelines;
2. Exchange-Traded Funds (ETFs) based on an international equity index that is approved by the Chief Investment Officer and purchased and monitored by Staff; and
3. Cash – either an investment in the Short-Term Investment Pool (STIP), a vehicle available through the Custodian, or an SEC registered money market fund that is considered a "US Treasury" or "US Government" money market fund per the SEC regulations.

Other Restrictions:

1. The International Equities Asset Class percentage of Net Asset Value invested in "small-cap" equities shall not exceed +10% above the Benchmark weight in "small cap";
2. The International Equities Asset Class percentage of Net Asset Value invested in passive/index strategies shall be greater than 42%;
3. The International Equities Asset Class percentage of Net Asset Value invested in Emerging Market securities shall not exceed +10% above the Benchmark weight in Emerging Market securities; and
4. Cash held at the International Equities Asset Class level (not including cash held by external managers in separate accounts or commingled funds) is limited to 5% of the International Equities Asset Class Net Asset Value.

If at any time, due to market fluctuations or any other circumstances, any of the guidelines are not maintained, Staff will use its best efforts to conform to these limits in a timely manner, considering current market conditions and the associated costs of rebalancing. At the Board's next regularly scheduled quarterly meeting, the CIO shall inform the Board of any cases that the International Equities Asset Class allocations were outside of the limits and either inform the Board of the actions that were taken to return the International Equities Asset Class back within guidelines or a plan to do so.

Schedule II-C:
Investment Objectives and Guidelines
Private Investments Asset Class

Approved Date of Schedule: November 19, 2019

This Schedule is effective upon adoption by the Board of Investments and supersedes all previous Investment Objectives and Guidelines for Private Investments.

Statement of Purpose:
The purpose of these objectives and guidelines is to:

1. Establish the investment objectives and performance standards of the Asset Class; and
2. Provide diversified exposure to the Private Investment markets in a prudent and cost-effective manner.

Investment Objective:

Strategic:
The objective of the Private Investments Asset Class is to attain the highest possible return within the parameters of the Investment Guidelines set forth below.

Performance:
There is no generally accepted benchmark index for private investment performance comparisons. Characteristically, private partnership investments are impacted by the "J-curve" effect, in which fees and transaction costs create negative returns during the initial investment years before distributions are realized. Private investments require a long-time horizon to realize the value provided by the creation or restructuring of private companies.

The performance objective for the Private Investments Asset Class is the achievement of long-term net returns (after management fees and general partner's carried interest) above a benchmark reflecting public equity market returns.

Success in achieving this objective will be measured by comparing the net return of the Private Investments Asset Class to the **MSCI USA Small Cap Index** (the "Benchmark") on an annualized basis. Performance results will be monitored quarterly. However, the success in achieving the objective will be measured on a five-year and ten-year annualized basis.

Investment Guidelines:

Staff will have full discretion to manage the Private Investments Asset Class consistent with the investment guidelines stated below. Compliance with the following guidelines for permitted investments and other restrictions is the sole responsibility of the Staff. Any exceptions or compliance violations are to be reported to the Board of Investments at the next scheduled quarterly Board meeting.

Most of the Private Investments Asset Class investments will be managed by external investment managers via a partnership structure in which the Montana Board of Investments will have a limited partnership interest.

<u>Permitted Investments</u>:

The Private Investments Asset Class may invest only in the following:

1. Private Investment partnership interests. These private partnerships may be direct limited partnerships, limited liability companies, or vehicles that primarily invest in partnerships, including Fund-of-Funds and Secondary Funds;
2. Investments held in separate accounts or commingled funds managed by external investment managers and governed by their respective investment management contracts and investment guidelines;
3. The Private Investments Asset Class may co-invest with private investment managers in transactions that are suitable for inclusion into a private investment partnership;
4. Individual public or private securities received as distributions from funds;
5. Exchange-Traded Funds (ETFs) based on a public equity index that is approved by the Chief Investment Officer and purchased and monitored by Staff; and
6. Cash – either an investment in the Short-Term Investment Pool (STIP), a vehicle available through the Custodian, or an SEC registered money market fund that is considered a "US Treasury" or "US Government" money market fund per the SEC regulations.

<u>Other Restrictions</u>

1. No more than 7.5% of the aggregate of the Private Investments Asset Class net asset value plus uncalled committed capital should be in a single Direct Limited Partnership;
2. No more than 30% of the aggregate of the Private Investments Asset Class net asset value plus uncalled committed capital should be considered "Non-U.S." exposure based on the primary objective of the Fund, Partnership, Separate Account, or Index;
3. No more than 10% of the aggregate of the Private Investments Asset Class net asset value shall be invested in direct co-investments;
4. Cash held at the Private Investments Asset Class level (not including cash held in the underlying partnership interests/funds) is limited to 5% of the Private Investments Asset Class Net Asset Value; and
5. Individual public securities received as distributions will be liquidated over a reasonable time-period dependent on market conditions.

The following table provides a guideline range with respect to Private Investments strategy diversification. <u>It is important to note that these ranges reference the sum of the Private Investments Asset Class net asset value and uncalled commitments</u>.

Strategy	Policy Range
Buyout and all other private equity related strategies not related to Venture Capital or Private Credit	50% - 100%
Venture Capital	0% - 25%
Private Credit	0% - 50%

For the purpose of the ranges provided above, funds will be classified in the category that is most reflective of the underlying investments in the funds.

If at any time, due to market fluctuations or any other circumstances, any of the guidelines are not maintained, Staff will use its best efforts to conform to these limits in a timely manner, while considering current market conditions and the associated costs of rebalancing. At the Board's next regularly scheduled quarterly meeting, the CIO shall inform the Board of any cases that the Private Investments Asset Class allocations were outside of the limits and either inform the Board of the actions that were taken to return the Private Investments Asset Class back within guidelines or a plan to do so.

Schedule II-D:
Investment Objectives and Guidelines
Natural Resources Asset Class

Effective Date of Schedule: April 14, 2020

This Schedule is effective upon adoption by the Board of Investments and supersedes all previous Investment Objectives and Guidelines for Natural Resources.

Statement of Purpose:
The purpose of these objectives and guidelines is to:

1. Establish the investment objectives and performance standards of the Natural Resources Asset Class; and
2. Provide diversified exposure to the Natural Resources markets in a prudent and cost-effective manner.

Investment Objective:

Strategic:
The objective of the Natural Resources Asset Class is to attain the highest possible return within the parameters of the Investment Guidelines set forth below.

Performance:
There is no generally accepted performance comparisons benchmark index for private partnership investments in Natural Resources. Characteristically, private partnership investments are impacted by the "j-curve" effect, in which fees and transaction costs create negative returns during the initial investment years before distributions are realized. Private partnership investments usually require a long-time horizon to realize the value provided by the creation or enhancement of private companies.

The long-term performance objective for the Natural Resources Asset Class is the achievement of net returns (after management fees and general partner's carried interest) above a benchmark reflecting public equity Natural Resources market returns.

Success in achieving this objective will be measured by comparing the long-term net return of the Natural Resources Asset Class to the **MSCI ACWI Commodity Producers Index** (the "Benchmark") on an annualized basis. Performance results will be monitored quarterly. However, the success in achieving the objective will be measured on a five-year and ten-year annualized basis.

Investment Guidelines:

Staff will have full discretion to manage the Natural Resources Asset Class consistent with the investment guidelines stated below. Compliance with the following guidelines for permitted investments and other restrictions is the sole responsibility of the Staff. Any exceptions or compliance violations are to be reported to the Board of Investments at the next scheduled quarterly Board meeting.

Most of the Natural Resources Asset Class investments will be managed by external investment managers via private investment partnerships in which the Montana Board of Investments will have a limited partnership interest; however, the Natural Resources Asset Class may also utilize public long-only and long/short strategies.

Permitted Investments:

The Natural Resources Asset Class (for the purpose of these guidelines, "Natural Resources" includes investments in timber, energy, agriculture, water, and other commodities) may invest only in the following:

1. Private investment partnership interests in Natural Resources. These private investment partnerships may be direct limited partnerships, limited liability companies, or vehicles that primarily invest in partnerships, including fund-of-funds and secondary funds;
2. The Natural Resources Asset Class may co-invest with private investment managers in transactions that are suitable for inclusion into a Natural Resources private investment partnership;
3. Individual public or private securities received as distributions from funds;
4. Separately managed accounts, open-ended funds, closed-ended funds, or exchange-traded funds (ETFs), managing publicly traded Natural Resources related investments, where the investments are approved by the Chief Investment Officer and purchased and monitored by Staff; and
5. Cash – either an investment in the Short-Term Investment Pool (STIP), a vehicle available through the custodian, or an SEC registered money market fund that is considered a "US Treasury" or "US Government" money market fund per the SEC regulations.

Other Restrictions

1. The Montana Public Retirement Plan assets as a percentage of Net Asset Value invested in a single investment within Natural Resources Asset Class shall be no greater than 2.0%;
2. No more than 30% of the aggregate of the Natural Resources Asset Class Net Asset Value plus uncalled committed capital should be considered "Non-U.S." exposure based on the primary objective of the fund, partnership, separately managed account, or index;
3. No more than 10% of the aggregate of the Natural Resources Asset Class Net Asset Value shall be invested in direct co-investments; and
4. Individual public securities received as distributions will be liquidated over a reasonable time- period dependent on market conditions.

The following table provides a guideline range with respect to the Natural Resources Asset Class strategy diversification. It is important to note that these ranges reference the sum of the Natural Resources Asset Class Net Asset Value and uncalled commitments.

Strategy	Policy Range
Energy	30% - 75%
Timber	0% - 45%
Broad Natural Resources	0% - 50%
Public Natural Resource Securities	0% - 40%

For funds with exposure across categories, the fund will be classified in the category that is most reflective of the underlying investments in the funds.

<u>Timber Fund Leverage</u>

Leverage is a significant risk factor. On an individual fund basis, the leverage level can range up to 30.0%. It is important to note; however, that in aggregate, leverage consists of the combined borrowing at the property level and the fund level. On a select basis, the leverage may exceed 30.0% at the combined property and fund investment level, if it is determined to be reasonable to do so, particularly in the early stages of the fund investment cycle when a fund level credit facility is utilized to finance early fund investments on a short-term basis prior to committed capital being drawn. While Staff will monitor leverage on this combined basis, the leverage statistic Staff will focus on most for purposes of compliance with this policy is the stabilized long-term leverage at the overall fund investment level once it has completed its acquisition phase, paid down outstanding short-term credit facility balances used to fund capital calls and the investment period has ended. New investments shall be made with the intention that the total timber fund investment leverage shall not exceed 30%.

Strategy	*Leverage Policy Range*
Timber	*0% - 30%*

If at any time, due to market fluctuations or any other circumstances, any of the guidelines are not maintained, Staff will use its best efforts to conform to these limits in a timely manner, while considering current market conditions and the associated costs of rebalancing. At the Board's next regularly scheduled quarterly meeting, the CIO shall inform the Board of any cases when the Natural Resources allocations were outside of the limits and either inform the Board of the actions that were taken to return the Natural Resources Asset Class back within guidelines or a plan to do so.

Schedule II-E:
Investment Objectives and Guidelines
Real Estate Asset Class

Effective Date of Schedule: April 14, 2020

This Schedule is effective upon adoption by the Board of Investments and supersedes all previous Investment Objectives and Guidelines for Real Estate.

Statement of Purpose:
The purpose of these objectives and guidelines is to:

1. Establish the investment objectives and performance standards of the Real Estate Asset Class; and
2. Provide diversified exposure to Real Estate in a prudent and cost-effective manner.

Investment Objective:

Strategic:
The objective of the Real Estate Asset Class is to attain the highest possible return within the parameters of the Investment Guidelines set forth below.

Performance:
Success in achieving this objective will be measured by comparing the risk and after-fee return of the Real Estate Asset Class to the **NCREIF Fund Index – Open End Diversified Core Equity (NFI-ODCE)** (the "Benchmark"). Performance results will be monitored and evaluated quarterly. However, the success in achieving the objective will be measured on a five-year, and ten-year annualized basis.

Investment Guidelines:

Staff will have full discretion to manage the Real Estate Asset Class consistent with the investment guidelines stated below. Compliance with the following guidelines for permitted investments and other restrictions is the sole responsibility of the Staff. Any exceptions or compliance violations are to be reported to the Board of Investments at the next scheduled quarterly Board meeting.

Most of the Real Estate Asset Class investments will be managed by external investment managers via private investment partnerships in which the Montana Board of Investments will have a limited partnership interest; however, the Real Estate Asset Class may also utilize public long-only and long/short strategies.

Permitted Investments:

The Real Estate Asset Class may invest only in the following:

1. Separate accounts, open-ended funds, closed-ended funds, exchange-traded funds (ETFs), or real Estate investment trusts (REITs) managing publicly traded real estate, where the investments are approved by the Chief Investment Officer and purchased and monitored by Staff;

2. Private investment partnership interests. These private partnerships may be direct limited partnerships, limited liability companies, or vehicles that primarily invest in partnerships, including fund-of-funds and secondary funds;
3. The Real Estate Asset Class may co-invest with private investment managers in transactions that are suitable for inclusion into a private real estate investment partnership;
4. Separate accounts investing in private real estate direct investments;
5. Individual public or private securities received as distributions from funds are also permitted to be held in the Real Estate Asset Class; and
6. Cash – either an investment in the Short-Term Investment Pool (STIP), a vehicle available through the custodian, or an SEC registered money market fund that is considered a "US Treasury" or "US Government" money market fund per the SEC regulations.

Other Restrictions

1. The Montana Public Retirement Plan assets as a percentage of Net Asset Value invested in a single investment within the Real Estate Asset Class shall be no greater than 2.0%;
2. No more than 30% of the aggregate of the Real Estate Asset Class Net Asset Value plus uncalled committed capital should be considered "Non-U.S." exposure based on the dominant geographic exposure of the Fund, Partnership, Separate Account, or Index;
3. No more than 10% of the aggregate of the Real Estate Asset Class Net Asset Value shall be invested in direct co-investments; and
4. Individual public securities received as distributions will be liquidated over a reasonable time-period dependent on market conditions.

The following table provides a guideline range with respect to the Real Estate Asset Class strategy diversification. It is important to note that these ranges reference the sum of the Real Estate Asset Class Net Asset Value and uncalled commitments.

Strategy	Policy Range
Core Real Estate	20% - 50%
Core-plus/Non-Core Real Estate	25% - 65%
Real Estate Debt	10% - 40%
Public Real Estate Securities	0% - 40%

For funds with exposure across these categories, the fund will be classified in the category that is most reflective of the underlying investments in the funds.

Leverage

Leverage is a significant risk factor. On an individual fund basis, the leverage level can range up to 75.0%. It is important to note; however, that in aggregate, leverage consists of the combined borrowing at the property level and the fund level. On a select basis, the leverage may exceed 75.0%at the combined property and fund investment level, if it is determined to be reasonable to do so, particularly in the early stages of the fund investment cycle when a fund level credit facility is utilized to finance early fund investments on a short-term basis prior to committed capital being drawn. While Staff will monitor leverage on this combined basis at the fund investment level, the leverage statistic Staff will focus on most for purposes of compliance with this policy is the stabilized long-term leverage at the overall fund investment level once it has completed its acquisition phase, paid down outstanding short-term credit facility balances used to fund capital calls and the investment period has ended. New investments shall be made with the intention that the total Real Estate Asset Class leverage shall not exceed 60%.

Strategy	Leverage Policy
Core Real Estate Investments	0% - 50%
Core-plus/Non-Core Real Estate	0% - 75%
Real Estate Debt	0% – 75%

If at any time, due to market fluctuations or any other circumstances, any of the guidelines are not maintained, Staff will use its best efforts to conform to these limits in a timely manner, while considering current market conditions and the associated costs of rebalancing. At the Board's next regularly scheduled quarterly meeting, the CIO shall inform the Board of any cases that the Real Estate Asset Class allocations were outside of the limits and either inform the Board of the actions that were taken to return the Real Estate Asset Class back within guidelines or a plan to do so.

While no formal diversification ranges are set forth for property type diversification or regional diversification within the United States, it is expected that the Real Estate Asset Class shall remain diversified across these factors. These and other factors shall be monitored and reported to the Board at least annually.

Schedule II-F:
Investment Objectives and Guidelines
Core Fixed Income

Approved Date of Schedule: November 19, 2019

This Schedule is effective upon adoption by the Board of Investments and supersedes all previous Investment Objectives and Guidelines for Core Fixed Income.

Statement of Purpose:
The purpose of these objectives and guidelines is to:

1. Establish the investment objectives and performance standards of the Core Fixed Income Asset Class; and
2. Provide diversified exposure to Core Fixed Income in a prudent and cost-effective manner.

Investment Objective:

Strategic:
The objective of the Core Fixed Income Asset Class is to attain the highest possible total return within the parameters of the Investment Guidelines set forth below.

Performance:
Success in achieving this objective will be measured by comparing the risk and after-fee return of the Core Fixed Income Asset Class to the **Bloomberg Barclays US Aggregate Bond Index** (the "Benchmark"). Performance results will be monitored and evaluated quarterly. However, the success in achieving the objective will be measured on a three-year, five-year, and ten-year annualized basis.

Investment Guidelines:

Staff will have full discretion to manage the Core Fixed Income Asset Class consistent with the investment guidelines stated below. Core Fixed Income is defined as strategies primarily invested in marketable, publicly traded, investment grade fixed income securities denominated in U.S. dollars. Compliance with the following guidelines for permitted investments and other restrictions is the sole responsibility of the Staff. Any exceptions or compliance violations are to be reported to the Board of Investments at the next scheduled quarterly Board meeting.

The Core Fixed Income Asset Class may invest only in the following:

Internally Managed Permitted Investments:

1. Dollar denominated debt obligations of the U.S. Government, including its agencies and instrumentalities;
2. Dollar denominated debt obligations of Quasi and Foreign Government entities;
3. Dollar denominated debt obligations of domestic and foreign corporations;

4. Dollar denominated securitized assets, including U.S. Agency mortgage backed and commercial mortgage backed securities (MBS/CMBS), U.S. Agency collateralized mortgage obligations (CMO's) and asset backed securities (ABS);
5. Dollar denominated Non-agency mortgage backed securities (RMBS) and Non-agency commercial mortgage backed securities (CMBS);
6. Cash – either an investment in the Short-Term Investment Pool (STIP), a vehicle available through the Custodian, or an SEC registered money market fund that is considered a "US Treasury" or "US Government" money market fund per the SEC regulations.

<u>Other Internally Managed Restrictions</u>

1. The average duration of any internally managed portfolio will be maintained in a range of + or – 20% of the Benchmark duration;
2. A minimum of 20% of the Net Asset Value of any internally managed portfolio will be held in U.S. Government securities, including U.S. Treasuries, TIPS and Agency securities;
3. Securities must be rated investment grade by at least two nationally recognized statistical rating organizations (NRSRO), with the exception of securities issued or guaranteed by agencies or instrumentalities of the U.S. Government. In the case of split-rated securities, the lower rating is used;
4. Securities that drop below investment grade as defined above may be held to maturity, however any internally managed portfolio may not hold more than 10% of its Net Asset Value in securities rated below investment grade;
5. Securitized assets must be rated a minimum of the 4th highest rating by any nationally recognized statistical rating organization (NRSRO) at the time of purchase;
   a. Securitized assets that drop below the 4th highest rating of any NRSRO may be held to maturity, however any internally managed portfolio may not hold more than 5% of its Net Asset Value in these securities;
6. A maximum of 10% of the Net Asset Value of any internally managed portfolio may be held in dollar denominated quasi and foreign government securities;
7. A maximum of two times the Benchmark weight may be held in Corporate securities in any internally managed portfolio;
8. A maximum of two times the Benchmark weight in U.S. Agency MBS may be held in U.S. Agency MBS and CMO securities in any internally managed portfolio;
   a. A maximum of 20% of the Net Asset Value of any internally managed portfolio may be held in U.S. Agency CMO's;
9. A maximum of 5% of the Net Asset Value of any internally managed portfolio may be held in asset backed securities (ABS);
10. A maximum of 10% of the Net Asset Value of any internally managed portfolio may be held in U.S. Agency and Non-Agency commercial mortgage backed securities (CMBS);
11. A maximum of 10% of the Net Asset Value of any internally managed portfolio may be held in non-agency mortgage backed securities (RMBS);
12. A maximum of 3% of the Net Asset Value of any internally managed portfolio may be held in a single corporate parent issuer, foreign/quasi government issuer or securitized specific pool at the time of purchase;
    a. A maximum of 4% of the Net Asset Value of any internally managed portfolio may be held in a single corporate parent issuer, foreign/quasi government issuer or securitized specific pool at any time;

13. A maximum of 5% of the Net Asset Value of any internally managed portfolio may be invested in Cash;
14. The use of leverage is prohibited.

<u>Externally Managed Permitted Investments</u>:

1. Securities and derivatives held in separate accounts, commingled funds, limited partnerships, or limited liability companies managed by external investment managers and governed by their respective investment management contracts and investment guidelines;
2. Cash – either an investment in the Short-Term Investment Pool (STIP), a vehicle available through the Custodian, or an SEC registered money market fund that is considered a "US Treasury" or "US Government" money market fund per the SEC regulations.

<u>Other Externally Managed Restrictions</u>

1. The average duration of any externally managed portfolio will be maintained in a range of + or – 25% of the index duration;
2. A maximum of 20% of the Net Asset Value of any externally managed portfolio will be invested in securities rated below investment grade as defined by any nationally recognized statistical rating organizations (NRSRO). In the case of split-rated securities, the lower rating is used;
3. A maximum of 10% of the Net Asset Value of any externally managed portfolio will be invested in Non-dollar debt; either hedged or unhedged;
4. A maximum of 5% of any externally managed portfolio will be invested in Cash.

If at any time, due to market fluctuations or any other circumstances, any of the guidelines are not maintained, Staff will use its best efforts to conform to these limits in a timely manner, while considering current market conditions and the associated costs of rebalancing. At the Board's next regularly scheduled quarterly meeting, the CIO shall inform the Board of any cases that the Core Fixed Income Asset Class allocations were outside of the limits and either inform the Board of the actions that were taken to return the Core Fixed Income Asset Class back within guidelines or a plan to do so.

Schedule II-G:
Investment Objectives and Guidelines
Non-Core Fixed Income Asset Class

Approved Date of Schedule: November 19, 2019

This Schedule is effective upon adoption by the Board of Investments and supersedes all previous Investment Objectives and Guidelines for Non-Core Fixed Income.

Statement of Purpose:
The purpose of these objectives and guidelines is to:

1. Establish the investment objectives and performance standards of the Non-Core Fixed Income Asset Class; and
2. Provide diversified exposure to the Non-Core Fixed Income markets in a prudent and cost-effective manner.

Investment Objective:

Strategic:
The objective of the Non-Core Fixed Income Asset Class is to attain the highest possible total return within the parameters of the Investment Guidelines set forth below.

Performance:
Success in achieving this objective will be measured by comparing the risk and after-fee return of the Non-Core Fixed Income Asset Class to the **Bloomberg Barclays US High Yield - 2% Issuer Cap Index** (the "Benchmark"). Performance results will be monitored and evaluated quarterly. However, the success in achieving the objective will be measured on a three-year, five-year, and ten-year annualized basis.

Investment Guidelines:

Staff will have full discretion to manage the Non-Core Fixed Income Asset Class consistent with the investment guidelines stated below. Non-Core Fixed Income is defined as strategies primarily invested in High Yield Corporate Debt, Emerging Market Debt, Convertible Debt and Preferred Securities. Compliance with the following guidelines for permitted investments and other restrictions is the sole responsibility of the Staff. Any exceptions or compliance violations are to be reported to the Board of Investments at the next scheduled quarterly Board meeting.

Permitted Investments:

The Non-Core Fixed Income Asset Class may invest only in the following:

1. Securities and derivatives held in separate accounts, commingled funds, limited partnerships, or limited liability companies managed by external investment managers and governed by their respective investment management contracts and investment guidelines;
2. Cash – either an investment in the Short-Term Investment Pool (STIP), a vehicle available through the Custodian, or an SEC registered money market fund that is considered a "US

Treasury" or "US Government" money market fund per the SEC regulations.

Other Restrictions

1. A maximum of 10% of the Net Asset Value of the Non-Core Fixed Income Asset Class shall be held in Non-U.S. securities if they are denominated in a foreign currency;
2. The average duration of the Non-Core Fixed Income Asset Class will be maintained in a range of + or – 25% of the index duration;
3. A maximum of 5% of the Net Asset Value of the Non-Core Fixed Income Asset Class shall be invested in Cash held at the Asset Class level (not including cash held by internal or external managers in separate accounts or commingled funds).

If at any time, due to market fluctuations or any other circumstances, any of the guidelines are not maintained, Staff will use its best efforts to conform to these limits in a timely manner, while considering current market conditions and the associated costs of rebalancing. At the Board's next regularly scheduled quarterly meeting, the CIO shall inform the Board of any cases that the Non-Core Fixed Income Asset Class allocations were outside of the limits and either inform the Board of the actions that were taken to return the Non-Core Fixed Income Asset Class back within guidelines or a plan to do so.

Schedule II-H:
Investment Objectives and Guidelines
Cash Asset Class

Approved Date of Schedule: November 19, 2019

This Schedule is effective upon adoption by the Board of Investments and supersedes all previous Investment Objectives and Guidelines for the Cash Asset Class that is part of the Consolidated Asset Pension Pool.

Statement of Purpose:
The purpose of these objectives and guidelines is to:

1. Establish the investment objectives and performance standards of the Cash Asset Class; and
2. Provide exposure to the cash-equivalent markets in a prudent and cost-effective manner.

Investment Objective:

Strategic:
The objective of the Cash Asset Class is to attain the highest possible total return within the parameters of the Investment Guidelines set forth below.

Performance:
Success in achieving this objective will be measured by comparing the risk and after-fee return of the Cash Asset Class to the **Federal Reserve US Treasury Constant Maturity 1-Month Index** (the "Benchmark"). Performance results will be monitored and evaluated quarterly. However, the success in achieving the objective will be measured on a three-year, five-year, and ten-year annualized basis.

Investment Guidelines:
Staff will have full discretion to manage the Cash Asset Class consistent with the investment guidelines stated below. Compliance with the following guidelines for permitted investments and other restrictions is the sole responsibility of the Staff. Any exceptions or compliance violations are to be reported to the Board of Investments at the next scheduled quarterly Board meeting.

Permitted Investments:

The Cash Asset Class may invest only in the following:

1. Cash and Cash Equivalents – either an investment in the Short-Term Investment Pool (STIP), a vehicle available through the Custodian, or an SEC registered money market fund that is considered a "US Treasury" or "US Government" money market fund per the SEC regulations.

If at any time, due to market fluctuations or any other circumstances, any of the guidelines are not maintained, Staff will use its best efforts to conform to these limits in a timely manner, while considering current market conditions and the associated costs of rebalancing. At the Board's next regularly scheduled quarterly meeting, the CIO shall inform the Board of any cases that the Cash Asset Class allocations were outside of the limits and either inform the Board of the actions that were taken to return the Cash Asset Class back within guidelines or a plan to do so.

2020 CALENDAR

Board Dates Board Packet Mailing Holidays

1 New Year's Day
20 M.L. King Day

JANUARY						
S	M	T	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

FEBRUARY						
S	M	T	W	Th	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

17 Presidents Day

MARCH						
S	M	T	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

APRIL						
S	M	T	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

25 Memorial Day

MAY						
S	M	T	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

JUNE						
S	M	T	W	Th	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

3/4 Independence Day

JULY						
S	M	T	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

AUGUST						
S	M	T	W	Th	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

7 Labor Day

SEPTEMBER						
S	M	T	W	Th	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

OCTOBER						
S	M	T	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

12 Columbus Day

3 Election Day
11 Veterans Day
26 Thanksgiving Day

NOVEMBER						
S	M	T	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

DECEMBER						
S	M	T	W	Th	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

25 Christmas Day

BOI WORK & EDUCATION PLAN

2020

FEBRUARY 11-12

Ethics Policy
Disaster Recovery and Emergency Preparedness
Outreach Efforts for Board - Loan and Municipal Programs
STIP Review
Quarterly Reports
Committee Meetings:
  Audit: Financial Audit

APRIL 14

Benchmarks used by Board
Domestic Equities Asset Class Review
Capital Market/Asset Allocation - Consultant
Consultant Board Member Education

MAY 27-28

Budget Status FYTD
MT Buildings (Board as Landlord/Tenant Holdings)
Policy Statements Review
Quarterly Reports
Committee Meetings:
  Audit: Accounting Review
  HR: Staffing Level Review
  HR: Exempt Staff Compensation Review

AUGUST 18-19

Budget Proposed FY '22-'23
Budget Status Prior FY
High Yield Asset Class Review (Non Core Fixed Income)
Quarterly Reports
Committee Meetings:
  Audit: SOC Report

OCTOBER 13

Proxy Voting Public Equities Review
Consultant Board Member Education
First Reading - Asset Allocation Range Recommendation

NOVEMBER 18-19

2021 Legislative Session
Resolution 217 Authorization of Investment Vendors
PERS and TRS Relationship
Adoption - Asset Allocation Range Approval
Quarterly Reports
Committee Meetings:
  Audit: SOC Report
  Audit: Annual Report and Financial Statements
  HR: Exempt Staff Performance Review

2021

FEBRUARY TBD (2 Day)

Ethics Policy
Disaster Recovery and Emergency Preparedness
Cash Management of State Monies
Treasurers Fund Review
Quarterly Reports
In-State Loan Program
INTERCAP / Board Rated Credit, Bond Issuer, Credit Enhancer
Committee Meetings:
  Audit: Financial Audit

APRIL TBD (1 Day)

Custodial Bank Relationship, Performance, Continuity
International Equities Asset Class Review
Capital Market/Asset Allocation - Consultant
Consultant Board Member Education

MAY TBD (2 Day)

Budget Status FYTD
Fixed Income Asset Classes Review (Core Fixed Income)
State Government Customer Relationships
Separate Accounts Review
Real Estate Asset Class Review
Policy Statements Review
Quarterly Reports
Committee Meetings:
  Audit: Accounting Review
  HR: Staffing Level Review
  HR: Exempt Staff Compensation Review

AUGUST TBD (2 Day)

Cost Reporting including CEM, Inc. Analysis
Budget Status Prior FY
Coal Severance Tax Trust Review
Natural Resources Asset Class Review
Quarterly Reports
Committee Meetings:
  Audit: SOC Report

OCTOBER TBD (1 Day)

Securities Lending Review
Private Equity Asset Class Review
Consultant Board Member Education
First Reading - Asset Allocation Range Recommendation

NOVEMBER TBD (2 Day)

Resolution 217 Authorization of Investment Vendors
PERS and TRS Relationship
Adoption - Asset Allocation Range Approval
Quarterly Reports
Committee Meetings:
  Audit: Securities Litigation Status
  Audit: Annual Report and Financial Statements
  HR: Exempt Staff Performance Review

Completed	Completed	Completed	In Progess	WORK & EDUCATION PLAN
2017	**2018**	**2019**	**2020**	
X		X		Accounting Review
X	X	X	X	Annual Report and Financial Statements
X	X	X	X	Asset Allocation Range Approval (Board Must Review/Approve Annually as per Policy)
X	X	X	X	Audit (Financial)
X		X		Benchmarks used by Board
X		X		Board as a Rated Investment Credit, a Bond Issuer and a Credit Enhancer
X	X	X	X	Board Member Education
X	X	X	X	Board's Budget
X	X	X	X	Capital Market/Asset Allocation - Consultant
	X		X	Cash Management of State Monies
X	X		X	Cost Reporting including CEM, Inc. Analysis
	X		X	Custodial Bank Relationship, Performance, Continuity
X	X	X	X	Disaster Recovery and Emergency Preparedness
X	X	X	X	Domestic Equities Asset Class Review
X	X	X	X	Exempt Staff Performance and Compensation Review (HR Policy Requires Annual Consideration)
X	X	X	X	Ethics Policy – (Board Policy Requires Annual Affirmations)
X	X	X	X	Fixed Income Asset Classes Review
X		X		In-State Loan Program
X		X		INTERCAP Program
X	X	X	X	Internal Controls
	X	X		International Equities Asset Class Review
X	X	X	X	Investment Counsultant Independent Presentations (Board Requries at Least Two Annually)
X	X	X	X	Legislative Session and Interim Matters
X		X		MT Buildings (Board as Landlord/Tenant Holdings)
X	X	X	X	Outreach Efforts for Board - Loan and Municipal Programs
X	X	X	X	PERS and TRS Relationship
X	X	X	X	Policy Statements Review (Governance Policy Requires Annual Investment Policy Review)
	X	X	X	Private Equity Asset Class Review
	X		X	Proxy Voting Public Equities
	X	X	X	Real Estate Asset Class Review
X	X	X	X	Resolution 217 Authorization of Investment Vendors (Board Policy Requires Annual Update)
X		X		Securities Lending
X	X	X	X	Securities Litigation
X	X	X	X	Staffing Level Review (Required Biannually in Board Policy)
X		X		State Fund as Principal Investment Client
X		X		State Government Customer Relationships
X		X		Website
	X	X	X	STIP Review
	X	X		Trust Fund Investment Pool Review
		X		Coal Severance Tax Trust Review
		X		Treasurers Fund Review
	X			Separate Accounts Review
	X			Natural Resources Asset Class Review
	X	X		High Yield Asset Class Review

Board of Investment's Commonly Used Acronyms

ABCP .... Asset Backed Commercial Paper
ABS .... Asset Backed Securities
ACH .... Automated Clearing House
ADR .... American Depository Receipts
AUM .... Assets Under Management
BOI .... Board of Investments
CAFR .... Comprehensive Annual Financial Report
CAIA .... Chartered Alternative Investment Analyst
CAPP .... Consolidated Asset Pension Pool
CFA .... Chartered Financial Analyst
CGT .... Capital Gains Tax
CIPM .... Certified in Investment Performance Measurement
CMBS .... Commercial Mortgage-Backed Securities
CP .... Commercial Paper
CPA .... Certified Public Accountant
CPI .... Consumer Price Index
CRP Loan .... Conservation Reserve Enhancement Program Loan
DOA .... Department of Administration
DPI .... Distributions to Paid-In
EBITDA .... Earnings Before Interest, Taxes, Depreciation, and Amortization
EM .... Emerging Markets
EMEA .... Europe, Middle East, Africa
ESG .... Environmental, Social, Governance
ETF .... Exchange Traded Funds
FCA .... Financial Conduct Authority
FMV .... Fair Market Value
FOIA .... Freedom of Information Act
FRM .... Financial Risk Manager

FTE.. Full Time Equivalent position (State personnel)
FX ....Foreign Exchange
GAAP ....Generally Accepted Accounting Principles
GASB ....Governmental Accounting Standards Board
GP .... General Partner
GTAA .... Global Tactical Asset Allocation
IG ....Investment Grade
IPS...Investment Policy Statement
IRP .... Intermediary Relending Program
IRR ....Internal Rate of Return
LAD ....Legislative Audit Division
LBO .... Leverage Buyout
LP.. Limited Partner/Partnership
LPAC.. Limited Partner Advisory Committee
LTV .... Loan to Value
MBOH .... Montana Board of Housing
MBOI .... Montana Board of Investments
MBS... Mortgage Backed Securities
MFFA .... Montana Facility Finance Authority
MLP .... Master Limited Partnership
MMbbl/D .... One Million Barrels per Day (Oil)
MOIC .... Multiple of Invested Capital
MOM... Montana Operations Manual
MPERA .... Montana Public Employee Retirement Administration
MPT .... Modern Portfolio Theory
MSCI .... Morgan Stanley Capital International
MSCI ACWI.. MSCI All Country World Index
MSCI EAFE... MCSI Europe, Australasia, and Far East
MSCI EM .... MSCI Emerging Markets
MSTA... Montana Science and Technology Alliance
MTSBA .... Montana School Boards Association

MVO .... Mean-Variance Optimization
NAV .... Net Asset Value
NCREIF .... National Council of Real Estate Investment Fiduciaries
NOI .... Net Operating Income (Real Estate)
ODCE .... Open-End Diversified Core Equity (Core Real Estate Funds)
PE .... Price-to-Earnings Ratio
PERS .... Public Employees' Retirement System
QSCB .... Qualified School Construction Bonds
QZAB .... Qualified Zone Academy Bonds
REIT .... Real Estate Investment Trust
RFP .... Request for Proposal
Russell .... Russell Indices
RVPI .... Residual Vale to Paid-in
SABHRS .... Statewide Accounting Budgeting and Human Resource System
SFBP .... State Fund Bond Portfolio
SFIP .... State Fund Investment Portfolio
SITSD .... State Information Technology Services Division
SMAs .... Separately Managed Accounts
SOC .... Service Organization Controls (Audit Report)
SPX .... Standard & Poor's 500 Total Market Index
SSBCI .... State Small Business Credit Initiative
STIP .... Short Term Investment Pool
TFBP .... Trust Funds Bond Portfolio
TFIP .... Trust Funds Investment Pool
TIF .... Tax Increment Financing
TIFD .... Tax Increment Financing District
TIPS .... Treasury Inflation Protected Securities
TRS .... Teachers' Retirement System
TVPI .... Total Value to Paid-in
TWR .... Time-Weighted Return
VC .... Venture Capital

Board of Investment's Terminology List

Revised August 2019

130/30 Market Strategy **Public Markets**
A form of Long-Shorting where the long exposure is 130% and the short exposure is 30%. See Partial Long/Short

Active Management
An investment method which involves hiring a manager to research securities and actively invest and trade securities to outperform an assigned index. Compare to Passive Management.

Actuarial Assumed Rate of Return **Accounting**
The investment rate of return used by actuaries that enables them to project the investment growth of retirement system assets into the future. An individual rate is determined and adopted by each Pension System.

Actuarial Funding Status **Accounting**
A measurement made by actuaries to measure a pension system's financial soundness. Shows the actuarial assets available to fund liabilities.

Agency Bonds **Fixed Income**
Agency bonds are issued by official US Government bodies. Compare to GSE Bonds

All Other Funds (AOF)
Holds all uncategorized accounts and funds.

Alpha
The measure of active return on an investment compared to the market. A measure of 1 means that an investment returned 1% in excess of the benchmark over a specified time period.

Alternative Investments
An all-encompassing range of investments, other than traditional assets such as publicly traded stocks and bonds. The most common alternative investments are private equity, real estate, commodities, and hedge funds.

Annualize
To annualize is to convert a short-term calculation or rate into an annual rate.

Appreciation
An increase in the value of an asset over time. The increase can occur for several reasons, including changes in supply or demand, or because of changes in inflation or interest rates. Compare to Depreciation.

Asset Backed Securities (ABS) **Fixed Income**
A security whose income payments and overall value are collateralized by a specific pool of underlying assets (i.e. mortgage backed loans, auto loans, credit card loans). Pooling together a group of similar assets into financial instruments allows investors to mitigate the risk of individual default.

Average Credit Quality **Fixed Income**
The average credit rating for each bond in the portfolio adjusted for its relative weight in the portfolio. See Credit Rating.

Basis Points (bps)
A basis point is 1/100th of a percentage and is regularly used when discussing the market (100 bps = 1.00%)

Beta
The measure of volatility or systematic risk of a security or portfolio compared to the market.

> Example: If a company has a beta of 1.5, it implies that its more volatile than the overall index because it is greater than 1. Because of this, if the market moves 1% the company is expected to move 1.5% in the same direction.

< 1 = less risk than market   1 = same risk as market   > 1 = more risk than market

Bid-Ask Spread
The difference between the highest price the buyer is willing to pay and the lowest price that a seller is willing to accept.

Blind Pool **Private Investments**
A fund or portfolio where the investors are not aware of what the specific investments will be at the time of the initial commitment.

Bloomberg Barclay's US Aggregate Index **Fixed Income**
A broad bond index covering most U.S. traded bonds and some dollar denominated foreign bonds traded in the U.S.

Broad Fixed Income **Fixed Income**
A broad investment class including Investment Grade, structured bonds, Government and Agency bonds, international bonds, and High Yield.

Buyout **Private Investments**
A fund strategy that acquires a controlling interest in a company. Under a buyout, the previous ownership loses control over the company in exchange for compensation. If borrowed funds are used to acquire the company, the deal is called a 'leveraged buyout'.

- Large-Size buyout
  - Target companies have revenues >$1B, EBITDA of >$50M
  - *Typically, private equity fund sizes of $2B and up*
- Mid-Size buyout
  - Target companies have revenues <$1B, EBITDA of $25M - $50M
  - *Typically, private equity fund sizes of $750M to $2B*
- Small-Size buyout
  - Target companies have revenues of $10M - $300M, EBITDA of $3M - $25M
  - *Typically, private equity fund sizes of <$750M*

Capital Call (Drawdown) **Private Investments**
When the GP's investment team is ready to purchase an asset, they will issue a capital call or drawdown for a portion of the capital committed by the LPs.

Capital Commitment **Private Investments**
The amount of capital an LP is contractually obligated to pay into a blind pool fund or portfolio to finance underlying investments and their associated fees and expenses.

Cap Rate **Real Estate**
The ratio of NOI compared to the current market value. The cap rate is often used to value and compare real estate investments.

Carried Interest **Private Investments**
A share of the profits of an investment fund that is paid to the GP.

Cash Equivalents
Assets that retain value and have a high degree of liquidity and are generally short-term commitments with minimal risk of loss.

China A-Share
The equity shares of mainland China that are quoted in the Chinese renminbi with restriction on foreign investment.

China B-share
The equity shares of Chinese companies that trade in foreign currencies. Used as a target investment for foreign investors.

Clawback **Private Investments**
A payment from the GP to the LPs as the result of the GP receiving excess distributions above what was contractually agreed upon.

Commingled Fund
Represents a pool of assets for multiple clients and are managed in a similar fashion by the same entity. Each client has a pro-rata share of the overall portfolio. Custody of the underlying securities are at the investment manager's custodian.

Consolidated Asset Pension Pool (CAPP)
The Consolidated Asset Pension Pool invests directly in the 13 Asset Classes.

Correlation
A measure of how investments or asset classes move relative to each other during the same period. To increase diversity, managers look for assets with lower correlations with other assets.
-1.0 = perfectly negative correlation 0.0 = no correlation +1.0 perfectly positive correlation

Coupon **Fixed Income**
The interest rate paid on a bond. This can either be a fixed or floating rate. A floating interest rate is typically tied to a benchmark such as U.S. Treasury Bills. Payments can be monthly, semi-annual, or annual.

Covenant **Fixed Income**
A legally binding term of agreement between a bond issuer and a bond holder which are designed to protect both parties. Can potentially restrict an issuer from undertaking certain activities or ensure they meet certain requirements.

Credit Rating **Fixed Income**
An assessment of creditworthiness of a borrower. A credit rating (between AAA and BBB) given by one of the three main credit rating agencies indicates a relatively low risk of default and hence an Investment Grade security.

	Moody's	**S&P**	**Fitch**
Investment Grade	Aaa	AAA	AAA
	Aa	AA	AA
	A	A	A
	Baa	BBB	BBB
High-Yield	Ba	BB	BB
	B	B	B
	Caa	CCC	CCC
In Default	D	C	CC
		D	DDD

Currency Risk **Risk Management**
A risk variable that comes from investments in currencies, currency futures contracts, forward currency exchanges, etc. These investments are subject to the risk that the value of a currency will change at a fundamental level.

Custodian **BOI/Gov't Specific**
A financial institution responsible for safeguarding BOI's financial assets by holding assets on behalf of BOI, thus forming a fiduciary relationship.

Debt Multiple **Private Investments**
A company's debt divided by EBITDA

Debt Related **Private Investments**
A fund strategy that provides debt financing in the form of a secured or unsecured loan for working capital or capital expenditures. Also called term loans, which often requires the borrower to adhere to certain rules regarding financial performance called covenants.

Depreciation
A decrease in the value of an asset over time. The decrease can occur for several reasons, including changes in demand or supply, or because of changes in inflation or interest rates. Compare to Appreciation.

Discount **Fixed Income**
Describes the discrepancies in the paid amount against its par value. A discount means the purchasers bought the security for less than the asset's par value. Compare to Premium

Distressed **Private Investments**
An investment strategy whereby the private investment manager purchases a distressed asset at a significant discount with the intention of turning around or improving the asset prior to selling.

Distributions **Private Investments**
Either cash or equity returned to investors after a fund or portfolio exits an investment.

Diversification **Risk Management**
Investing in different asset classes, industries, securities, and/or countries to protect against extreme losses and to expand the possibilities of gains from multiple asset types.

Domestic Equity
Equity from the United State including stocks, or other public equity-related investments.

Downside Capture Ratio
During a down market, the downside capture ratio shows how a portfolio compared to its benchmark. It is shown as a ratio with a value below 1 being preferred as it indicates that the portfolio had good downside protection and didn't lose as much as its benchmark. Compare to Upside Capture Ratio.

Downside Risk **Risk Management**
Downside risk describes the potential downfall and unintended negative consequences of an investment.

Dry Powder
Refers to fund's uninvested capital available to fund future investments.

Duration **Fixed Income**
A measure of a bond or portfolio's sensitivity to changes in interest rates. As duration increases, the bond or portfolio's sensitivity to interest rates increases.

> Example: if current interest rates increase by 1% and a bond has a duration of 4, the bond price will decrease by about 4%. However, if interest rates decrease by 1% the bond price will increase by about 4%

EBITDA
Stands for: Earnings Before Interest, Taxes, Depreciation, and Amortization. It is a non-GAAP measurement that shows as an organization's earnings before interest, taxes, depreciation, and amortization can be subtracted out. This allows for a greater understanding of a company's current operating profitability

EBITDAX **Private Investments**
Stands for: Earnings Before Interest, Taxes, Depreciation, Depletion, Amortization, and Exploration Expenses. This is a valuation metric used for oil and gas companies which shows their ability to produce income from operations in a given year.

Enterprise Fund Financial Statements **Accounting**
Used to account for the recovery of costs for goods or services primarily provided to users outside of the primary government. Used by BOI to report the programs created under the Municipal Finance Consolidation Act and the Economic Development Bond Act.

Equity Styles **Public Markets**
Categorization of investment approaches or objectives that a fund manager uses

> **Core:** Core holdings are a central investment of a long-term portfolio that exhibit common traits such as strong market share and promising growth prospects. Considered a blend of growth and value investing.
> **Growth:** An investment style that focuses on earnings that are expected to grow at a desirable and above average rate.
> **Value:** An investment strategy where assets are chosen because they are trading below their intrinsic value or fundamentals making them undervalued.

Exchange Traded Fund (ETF) **Public Markets**
An investment fund traded on stock exchanges, much like stocks. Most ETFs track an index, such as a stock index or bond index.

Face (Par) Value **Fixed Income**
The stated value of an investment at maturity.

Fixed Income **Fixed Income**
An investment, generally in bonds and loans, that returns payments on a regular schedule (coupon) as well as the original investment (principal) at the end of investment period.

Foreign Markets Risk **Risk Management**
Risks that are not typically associated with domestic markets including changes in currency exchange rates, less government supervision of exchanges, brokers, and issuer; increased social economic, political uncertainty, and greater for price volatility. These risks may be greater in emerging and frontier markets.

Forms of Economic Markets **Public Markets**
Economic markets are divided based on several measurements including economic development, size and liquidity requirements, and market accessibility criteria.

> **Developed Market:** A country that is developed in terms of its economy and capital markets like the US, Japan, Germany, or Canada.

Emerging Market: A country that has built an adequate infrastructure to facilitate a developed economy and capital market but is still working towards other characteristics of a developed market.
Frontier Market: A market from a developing country that does not have a developed stock market or infrastructure and generally has higher returns to compensate investors.

Forward Contract **Public Markets**
A contract between parties to buy or sell an asset at a future date and predetermined price regardless of future market conditions. Can be used for hedging or speculation.

Forward Rate **Public Markets**
An interest rate that will be applicable to a future financial transaction.

Free Cash Flows
Net cash a company produces though its operations excluding non-cash expenditures.

Fund-of-Funds **Private Investments**
A fund that invests in multiple managers/funds, who then invest that capital directly.

GAAP/GASB **Accounting**
The Governmental Accounting Standards Board (GASB) is the author of the generally accepted accounting principles (GAAP) used by state and local governments in the US along with various corporations.

General Partner (GP) **Private Investments**
The team/firm that oversees the investment of a specific private fund.

Global Industry Classification Standard (GICS)
A common global classification standard used by thousands of market participants including MSCI (the BOI's preferred index provider). Through GICS there are 11 sectors, 24 industry groups, and 68 industries.

GSE Bonds **Fixed Income**
Stands for Government Sponsored Entity (GSE) bonds which are offered by lenders created by an act of congress to assist groups of borrowers. GSE bonds are backed but not guaranteed by the U.S. government. Compare to Agency Bonds

Hedge Funds **Public Markets**
Like mutual funds, hedge funds pool investors' money and invest that money to make a positive return. Hedge funds typically have more flexible investment strategies than mutual funds.

Hedging **Public Markets**
An investment position taken to offset potential losses that may be incurred by another investment. Compare to Speculation.

High-Yield Bond **Public Markets**
A non-investment grade bond that is at a higher risk of default or some other adverse event. However, these pay higher yields than better quality bonds to make them attractive to investors.

Indenture **Fixed Income**
A contract that explains the various terms, options, and intricacies of a bond.

Index
A hypothetical portfolio of securities representing a market segment and are commonly used as a benchmark for the stock and bond markets (S&P 500, Barclay's Aggregate, or the MSCI USA IMI).

Inflation
The rate at which the general level of prices for goods and services is increasing. As inflation increases, the purchasing power of money falls.

In-State Loan Program **BOI/Gov't Specific**
Statutory authorized program that directs the Board to provide financial lending using Coal Tax Trust fund money to borrowers who meet program requirements set in law.

Interest **Fixed Income**
The amount that must be paid to compensate the lender/investor for the use of the funds.

Intermediary Relending Program (IRP)
A loan to an Economic Development organization that has three years to loan the money to local businesses that need equity capital to obtain a bank loan. Funds are matched through a program with the United States Department of Agriculture (USDA).

Internal Controls
The plan of an organization that has the methods and measures used to monitor assets, prevent fraud, minimize errors, verify the accuracy and reliability of accounting data, promote operational efficiency, and ensure that established managerial policies and procedures are complied with.

Internal Rate of Return (IRR)
The dollar-weighted return earned by investors.

Internal Service Fund **Accounting**
Used to account for the recovery for costs of goods or services primarily provided by one department or agency to another department or agency. Used to report to the investment operations of the Board.

International Equity
Equity outside of the United States. Examples include stocks or equity investments in China, Germany, or Canada.

Investment Grade Bond **Fixed Income**
Bonds rated BBB/Baa and above. These bonds have lower yields than high-yield bonds because of the lower risk of default.

Investment Period **Private Investments**
The prespecified timeframe during the beginning of a fund's life when the investments of the fund will be made.

Key Man Provision **Private Investments**
A clause that prevents the GP from making new investments after a key executive(s) departs.

Leverage (Financial leverage)
The use of debt to acquire additional assets.

> Example: If we were to purchase a $1,000 asset using $750 of debt and $250 of cash to fund the purchase, the purchased would 75% leveraged.

LIBOR **Fixed Income**
Benchmark interest rate at which major global banks borrow from one another. The rate is calculated based on survey results from a panel of banks.

Limited Partnership **Private Investments**

The common legal structure used for private equity funds.

Liquidity
The ability of an asset to be converted into cash quickly and without a meaningful price discount.

LPAC Membership **Private Investments**
The Limited Partnership Agreement Committee (LPAC) membership is occasionally available as a term of agreement. Being on the LPAC gives BOI a chance to voice concerns more directly and make decisions in conjuncture with other LPAC members during unexpected events including the loss of key investment team members, extending the investing or exiting time frame, etc.

Mark-to-Market
Recording the price of an asset on a regular basis to reflect its current market value. Can also be referred as fair value accounting.

Market Capitalization **Public Markets**
Measured by the total dollar market value of a company's outstanding shares and is generally used to compare companies in investment universes or sectors. The following classification are according to the MSCI and are variable between investors and indexes. (all below ranges come from MSCI World)

> **Large (Big) Cap:** Defined as companies with market caps that are $20 billion or larger. Less volatile than other, smaller firms
> **Mid Cap:** Defined as a company with a market cap between $2 - $20 billion. These tend to have more risk than larger companies but with room to grow their market cap.
> **Small Cap:** Defined as companies with market caps less than $2 billion. Generally younger companies with growing potential and added risk.

Market Impact
The effect a market participant has when it buys or sells an asset, on the price of that asset.

Maturity **Fixed Income**

The agreed date that the full amount of the bond or investment must be paid back to the lender plus interest if applicable.

Mean

The average of a data set. All data points are added together and then divided by the number of data points.

Median

The center or middle number in a range of data when data points are organized by value.

Montana Operations Manual (MOM) **Accounting**

Contains guidance for all state agencies. Among the topics included are accounting, travel, procurement, information technology, budget, and human resources.

MSCI

The provider of investment decision support tools including indexes.

- **ACWI** – All Country World Index
- **ACWI ex US** – All Country World Index excluding US
- **EAFE** – Europe, Australasia, and Far East
- **EM** – Emerging Markets
- **IMI** – Investible (all-cap) Market Index
- **US** – the United States

Multi-Asset Class

A combination of asset classes (i.e. cash, equity or bonds) used in an investment creating a group or portfolio of assets.

Multiple of Invested Capital (MOIC) **Private Investments**

Performance metric which shows how much more or less an investment is worth compared to the total invested capital over time. A multiple greater than one indicates a gain, and a multiple less than one indicates a loss.

$$Total\ Value\ /Invested\ Capital$$

Natural Resources **Private Investments**

Natural Resource investments are investments managed by external advisors who invest in timber, gas and oil related companies, as well as other natural resources.

Net Asset Value (NAV) **Accounting**

The 'true' value of a fund's investments based on the quoted prices of its components.

$$NAV = Value\ of\ Assets - Value\ of\ Liabilities$$

NCREIF **Real Estate**

Stands for National Council of Real Estate Investment Fiduciaries. A property Index that is compiled quarterly and shows the composite total rate of return measure of investment performance of a pool of individual commercial real estate properties acquired in the private market for investment purposes.

NFI-ODCE **Real Estate**

Short for NCREIF Fund Index – Open End Core Equity; an index of investment returns reporting on both a historical and current basis. This information comes from 33 open-end commingled funds pursuing a core investment strategy.

NOI (Net Operating Income)

A calculation used to analyze real estate investments. NOI equals the revenue from the property minus necessary operating expenses.

Opportunity Cost

The loss of potential gain from other alternatives when one alternative is chosen.

Overweight **Public Markets**

A security position that is in excess, or overweight when compared to the security's weight in the underlying benchmark or sector. Actively managed portfolios will overweight securities that have the potential to earn excess returns above the benchmark returns. Portfolios can also be overweight sectors, countries, or some other characteristic. Compare to alternative weighting schemes such as equal weight or underweight.

Partial Long/Short **Public Markets**

An investing strategy that takes long positions in stocks that are expected to appreciate and short positions in stocks that are expected to decline.

Passive Management
An investment strategy where a manager purchases a portfolio of securities that they hope to replicate market index returns, (this strategy generally involves lower management fees).

Placement Agent **Private Investments**
A third-party group that assists the GP in fundraising for a new or existing fund.

Policy Portfolio
A fixed baseline or target mix of asset classes (stocks, bonds, cash, etc.) for a portfolio.

Preferred Return **Private Investments**
The threshold return that the LPs of a private equity fund must receive, prior to the GP receiving its carried interest.

Premium **Fixed Income**
Describes the discrepancies in the paid amount against its par value. A premium means the purchasers bought the security for more than its par value. Compare to Discount.

Present Value **Accounting**
The value of a stream of future cashflows discounted at a specified interest rate to the present date. Shows what a dollar in the future is worth to an investor today.

Price to Book (P/B) Ratio
Price of an Asset divided by its Book Value.

Price to Earnings (P/E) Ratio
Price of an Asset divided by its Earnings.

Principal **Fixed Income**
The initial size of a bond or investment.

Principal Repayment **Fixed Income**
The payment of the face value or principal of a security by the issuer, generally due on the maturity date unless the issuer redeems the security before it matures.

Private Investments **Private Investments**
Asset classes comprised primarily of equity and debt securities in private operating companies, real property and other types of investments that are not publicly traded on a stock exchange. At BOI it is an umbrella term that covers the private equity, real estate, and natural resources asset classes.

Prudent Expert Principle
A measure that requires the fiduciary (BOI) to properly discharge their duties by doing the following:

a) discharge the duties with the care, skill, prudence, and diligence, under the circumstances then prevailing, that a prudent person acting in a like capacity with the same resources and familiar with like matters exercises in the conduct of an enterprise of a like character with like aims;
b) diversify the holdings of each fund within the unified investment program to minimize the risk of loss and to maximize the rate of return unless, under the circumstances, it is clearly prudent not to do so; and
c) discharge the duties solely in the interest of and for the benefit of the funds forming the unified investment program.

Purchase Price Multiple **Private Investments**
The enterprise value of a company divided by the company’s EBITDA

Ratings **Fixed Income**
An assessment of the creditworthiness of a borrower. Bond ratings from Moody’s, S&P and Fitch between AAA and BBB- are investment grade. BB and below are below investment grade/high yield.

Real Estate Classes **Real Estate**

Core: Lower risk; considered the best quality holdings such as prime commercial property in major metropolitan cities that have low leverage and low levels of vacancy.

Value-Add: Moderate risk, non-core; property that generally already has some form of in-place cash flow which investors are seeking to increase by making improvements or repositioning the property.

Opportunistic: Higher risk, non-core; these properties tend to need more significant alterations and rehabilitation to realize their full earning potential. These properties generally have a higher vacancy rate, include higher levels of leverage, and can include ground-up development.

Rebalancing **Risk Management**
The action of buying or selling assets to realign the asset weights to meet the target portfolio.

Resolution **BOI/Gov't Specific**
A formal and written action by an organizational body that has long-term significance and requires a vote from the governing body. BOI uses resolutions mainly for its most significant and long-term actions and/or policies.

Risk Tolerance **Risk Management**
An investor's ability to handle declines in the value of their portfolio.

Russell US Indexes **Public Equity**
A family of global equity indices from FTSE Russell that allow investors to track performance of market segments.

S&P 500 Index
The Standard & Poor's market index based on the market capitalizations of the 500 largest companies which have common stock listed on the NYSE or NASDAQ. The weightings are determined by S&P Dow Jones Indices.

SABHRS **Accounting**
Stands for the State Accounting, Budgeting and Human Resource System. By statute, BOI investment and other financial data must be reported through this system, which is the State's official accounting book of record.

Sector
An area of the economy in which businesses share the same or related product or services, e.g. an economic sector. This can also refer to a group of securities that exhibit similar characteristics. See Global Industry Classification for examples.

Separately Managed Account (SMA)
Represents a portfolio of assets specifically constructed according to the client's investment policy.

Short Position
A negative share or market value indicates a short position or sale of a borrowed security.

Short Term Investment Pool (STIP)
Used by state and local agencies and the retirement systems as an alternative to idle cash. STIP investments are short, highly liquid and among the safest obtainable as it is structured like a money market fund.

Shortfall
A situation where the level of funds required to meet an obligation is not available.

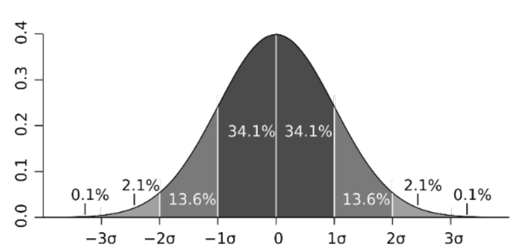
SOFR **Fixed Income**
Influential interest rate based on daily transactions in the Treasury repurchase market.

Speculation **Public Markets**
Involves investors making bets on future market conditions or events and is used when an investor hopes to increase profits. Compare to Hedging.

Spread **Fixed Income**
A measurement of the difference in yield between a non-Treasury bond and a U.S. Treasury bond. The U.S. Treasury is considered the risk-free alternative. A higher spread represents greater uncertainty of repayment.

Spread duration
Measures the price sensitivity of a bond to changes in spread.

Standard Deviation
Measures the dispersion or spread of a dataset compared to its historic mean. In finance it can be applied to the annual rate of return of an investment. It sheds light on the historical volatility of that investment. The greater the standard deviation of a security, the greater the variance between each price and the mean.



Tail Risk **Risk Management**

Describes portfolio risk when the return is (generally) more than two standard deviations from the mean. The tail risk probability is towards the far left or far right of the normal distribution curve pictured above and has a small chance of occurring (the returns during the Great Recession was considered a five standard deviation event). Left-tail risk is associated with negative returns while right-tail risks are associated with positive returns.

Target-Risk

A mix of stocks, bonds, and other investments holdings to create a desired risk profile.

TED Spread **Fixed Income**

The difference between the interest rates on interbank loans and on short-term U.S. government debt ("T-bills"). TED is an acronym formed from T-Bill and ED, the ticker symbol for the Eurodollar futures contract.

TIPS **Fixed Income**

Treasury Inflation Protected Securities (TIPS) are Treasury bonds that are indexed to the Consumer Price Index to protect investors from the negative effects of inflation.

Total Return

The return on an investment including appreciation or depreciation, interest, dividends, and fees in the price of a security over a given period.

Tracking Error

The divergence between the price change of a position or a portfolio and the price change of a benchmark.

Trust Fund Investment Pool (TFIP)

TFIP is managed with the primary focus of generating income.

Underweight **Public Markets**

A security's portfolio weight that is less than or underweight the security's weight in the underlying benchmark. Can also be used to describe the relative composition of a portfolio such as underweight a sector or industry. Compare to equal weight or overweight.

Underwriter **Fixed Income**

The agent who buys investments to be resold to the public. At BOI this would generally be the investment firm that buys the Board's bonds to be resold to the public.

Unified Investment Program Financial Statements **Accounting**

The program in the State's constitution requiring a central investment program which the legislature has assigned to the BOI.

Upside Capture Ratio

During an up market, the upside capture ratio shows how well a portfolio performed compared to its benchmark. It is shown as a ratio with a value above 1 being preferred as it indicates the portfolio "beat the market" by outperforming. Compare to Downside Capture Ratio

Venture Capital **Private Investments**

Money that is provided to seed early-stage, emerging growth companies. Venture capital funds invest in companies in exchange for equity in the companies they invest in.

Vintage Year **Private Investments**

The first year in which capital is drawn to fund an investment.

Volatility

The degree of variation of a price series over time as measured by the standard deviation of returns. Historic volatility is derived from time series of past market prices. An implied volatility is derived from the market price of a market traded derivative (in particular an option).

Waterfall Type **Private Investments**

The waterfall type describes how a private equity fund will make distributions to its LPs and GP.

> **European Waterfall:** Payment schedule where distributions are based off of how well the fund as a whole has performed.
>
> **Deal-by-Deal Waterfall:** Payment schedule where distributions are made on a deal-by-deal basis instead of on performance of the whole fund.

Weighted Average Maturity (Life) **Fixed Income**

Measures of how quickly the outstanding principal will be repaid. The higher the number the longer it is expected to take for the debt to be paid.

Yield Curve **Fixed Income**

A curve that plots the prevailing yield for bonds at different maturities. Curves generally slope upward because longer maturities require a higher interest rates to compensate for the added risk of holding an asset for an extended period. The graph below is a representation and not up to date.

Yield Curve Inversion

Rare type of curve in which long-term debt has a lower yield than short term debt of the same credit quality. Normally seen as a recession indicator.

Yield to Maturity

The yield anticipated on a bond or portfolio if it is held until maturity and all coupon payments are reinvested at the YTM.