SJR 14 Amendment Modeling

Senate Finance Committee
April 24, 2025
Legislative Finance Division

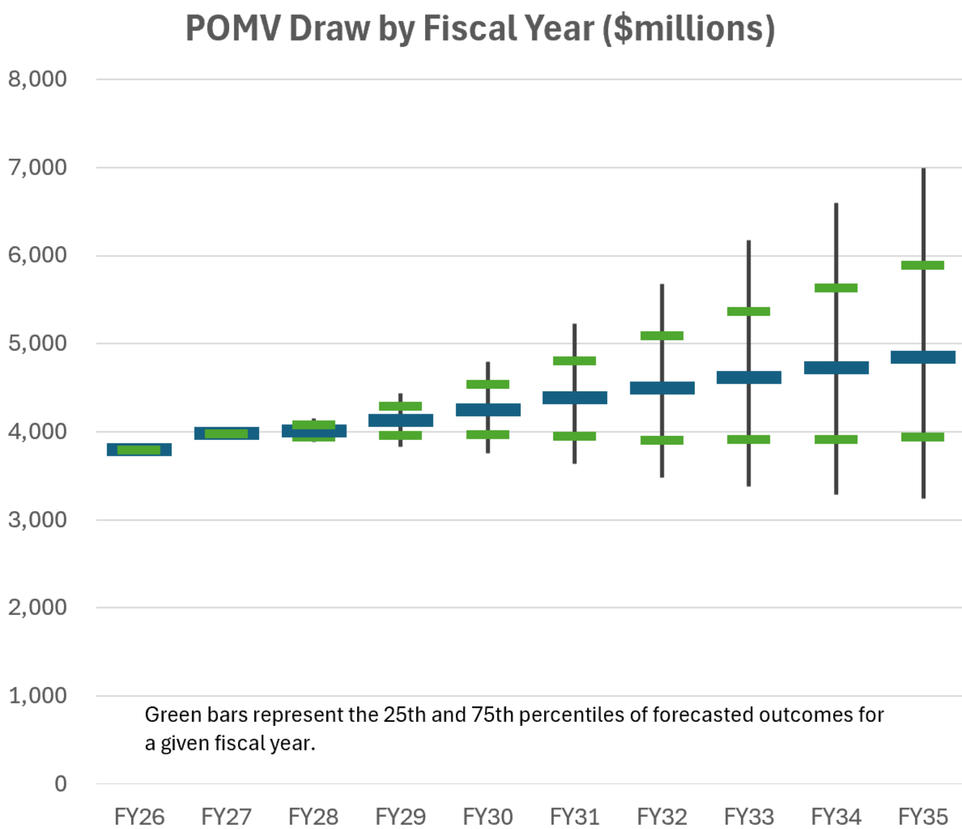
Probabilistic Modeling

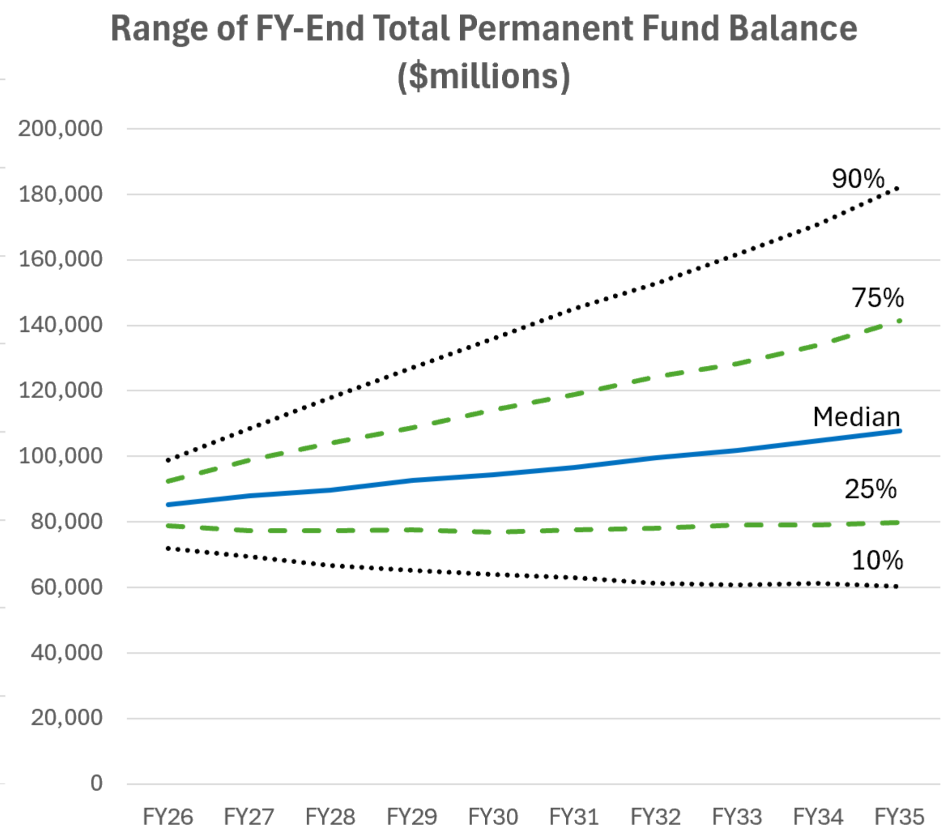
- LFD has two versions of the fiscal model: a linear model which assumes that revenue matches DOR's forecast, and a probabilistic model that shows the impact of revenue volatility
- These probabilistic model allows for variation in two variables:
  - Oil prices (using a range centered around DOR's forecast), which impacts Permanent Fund royalty deposits
  - Permanent Fund investment returns (using the ranges developed by Callan for APFC)
- Median cases using probabilistic models are typically lower than the linear model
- These scenarios assume no ERA Overdraws

Modeled Scenarios

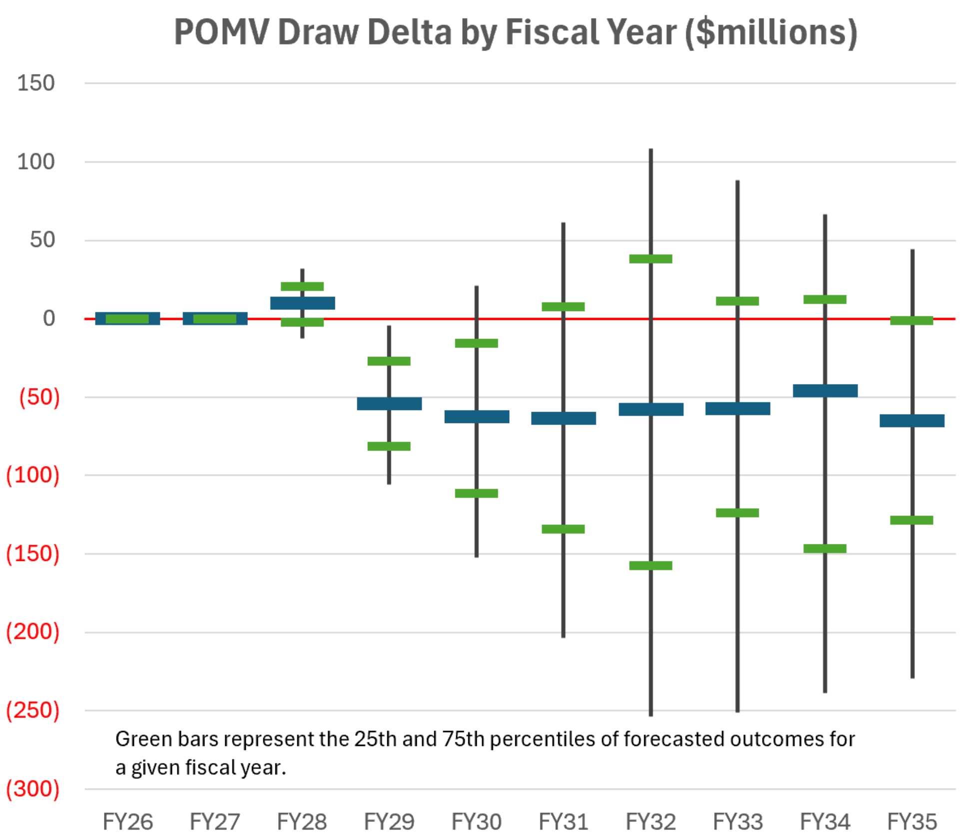
- Scenarios with POMV Draw formula change beginning FY28
  - Retain 5-year average of total Permanent Fund value, but vary draw percentage between 4.5% and 5.5%
  - Retain 5.0% draw percentage, but vary from 3 to 7-year average of total Permanent Fund value
- Scenarios with POMV Draw formula change beginning FY26
  - Step Down: 5% draw in FY26-27, 4.875% FY28-29, 4.75% FY30-FY31, 4.625% FY32-33, 4.5% FY34-35
  - 5.5% draw in FY26-FY28 & FY31-33, 5% draw in FY29-30 and FY34-35
  - 5% draw in FY26-FY28 & FY31-33, 4.5% draw in FY29-30 and FY34-35
  - 5% draw, except 5.5% draw if 5% nominal draw amount would be lower than prior year
  - 4.5% draw, except 5% draw if 4.5% nominal draw amount would be lower than prior year

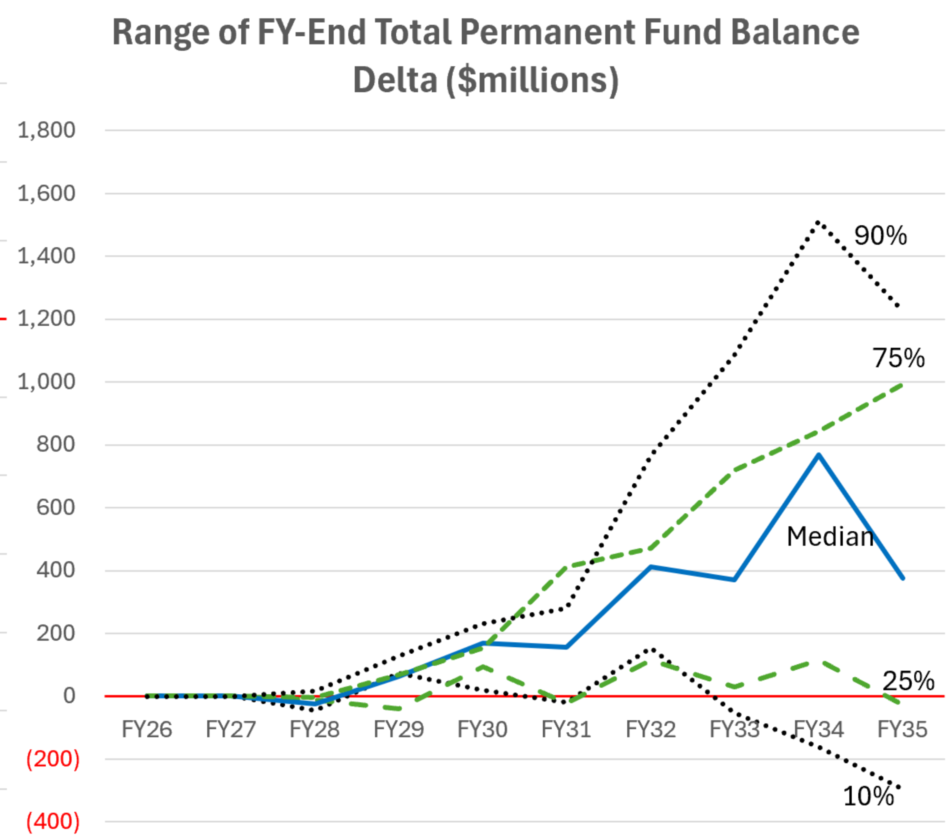
Status Quo POMV Formula with No Overdraws



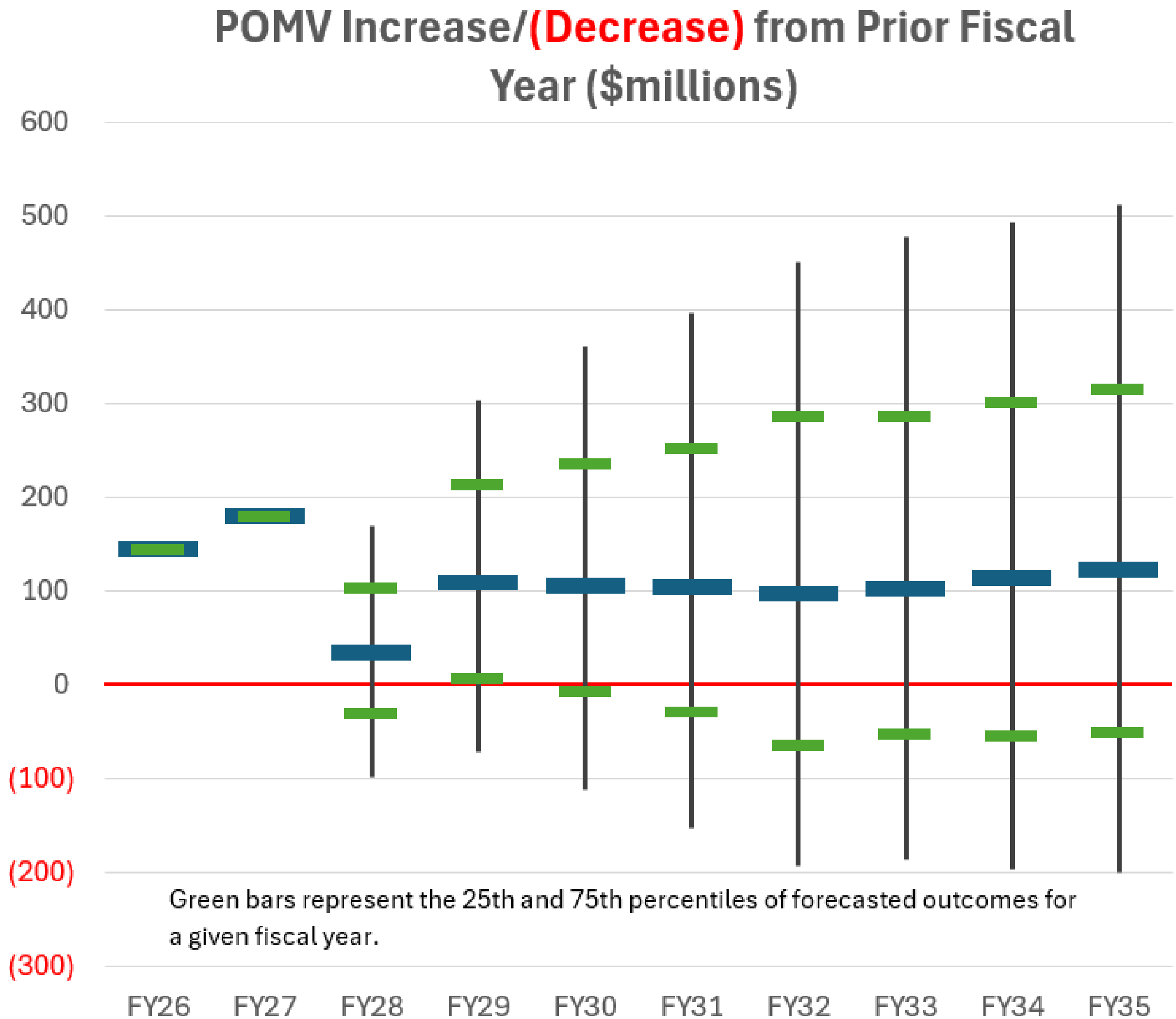


Delta from Status Quo to 6 Year Average Beginning FY28





How Uncertain is the POMV Amount from Year to Year?



POMV Draw as Percentage of Prior FY-End Total Perm Fund Balance

Median Effective Draw Rate										
Scenario Beginning FY28	**FY26**	**FY27**	**FY28**	**FY29**	**FY30**	**FY31**	**FY32**	**FY33**	**FY34**	**FY35**
5 Yr Avg, 4.5% Draw	4.57%	4.64%	4.11%	4.15%	4.13%	4.15%	4.11%	4.15%	4.11%	4.11%
5 Yr Avg, 4.75% Draw	4.57%	4.64%	4.34%	4.39%	4.38%	4.40%	4.36%	4.41%	4.37%	4.37%
5 Yr Avg, 5% Draw	4.57%	4.64%	4.57%	4.63%	4.63%	4.66%	4.62%	4.68%	4.63%	4.64%
5 Yr Avg, 5.25% Draw	4.57%	4.64%	4.80%	4.88%	4.88%	4.92%	4.89%	4.95%	4.90%	4.91%
5 Yr Avg, 5.5% Draw	4.57%	4.64%	5.02%	5.12%	5.14%	5.19%	5.16%	5.23%	5.17%	5.18%
3 Yr Avg, 5% Draw	4.57%	4.64%	4.70%	4.78%	4.74%	4.76%	4.76%	4.76%	4.75%	4.72%
4 Yr Avg, 5% Draw	4.57%	4.64%	4.63%	4.70%	4.69%	4.71%	4.69%	4.72%	4.70%	4.67%
5 Yr Avg, 5% Draw	4.57%	4.64%	4.57%	4.63%	4.63%	4.66%	4.62%	4.68%	4.63%	4.64%
6 Yr Avg, 5% Draw	4.57%	4.64%	4.58%	4.58%	4.56%	4.58%	4.58%	4.62%	4.60%	4.57%
7 Yr Avg, 5% Draw	4.57%	4.64%	4.45%	4.57%	4.49%	4.50%	4.53%	4.56%	4.53%	4.55%
Scenario Beginning FY26	**FY26**	**FY27**	**FY28**	**FY29**	**FY30**	**FY31**	**FY32**	**FY33**	**FY34**	**FY35**
Step Down	4.57%	4.64%	4.45%	4.51%	4.39%	4.41%	4.25%	4.29%	4.13%	4.12%
5.5% FY26-28 & FY31-33; 5% FY29-30 & FY34-35	5.02%	5.13%	5.07%	4.69%	4.67%	5.16%	5.13%	5.21%	4.69%	4.68%
5% FY26-28 & FY31-33; 4.5% FY29-30 & FY34-35	4.57%	4.64%	4.57%	4.17%	4.15%	4.62%	4.59%	4.66%	4.15%	4.15%
5% Except 5.5% if POMV Below Prior Year	4.57%	4.64%	4.70%	4.77%	4.84%	4.88%	4.93%	4.99%	4.99%	5.00%
4.5% Except 5% if POMV Below Prior Year	4.57%	4.64%	4.57%	4.63%	4.63%	4.65%	4.59%	4.62%	4.57%	4.55%

Median POMV Draw Amount

Median POMV Draw ($millions)										
Scenario Beginning FY28	**FY26**	**FY27**	**FY28**	**FY29**	**FY30**	**FY31**	**FY32**	**FY33**	**FY34**	**FY35**
5 Yr Avg, 4.5% Draw	3,800.9	3,980.2	3,616.7	3,721.3	3,834.0	3,939.0	4,048.8	4,184.1	4,272.0	4,369.1
5 Yr Avg, 4.75% Draw	3,800.9	3,980.2	3,817.7	3,928.1	4,044.9	4,151.7	4,260.9	4,394.7	4,475.4	4,568.3
5 Yr Avg, 5% Draw	3,800.9	3,980.2	4,018.6	4,134.8	4,255.6	4,363.5	4,472.0	4,603.0	4,678.1	4,760.8
5 Yr Avg, 5.25% Draw	3,800.9	3,980.2	4,219.5	4,341.5	4,466.1	4,574.5	4,681.6	4,809.0	4,877.5	4,951.3
5 Yr Avg, 5.5% Draw	3,800.9	3,980.2	4,420.5	4,548.3	4,676.3	4,784.8	4,890.0	5,012.7	5,073.7	5,137.6
3 Yr Avg, 5% Draw	3,800.9	3,980.2	4,136.0	4,264.2	4,376.5	4,450.6	4,569.6	4,670.2	4,750.0	4,837.5
4 Yr Avg, 5% Draw	3,800.9	3,980.2	4,071.8	4,198.6	4,318.3	4,417.1	4,502.6	4,626.2	4,689.0	4,793.7
5 Yr Avg, 5% Draw	3,800.9	3,980.2	4,018.6	4,134.8	4,255.6	4,363.5	4,472.0	4,603.0	4,678.1	4,760.8
6 Yr Avg, 5% Draw	3,800.9	3,980.2	4,027.8	4,079.9	4,192.8	4,303.6	4,418.9	4,545.0	4,654.7	4,722.4
7 Yr Avg, 5% Draw	3,800.9	3,980.2	3,915.8	4,079.0	4,138.4	4,244.8	4,362.8	4,492.2	4,618.7	4,694.6
Scenario Beginning FY26	**FY26**	**FY27**	**FY28**	**FY29**	**FY30**	**FY31**	**FY32**	**FY33**	**FY34**	**FY35**
Step Down	3,800.9	3,980.2	3,918.1	4,031.4	4,043.9	4,148.5	4,143.7	4,271.7	4,232.2	4,320.2
5.5% FY26-28 & FY31-33; 5% FY29-30 & FY34-35	4,181.0	4,378.2	4,416.1	4,122.6	4,229.6	4,756.2	4,863.3	4,989.0	4,594.7	4,662.0
5% FY26-28 & FY31-33; 4.5% FY29-30 & FY34-35	3,800.9	3,980.2	4,018.6	3,721.3	3,830.1	4,368.0	4,485.6	4,626.5	4,238.3	4,323.1
5% Except 5.5% if POMV Below Prior Year	3,800.9	3,980.2	4,120.9	4,297.6	4,428.2	4,560.6	4,712.2	4,862.7	5,000.3	5,067.5
4.5% Except 5% if POMV Below Prior Year	3,800.9	3,980.2	4,018.6	4,134.7	4,254.9	4,363.5	4,469.8	4,584.9	4,661.2	4,723.8

How Does the Median POMV Draw Differ from the Status Quo Formula?

Median POMV Draw, Delta from Status Quo ($millions)

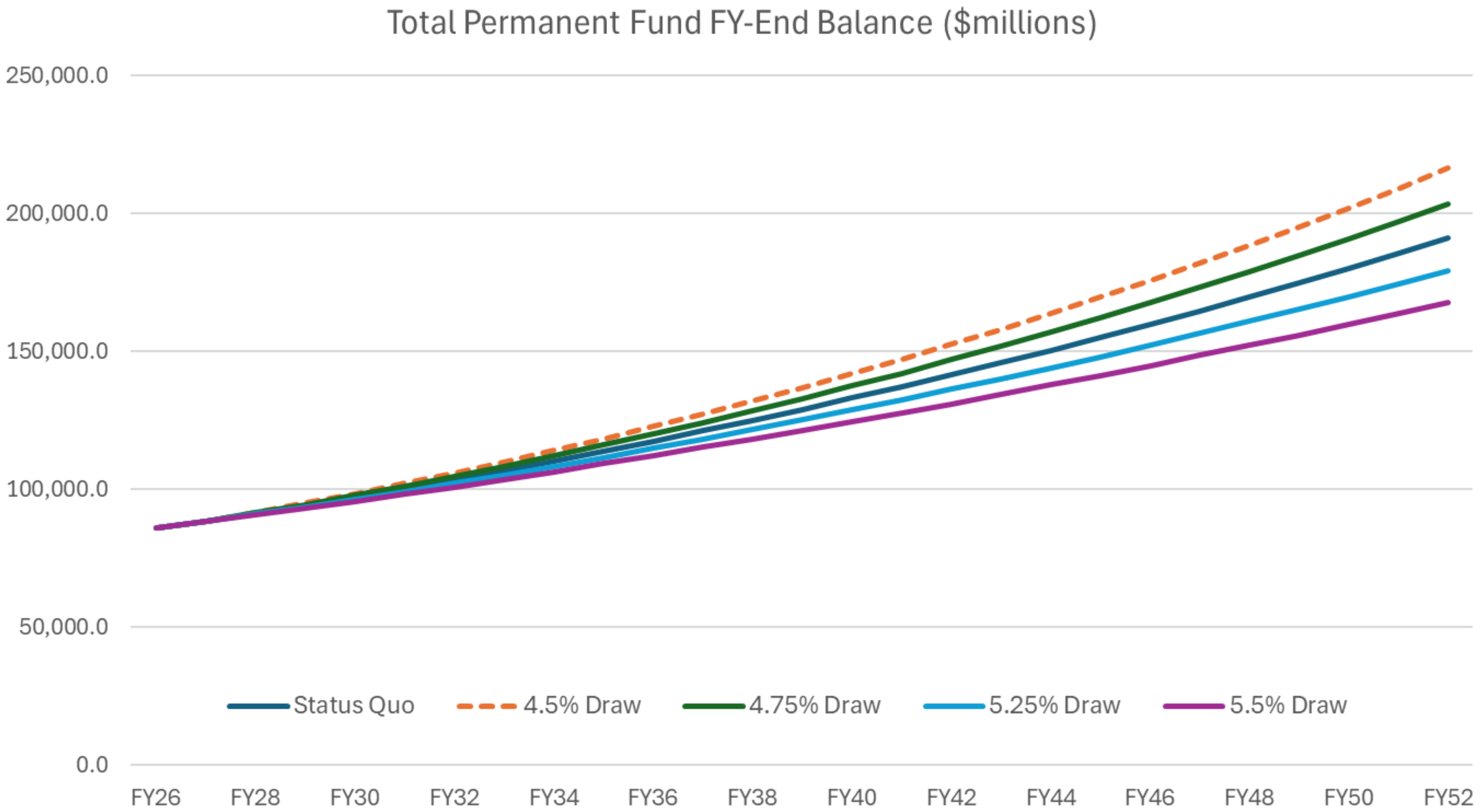
Scenario Beginning FY28	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
5 Yr Avg, 4.5% Draw	0.0	0.0	(401.9)	(413.5)	(421.6)	(424.4)	(423.2)	(418.9)	(406.1)	(391.6)
5 Yr Avg, 4.75% Draw	0.0	0.0	(200.9)	(206.7)	(210.7)	(211.8)	(211.0)	(208.3)	(202.7)	(192.4)
5 Yr Avg, 5% Draw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5 Yr Avg, 5.25% Draw	0.0	0.0	200.9	206.7	210.5	211.0	209.7	206.0	199.4	190.5
5 Yr Avg, 5.5% Draw	0.0	0.0	401.9	413.5	420.7	421.4	418.1	409.7	395.6	376.9
3 Yr Avg, 5% Draw	0.0	0.0	117.4	129.4	120.9	87.1	97.7	67.2	71.9	76.8
4 Yr Avg, 5% Draw	0.0	0.0	53.2	63.8	62.7	53.6	30.7	23.2	10.9	33.0
5 Yr Avg, 5% Draw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6 Yr Avg, 5% Draw	0.0	0.0	9.2	(54.9)	(62.8)	(59.9)	(53.1)	(58.0)	(23.4)	(38.3)
7 Yr Avg, 5% Draw	0.0	0.0	(102.8)	(55.8)	(117.2)	(118.7)	(109.1)	(110.8)	(59.4)	(66.2)

Scenario Beginning FY26	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Step Down	0.0	0.0	(100.5)	(103.4)	(211.7)	(214.9)	(328.2)	(331.3)	(445.9)	(440.6)
5.5% FY26-28 & FY31-33; 5% FY29-30 & FY34-35	380.1	398.0	397.5	(12.2)	(26.0)	392.8	391.3	386.0	(83.4)	(98.8)
5% FY26-28 & FY31-33; 4.5% FY29-30 & FY34-35	0.0	0.0	0.0	(413.5)	(425.6)	4.6	13.7	23.6	(439.8)	(437.6)
5% Except 5.5% if POMV Below Prior Year	0.0	0.0	102.3	162.8	172.6	197.1	240.3	259.7	322.2	306.7
4.5% Except 5% if POMV Below Prior Year	0.0	0.0	0.0	(0.1)	(0.7)	0.0	(2.1)	(18.1)	(16.9)	(37.0)

How Uncertain is the POMV Amount from Year to Year?

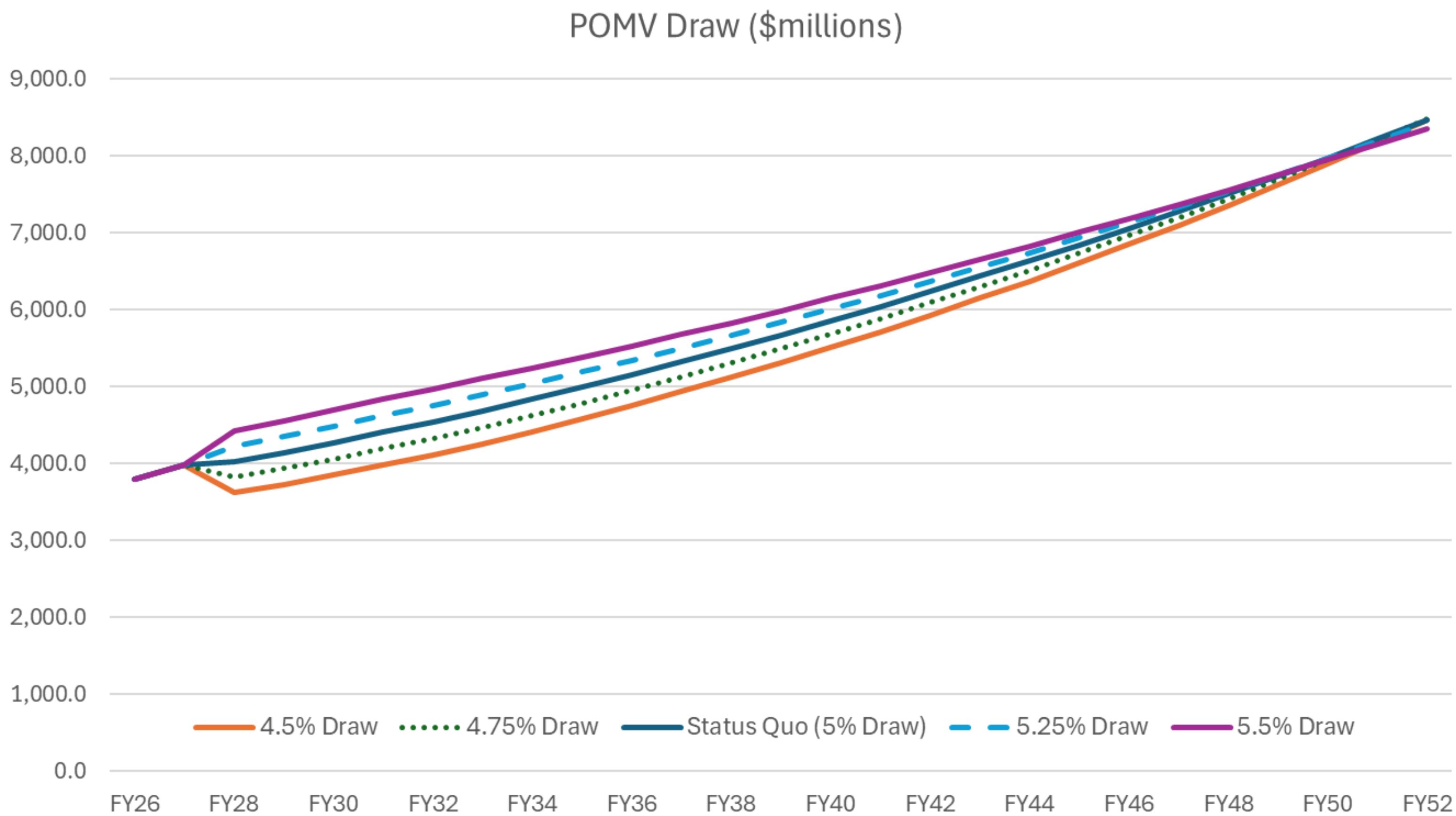
Range from 25% to 75% Case, POMV Draw Amount Change from Prior Year ($millions)										
Scenario Beginning FY28	**FY26**	**FY27**	**FY28**	**FY29**	**FY30**	**FY31**	**FY32**	**FY33**	**FY34**	**FY35**
5 Yr Avg, 4.5% Draw	0.0	0.0	126.5	199.4	235.0	288.7	330.6	345.6	353.0	369.2
5 Yr Avg, 4.75% Draw	0.0	0.0	133.5	210.4	247.9	304.1	348.6	362.9	369.1	386.8
5 Yr Avg, 5% Draw	0.0	0.0	140.6	221.5	260.7	319.5	366.6	379.9	383.5	401.6
5 Yr Avg, 5.25% Draw	0.0	0.0	147.6	232.6	273.6	334.8	384.5	397.5	399.6	416.0
5 Yr Avg, 5.5% Draw	0.0	0.0	154.6	243.7	286.4	349.9	402.4	414.5	414.7	433.2
3 Yr Avg, 5% Draw	0.0	0.0	234.3	369.2	432.7	453.3	476.7	483.4	474.1	522.3
4 Yr Avg, 5% Draw	0.0	0.0	175.7	276.9	325.4	398.3	422.5	422.6	427.3	430.5
5 Yr Avg, 5% Draw	0.0	0.0	140.6	221.5	260.7	319.5	366.6	379.9	383.5	401.6
6 Yr Avg, 5% Draw	0.0	0.0	117.1	184.6	217.5	266.3	306.7	343.8	355.5	370.2
7 Yr Avg, 5% Draw	0.0	0.0	100.4	158.2	186.6	228.9	263.7	296.3	324.2	332.8
Scenario Beginning FY26	**FY26**	**FY27**	**FY28**	**FY29**	**FY30**	**FY31**	**FY32**	**FY33**	**FY34**	**FY35**
Step Down	0.0	0.0	137.1	216.0	242.1	303.8	322.8	352.7	330.9	365.9
5.5% FY26-28 & FY31-33; 5% FY29-30 & FY34-35	0.0	0.0	154.3	206.6	258.7	398.0	400.0	411.9	326.8	391.5
5% FY26-28 & FY31-33; 4.5% FY29-30 & FY34-35	0.0	0.0	140.6	186.0	234.7	368.6	366.9	381.6	301.7	365.5
5% Except 5.5% if POMV Below Prior Year	0.0	0.0	225.8	219.3	273.6	334.4	407.4	388.4	396.6	414.1
4.5% Except 5% if POMV Below Prior Year	0.0	0.0	140.6	216.1	228.1	293.7	339.8	349.0	359.0	378.8

Longer-Term Impact of Different Draw Rates on Perm Fund Balance



Long-term analysis uses linear model. Uses DOR's long-term royalty forecast extrapolation and assumes Callan's 7.65% 10-year average return for entire period.

Longer-Term Impact of Different Draw Rates on POMV Draw



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Questions?

Contact Information

Alexei Painter
Legislative Fiscal Analyst
(907) 465-5413
Alexei.Painter@akleg.gov

Conor Bell
Fiscal Analyst
(907) 465-3002
Conor.Bell@akleg.gov

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