Appendix 6B3 – Sacramento – San Joaquin Delta Modeling, X2 Results (DSM2-QUAL)

The following results of the DSM2 QUAL model are included for X2 results at key project locations for the following alternatives:

- No Action Alternative 011221
- Alternative 1A 011221
- Alternative 1B 011221
- Alternative 2 011221
- Alternative 3 020121

Section	Output Parameters	Table Numbers	Figure Numbers
X2	X2 Distance	6B3-1-1a to 6B3-1-4c	6B3-1-1 to 6B3-1-18

Report formats
- Monthly tables comparing an alternative against the No Action alternative (exceedance values, long-term average, and average by water year type)
- Monthly pattern charts (long-term average and average by water year type) including all alternatives
- Monthly exceedance charts (all months) including all alternatives

Table 6B3-1-1a. X2, No Action Alternative 011221, Monthly Position (KM)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	92.7	92.1	90.6	86.5	78.5	78.9	80.0	82.3	83.7	87.7	91.4	92.7
20%	92.3	91.3	88.9	84.1	72.7	71.9	73.4	80.0	83.3	85.7	90.0	92.1
30%	91.9	90.6	87.0	81.8	67.5	65.2	68.4	77.7	82.1	84.6	89.2	91.4
40%	91.6	89.2	85.9	74.9	64.0	63.4	66.5	71.3	79.9	82.5	87.0	91.1
50%	90.1	84.8	83.6	70.6	59.5	60.1	63.9	67.7	77.4	81.2	85.7	89.2
60%	80.7	84.3	81.8	65.4	55.5	57.5	60.6	65.3	75.5	79.3	83.5	80.3
70%	80.4	83.9	69.8	56.5	54.1	54.4	58.0	62.7	71.7	78.4	83.1	79.9
80%	79.5	82.5	63.9	54.5	54.0	54.0	54.2	58.1	66.7	76.7	82.5	79.5
90%	78.8	74.1	56.6	54.0	54.0	54.0	54.0	54.1	58.2	72.5	81.8	79.1
Long Term												
Full Simulation Period[a]	85.8	84.7	78.2	69.8	63.1	62.6	64.8	69.0	75.2	80.5	85.6	85.7
Water Year Types[b,c]												
Wet (32%)	78.7	79.5	75.3	57.5	54.8	55.5	56.7	59.3	65.4	73.6	81.0	78.4
Above Normal (15%)	80.5	82.2	77.1	64.7	57.4	55.8	58.9	63.3	72.5	77.9	82.8	79.8
Below Normal (17%)	89.0	84.5	75.9	73.2	61.8	63.1	65.1	69.3	77.1	81.5	86.2	90.0
Dry (22%)	92.2	88.9	78.8	79.2	70.2	67.6	70.5	76.4	81.8	85.2	89.7	91.8
Critical (15%)	92.9	92.4	87.6	83.5	77.2	76.7	79.0	84.1	87.2	89.6	91.5	93.0

Table 6B3-1-1b. X2, Alternative 1A 011221, Monthly Position (KM)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	91.9	91.5	90.5	86.2	78.5	79.1	80.0	82.1	83.7	87.5	90.9	92.1
20%	91.2	90.6	89.0	84.6	72.8	72.1	73.5	80.0	83.3	85.5	89.1	91.2
30%	90.8	89.8	87.4	82.5	67.8	65.8	68.6	77.6	82.0	84.4	88.4	90.7
40%	90.2	88.2	86.1	75.5	64.6	64.0	66.8	71.3	80.0	82.5	86.1	89.7
50%	89.2	84.5	84.8	71.1	60.0	60.9	64.4	67.8	77.5	80.9	85.0	88.5
60%	80.3	84.1	81.6	65.9	55.6	58.1	60.8	65.3	75.5	79.3	83.4	80.0
70%	79.9	83.9	70.8	56.9	54.2	54.7	58.1	63.0	71.8	78.6	82.8	79.5
80%	79.1	82.9	63.9	54.6	54.0	54.0	54.2	58.1	67.1	76.8	82.1	79.1
90%	78.4	73.9	56.5	54.0	54.0	54.0	54.0	54.1	58.3	72.5	81.5	78.8
Long Term												
Full Simulation Period[a]	85.1	84.5	78.4	70.0	63.3	63.0	64.9	69.0	75.3	80.4	85.1	85.1
Water Year Types[b,c]												
Wet (32%)	78.4	79.7	75.5	57.6	54.8	55.6	56.8	59.3	65.5	73.7	80.9	78.1
Above Normal (15%)	80.2	82.1	77.3	65.1	57.5	56.2	59.0	63.4	72.7	78.0	82.6	79.4
Below Normal (17%)	88.3	84.3	76.1	73.4	62.2	63.8	65.3	69.4	77.3	81.5	85.5	89.2
Dry (22%)	91.1	88.2	78.6	79.4	70.6	68.1	70.6	76.3	81.8	84.9	88.7	90.7
Critical (15%)	91.6	91.7	88.0	83.8	77.6	77.2	79.1	84.1	87.2	89.3	91.0	92.5

Table 6B3-1-1c. X2, Alternative 1A 011221 minus No Action Alternative 011221, Monthly Position (KM)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-0.8	-0.6	-0.2	-0.3	0.0	0.2	0.1	-0.2	0.0	-0.2	-0.6	-0.6
20%	-1.1	-0.7	0.0	0.5	0.1	0.2	0.1	0.0	0.0	-0.2	-0.9	-0.9
30%	-1.1	-0.8	0.4	0.7	0.3	0.6	0.2	-0.1	-0.1	-0.2	-0.8	-0.7
40%	-1.4	-1.0	0.2	0.6	0.6	0.7	0.2	0.0	0.2	0.0	-0.9	-1.3
50%	-0.9	-0.3	1.2	0.5	0.5	0.8	0.5	0.1	0.0	-0.2	-0.7	-0.7
60%	-0.4	-0.2	-0.3	0.5	0.1	0.7	0.2	0.1	0.0	-0.1	-0.1	-0.3
70%	-0.4	0.0	0.9	0.4	0.1	0.3	0.1	0.3	0.1	0.3	-0.3	-0.5
80%	-0.5	0.4	0.0	0.1	0.0	0.0	0.1	0.0	0.3	0.2	-0.3	-0.4
90%	-0.4	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	-0.3	-0.4
Long Term												
Full Simulation Period[a]	-0.7	-0.2	0.2	0.2	0.2	0.4	0.1	0.0	0.1	-0.1	-0.5	-0.6
Water Year Types[b,c]												
Wet	-0.3	0.1	0.3	0.1	0.0	0.1	0.0	0.0	0.1	0.1	-0.1	-0.3
Above Normal	-0.3	-0.1	0.2	0.4	0.1	0.4	0.1	0.1	0.2	0.1	-0.2	-0.4
Below Normal	-0.7	-0.2	0.2	0.3	0.3	0.7	0.2	0.1	0.2	-0.1	-0.8	-0.9
Dry	-1.0	-0.7	-0.2	0.3	0.4	0.6	0.1	0.0	0.0	-0.2	-0.9	-1.1
Critical	-1.3	-0.7	0.4	0.3	0.4	0.5	0.1	0.1	0.0	-0.3	-0.5	-0.5

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

d All scenarios are simulated at current climate condition and 0 cm sea level rise.

Table 6B3-1-2a. X2, No Action Alternative 011221, Monthly Position (KM)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	92.7	92.1	90.6	86.5	78.5	78.9	80.0	82.3	83.7	87.7	91.4	92.7
20%	92.3	91.3	88.9	84.1	72.7	71.9	73.4	80.0	83.3	85.7	90.0	92.1
30%	91.9	90.6	87.0	81.8	67.5	65.2	68.4	77.7	82.1	84.6	89.2	91.4
40%	91.6	89.2	85.9	74.9	64.0	63.4	66.5	71.3	79.9	82.5	87.0	91.1
50%	90.1	84.8	83.6	70.6	59.5	60.1	63.9	67.7	77.4	81.2	85.7	89.2
60%	80.7	84.3	81.8	65.4	55.5	57.5	60.6	65.3	75.5	79.3	83.5	80.3
70%	80.4	83.9	69.8	56.5	54.1	54.4	58.0	62.7	71.7	78.4	83.1	79.9
80%	79.5	82.5	63.9	54.5	54.0	54.0	54.2	58.1	66.7	76.7	82.5	79.5
90%	78.8	74.1	56.6	54.0	54.0	54.0	54.0	54.1	58.2	72.5	81.8	79.1
Long Term												
Full Simulation Period[a]	85.8	84.7	78.2	69.8	63.1	62.6	64.8	69.0	75.2	80.5	85.6	85.7
Water Year Types[b,c]												
Wet (32%)	78.7	79.5	75.3	57.5	54.8	55.5	56.7	59.3	65.4	73.6	81.0	78.4
Above Normal (15%)	80.5	82.2	77.1	64.7	57.4	55.8	58.9	63.3	72.5	77.9	82.8	79.8
Below Normal (17%)	89.0	84.5	75.9	73.2	61.8	63.1	65.1	69.3	77.1	81.5	86.2	90.0
Dry (22%)	92.2	88.9	78.8	79.2	70.2	67.6	70.5	76.4	81.8	85.2	89.7	91.8
Critical (15%)	92.9	92.4	87.6	83.5	77.2	76.7	79.0	84.1	87.2	89.6	91.5	93.0

Table 6B3-1-2b. X2, Alternative 1B 011221, Monthly Position (KM)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	91.8	91.5	90.5	86.2	78.5	79.1	80.0	82.2	83.7	87.5	90.8	91.8
20%	91.4	90.5	89.0	84.6	72.8	72.1	73.5	80.0	83.3	85.5	89.1	91.2
30%	91.0	89.9	87.4	82.0	67.8	65.8	68.6	77.8	82.0	84.5	88.4	90.6
40%	90.3	88.4	86.2	75.4	64.2	64.0	66.7	71.3	80.0	82.5	86.0	89.8
50%	89.1	84.5	84.8	70.9	59.9	60.9	64.4	67.8	77.5	80.9	85.0	88.3
60%	80.3	84.1	81.3	65.9	55.6	58.1	60.8	65.3	75.7	79.3	83.4	80.0
70%	80.0	83.9	72.3	56.9	54.2	54.7	58.1	63.0	71.8	78.6	82.8	79.6
80%	79.1	82.9	63.6	54.6	54.0	54.0	54.2	58.1	67.1	76.8	82.1	79.1
90%	78.4	73.8	56.5	54.0	54.0	54.0	54.0	54.1	58.3	72.5	81.5	78.8
Long Term												
Full Simulation Period[a]	85.1	84.4	78.3	70.0	63.2	63.0	64.9	69.0	75.3	80.4	85.1	85.1
Water Year Types[b,c]												
Wet (32%)	78.4	79.7	75.5	57.6	54.8	55.6	56.8	59.3	65.5	73.7	80.9	78.1
Above Normal (15%)	80.2	82.1	77.1	65.1	57.5	56.2	59.0	63.4	72.7	78.0	82.6	79.5
Below Normal (17%)	88.2	84.1	75.9	73.4	62.1	63.8	65.2	69.4	77.3	81.4	85.4	89.1
Dry (22%)	91.2	88.3	78.6	79.4	70.5	68.1	70.6	76.4	81.8	84.9	88.7	90.8
Critical (15%)	91.7	91.7	87.9	83.8	77.5	77.1	79.1	84.1	87.2	89.3	91.0	92.4

Table 6B3-1-2c. X2, Alternative 1B 011221 minus No Action Alternative 011221, Monthly Position (KM)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-0.8	-0.6	-0.2	-0.3	0.0	0.2	0.1	-0.1	0.0	-0.2	-0.7	-0.8
20%	-0.9	-0.8	0.0	0.5	0.1	0.2	0.1	0.0	0.0	-0.2	-0.9	-0.9
30%	-0.9	-0.7	0.4	0.2	0.3	0.6	0.2	0.1	-0.1	-0.1	-0.8	-0.8
40%	-1.3	-0.8	0.3	0.6	0.2	0.7	0.2	-0.1	0.2	0.0	-1.0	-1.3
50%	-1.0	-0.3	1.2	0.3	0.4	0.8	0.4	0.1	0.1	-0.2	-0.7	-0.9
60%	-0.4	-0.2	-0.5	0.5	0.1	0.7	0.2	0.1	0.2	-0.1	-0.1	-0.3
70%	-0.4	0.0	2.5	0.4	0.1	0.2	0.1	0.3	0.1	0.2	-0.3	-0.3
80%	-0.5	0.4	-0.3	0.1	0.0	0.0	0.0	0.0	0.3	0.2	-0.3	-0.4
90%	-0.4	-0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	-0.3	-0.4
Long Term												
Full Simulation Period[a]	-0.6	-0.3	0.1	0.2	0.2	0.4	0.1	0.0	0.1	-0.1	-0.5	-0.6
Water Year Types[b,c]												
Wet	-0.3	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.1	-0.1	-0.3
Above Normal	-0.3	-0.1	0.0	0.4	0.1	0.3	0.1	0.1	0.2	0.0	-0.2	-0.3
Below Normal	-0.7	-0.4	0.0	0.2	0.3	0.7	0.2	0.1	0.2	-0.1	-0.8	-0.9
Dry	-0.9	-0.6	-0.1	0.2	0.3	0.6	0.1	0.0	0.0	-0.2	-1.0	-1.0
Critical	-1.2	-0.7	0.4	0.3	0.3	0.4	0.1	0.1	0.1	-0.3	-0.5	-0.6

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

d All scenarios are simulated at current climate condition and 0 cm sea level rise.

Table 6B3-1-3a. X2, No Action Alternative 011221, Monthly Position (KM)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	92.7	92.1	90.6	86.5	78.5	78.9	80.0	82.3	83.7	87.7	91.4	92.7
20%	92.3	91.3	88.9	84.1	72.7	71.9	73.4	80.0	83.3	85.7	90.0	92.1
30%	91.9	90.6	87.0	81.8	67.5	65.2	68.4	77.7	82.1	84.6	89.2	91.4
40%	91.6	89.2	85.9	74.9	64.0	63.4	66.5	71.3	79.9	82.5	87.0	91.1
50%	90.1	84.8	83.6	70.6	59.5	60.1	63.9	67.7	77.4	81.2	85.7	89.2
60%	80.7	84.3	81.8	65.4	55.5	57.5	60.6	65.3	75.5	79.3	83.5	80.3
70%	80.4	83.9	69.8	56.5	54.1	54.4	58.0	62.7	71.7	78.4	83.1	79.9
80%	79.5	82.5	63.9	54.5	54.0	54.0	54.2	58.1	66.7	76.7	82.5	79.5
90%	78.8	74.1	56.6	54.0	54.0	54.0	54.0	54.1	58.2	72.5	81.8	79.1
Long Term												
Full Simulation Period[a]	85.8	84.7	78.2	69.8	63.1	62.6	64.8	69.0	75.2	80.5	85.6	85.7
Water Year Types[b,c]												
Wet (32%)	78.7	79.5	75.3	57.5	54.8	55.5	56.7	59.3	65.4	73.6	81.0	78.4
Above Normal (15%)	80.5	82.2	77.1	64.7	57.4	55.8	58.9	63.3	72.5	77.9	82.8	79.8
Below Normal (17%)	89.0	84.5	75.9	73.2	61.8	63.1	65.1	69.3	77.1	81.5	86.2	90.0
Dry (22%)	92.2	88.9	78.8	79.2	70.2	67.6	70.5	76.4	81.8	85.2	89.7	91.8
Critical (15%)	92.9	92.4	87.6	83.5	77.2	76.7	79.0	84.1	87.2	89.6	91.5	93.0

Table 6B3-1-3b. X2, Alternative 2 011221, Monthly Position (KM)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	92.0	91.7	90.5	86.3	78.5	79.1	80.0	82.1	83.7	87.5	90.8	92.1
20%	91.4	91.1	89.0	84.6	72.8	72.1	73.5	80.0	83.3	85.5	89.1	91.3
30%	90.9	89.9	87.4	82.5	67.8	65.8	68.6	77.6	82.0	84.5	88.4	90.7
40%	90.4	88.2	86.2	75.5	64.6	64.0	66.8	71.3	80.0	82.4	86.1	89.7
50%	89.2	84.6	84.8	71.1	59.9	60.9	64.4	67.8	77.5	80.9	85.0	88.4
60%	80.4	84.1	81.6	65.8	55.6	58.1	60.8	65.3	75.5	79.3	83.4	80.0
70%	80.0	83.9	70.8	56.7	54.2	54.7	58.1	63.0	71.8	78.6	82.8	79.5
80%	79.2	82.9	64.1	54.6	54.0	54.0	54.2	58.1	67.1	76.8	82.1	79.1
90%	78.4	73.9	56.5	54.0	54.0	54.0	54.0	54.1	58.3	72.5	81.5	78.7
Long Term												
Full Simulation Period[a]	85.1	84.5	78.4	70.0	63.3	63.0	64.9	69.0	75.3	80.4	85.1	85.0
Water Year Types[b,c]												
Wet (32%)	78.5	79.7	75.5	57.6	54.8	55.6	56.8	59.3	65.5	73.7	80.8	78.0
Above Normal (15%)	80.2	82.1	77.3	65.1	57.5	56.2	59.0	63.4	72.7	78.0	82.5	79.4
Below Normal (17%)	88.1	84.3	76.1	73.4	62.2	63.8	65.3	69.4	77.3	81.5	85.4	89.1
Dry (22%)	91.2	88.5	78.7	79.4	70.6	68.1	70.6	76.3	81.8	84.9	88.7	90.8
Critical (15%)	91.8	91.7	87.9	83.8	77.5	77.1	79.1	84.1	87.2	89.3	91.1	92.5

Table 6B3-1-3c. X2, Alternative 2 011221 minus No Action Alternative 011221, Monthly Position (KM)

| Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-0.7	-0.4	-0.1	-0.2	0.0	0.2	0.1	-0.2	0.0	-0.2	-0.6	-0.6
20%	-1.0	-0.2	0.0	0.5	0.1	0.2	0.1	0.0	0.0	-0.2	-0.9	-0.8
30%	-0.9	-0.6	0.4	0.7	0.3	0.6	0.2	-0.1	-0.1	-0.1	-0.8	-0.7
40%	-1.1	-1.0	0.2	0.6	0.6	0.7	0.2	0.0	0.2	0.0	-0.9	-1.4
50%	-0.9	-0.3	1.2	0.5	0.4	0.8	0.5	0.1	0.0	-0.2	-0.7	-0.8
60%	-0.3	-0.2	-0.2	0.4	0.1	0.7	0.2	0.1	0.0	-0.1	-0.1	-0.3
70%	-0.4	0.0	0.9	0.2	0.1	0.3	0.1	0.3	0.1	0.3	-0.3	-0.5
80%	-0.4	0.4	0.2	0.1	0.0	0.0	0.1	0.0	0.3	0.2	-0.3	-0.4
90%	-0.4	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	-0.3	-0.5
Long Term												
Full Simulation Period[a]	-0.6	-0.2	0.2	0.2	0.2	0.4	0.1	0.0	0.1	-0.1	-0.5	-0.6
Water Year Types[b,c]												
Wet	-0.3	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.1	-0.2	-0.4
Above Normal	-0.3	-0.1	0.1	0.4	0.1	0.3	0.1	0.1	0.2	0.1	-0.2	-0.4
Below Normal	-0.8	-0.2	0.2	0.3	0.3	0.7	0.2	0.1	0.2	-0.1	-0.8	-0.9
Dry	-0.9	-0.4	0.0	0.3	0.4	0.5	0.1	0.0	0.0	-0.2	-0.9	-1.0
Critical	-1.2	-0.6	0.4	0.3	0.3	0.4	0.1	0.1	0.1	-0.3	-0.5	-0.4

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

d All scenarios are simulated at current climate condition and 0 cm sea level rise.

Table 6B3-1-4a. X2, No Action Alternative 011221, Monthly Position (KM)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	92.7	92.1	90.6	86.5	78.5	78.9	80.0	82.3	83.7	87.7	91.4	92.7
20%	92.3	91.3	88.9	84.1	72.7	71.9	73.4	80.0	83.3	85.7	90.0	92.1
30%	91.9	90.6	87.0	81.8	67.5	65.2	68.4	77.7	82.1	84.6	89.2	91.4
40%	91.6	89.2	85.9	74.9	64.0	63.4	66.5	71.3	79.9	82.5	87.0	91.1
50%	90.1	84.8	83.6	70.6	59.5	60.1	63.9	67.7	77.4	81.2	85.7	89.2
60%	80.7	84.3	81.8	65.4	55.5	57.5	60.6	65.3	75.5	79.3	83.5	80.3
70%	80.4	83.9	69.8	56.5	54.1	54.4	58.0	62.7	71.7	78.4	83.1	79.9
80%	79.5	82.5	63.9	54.5	54.0	54.0	54.2	58.1	66.7	76.7	82.5	79.5
90%	78.8	74.1	56.6	54.0	54.0	54.0	54.0	54.1	58.2	72.5	81.8	79.1
Long Term												
Full Simulation Period[a]	85.8	84.7	78.2	69.8	63.1	62.6	64.8	69.0	75.2	80.5	85.6	85.7
Water Year Types[b,c]												
Wet (32%)	78.7	79.5	75.3	57.5	54.8	55.5	56.7	59.3	65.4	73.6	81.0	78.4
Above Normal (15%)	80.5	82.2	77.1	64.7	57.4	55.8	58.9	63.3	72.5	77.9	82.8	79.8
Below Normal (17%)	89.0	84.5	75.9	73.2	61.8	63.1	65.1	69.3	77.1	81.5	86.2	90.0
Dry (22%)	92.2	88.9	78.8	79.2	70.2	67.6	70.5	76.4	81.8	85.2	89.7	91.8
Critical (15%)	92.9	92.4	87.6	83.5	77.2	76.7	79.0	84.1	87.2	89.6	91.5	93.0

Table 6B3-1-4b. X2, Alternative 3 020121, Monthly Position (KM)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	92.3	91.9	90.7	86.1	78.5	79.1	80.0	82.2	83.9	87.5	90.9	92.2
20%	91.7	91.0	89.0	84.6	72.7	72.2	73.5	80.1	83.4	85.4	89.4	91.5
30%	91.2	90.2	87.4	82.7	67.8	65.8	68.6	77.8	82.0	84.5	88.6	90.8
40%	90.4	88.3	86.3	75.4	64.3	64.0	66.7	71.2	80.1	82.4	86.1	89.8
50%	88.9	84.5	84.3	70.8	59.9	61.0	64.2	67.8	77.5	80.9	85.0	88.2
60%	80.3	84.2	81.4	65.9	55.6	58.1	60.8	65.3	75.6	79.2	83.3	80.1
70%	80.0	83.8	71.6	56.9	54.2	54.7	58.1	63.0	71.8	78.5	82.8	79.6
80%	79.1	82.9	63.8	54.5	54.0	54.0	54.2	58.1	67.1	76.8	82.2	79.0
90%	78.5	73.9	56.5	54.0	54.0	54.0	54.0	54.1	58.3	72.5	81.5	78.8
Long Term												
Full Simulation Period[a]	85.2	84.5	78.2	70.0	63.2	63.0	64.8	69.0	75.4	80.4	85.2	85.2
Water Year Types[b,c]												
Wet (32%)	78.5	79.7	75.5	57.6	54.8	55.6	56.8	59.3	65.6	73.7	80.9	78.2
Above Normal (15%)	80.2	82.0	76.8	65.1	57.5	56.2	59.0	63.4	72.7	77.9	82.6	79.4
Below Normal (17%)	88.0	84.0	75.5	73.6	62.2	63.8	65.2	69.3	77.3	81.4	85.4	89.1
Dry (22%)	91.5	88.5	78.8	79.2	70.4	68.1	70.6	76.4	81.8	84.9	88.9	91.0
Critical (15%)	92.2	91.8	88.0	83.8	77.6	77.2	79.1	84.2	87.3	89.4	91.1	92.6

Table 6B3-1-4c. X2, Alternative 3 020121 minus No Action Alternative 011221, Monthly Position (KM)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-0.3	-0.2	0.0	-0.4	-0.1	0.2	0.1	-0.1	0.1	-0.2	-0.5	-0.4
20%	-0.6	-0.4	0.0	0.5	0.0	0.2	0.1	0.1	0.1	-0.3	-0.6	-0.5
30%	-0.7	-0.4	0.4	0.9	0.3	0.6	0.2	0.1	-0.1	-0.1	-0.7	-0.6
40%	-1.2	-0.9	0.4	0.5	0.3	0.7	0.2	-0.1	0.2	0.0	-0.9	-1.3
50%	-1.2	-0.4	0.7	0.2	0.4	0.9	0.2	0.1	0.1	-0.2	-0.7	-1.0
60%	-0.4	-0.1	-0.5	0.5	0.1	0.7	0.2	0.0	0.1	-0.2	-0.1	-0.2
70%	-0.4	0.0	1.8	0.4	0.1	0.3	0.1	0.3	0.1	0.2	-0.3	-0.4
80%	-0.5	0.4	0.0	0.1	0.0	0.0	0.1	0.0	0.3	0.2	-0.3	-0.5
90%	-0.2	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	-0.3	-0.4
Long Term												
Full Simulation Period[a]	-0.6	-0.2	0.0	0.2	0.2	0.4	0.1	0.1	0.1	-0.1	-0.4	-0.5
Water Year Types[b,c]												
Wet	-0.3	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.1	-0.1	-0.3
Above Normal	-0.3	-0.1	-0.3	0.4	0.1	0.3	0.1	0.1	0.2	0.0	-0.2	-0.4
Below Normal	-1.0	-0.6	-0.4	0.5	0.3	0.7	0.2	0.0	0.2	-0.1	-0.8	-0.9
Dry	-0.7	-0.4	0.0	0.0	0.2	0.5	0.1	0.1	0.1	-0.3	-0.8	-0.7
Critical	-0.8	-0.6	0.4	0.3	0.4	0.4	0.1	0.1	0.1	-0.2	-0.4	-0.3

a Based on the 82-year simulation period.

b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

c These results are displayed with calendar year - year type sorting.

d All scenarios are simulated at current climate condition and 0 cm sea level rise.
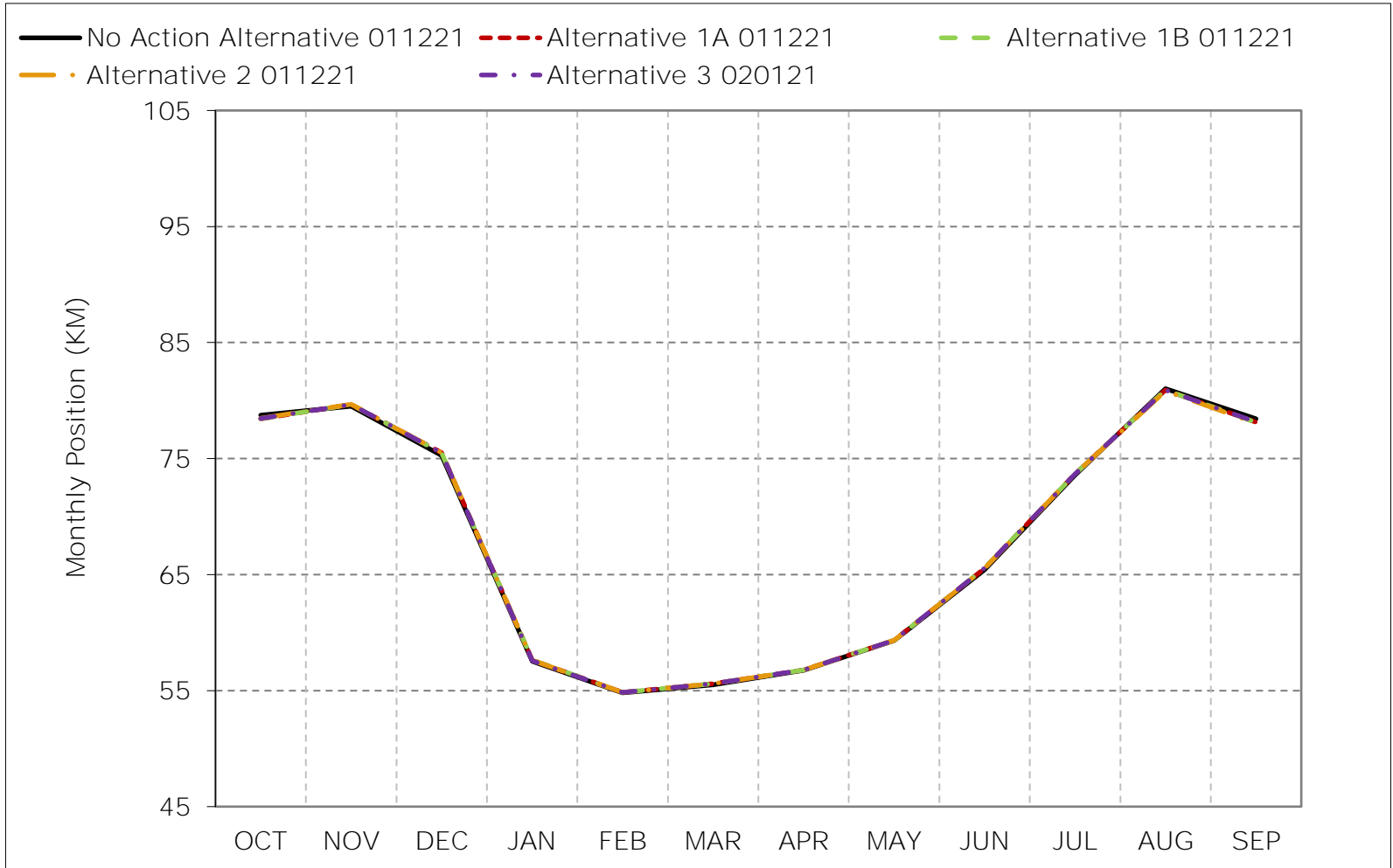
Figure 6B3-1-1. X2, Long-Term Average Position
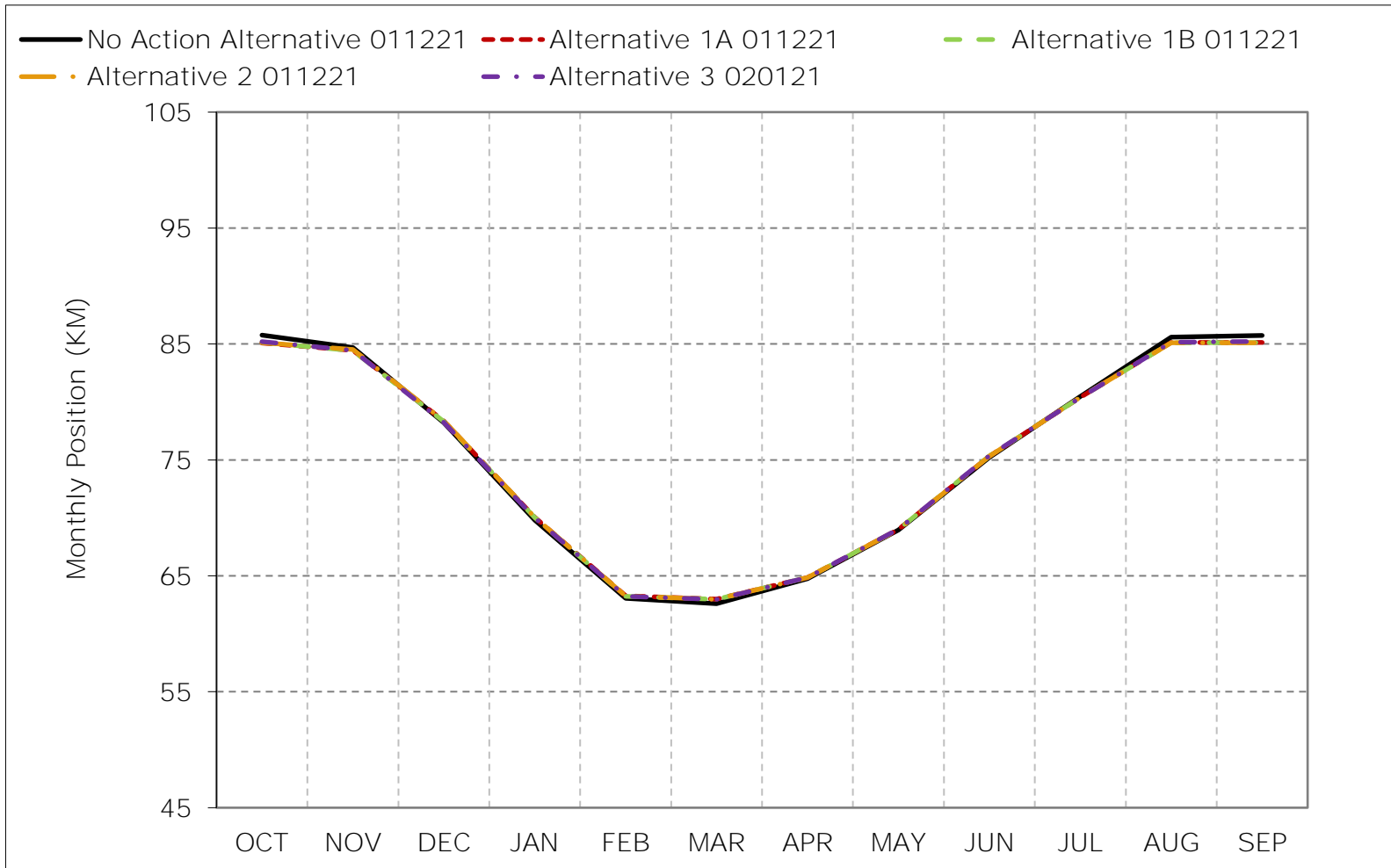
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with calendar year - year type sorting.

*All scenarios are simulated at current climate condition and 0 cm sea level rise.

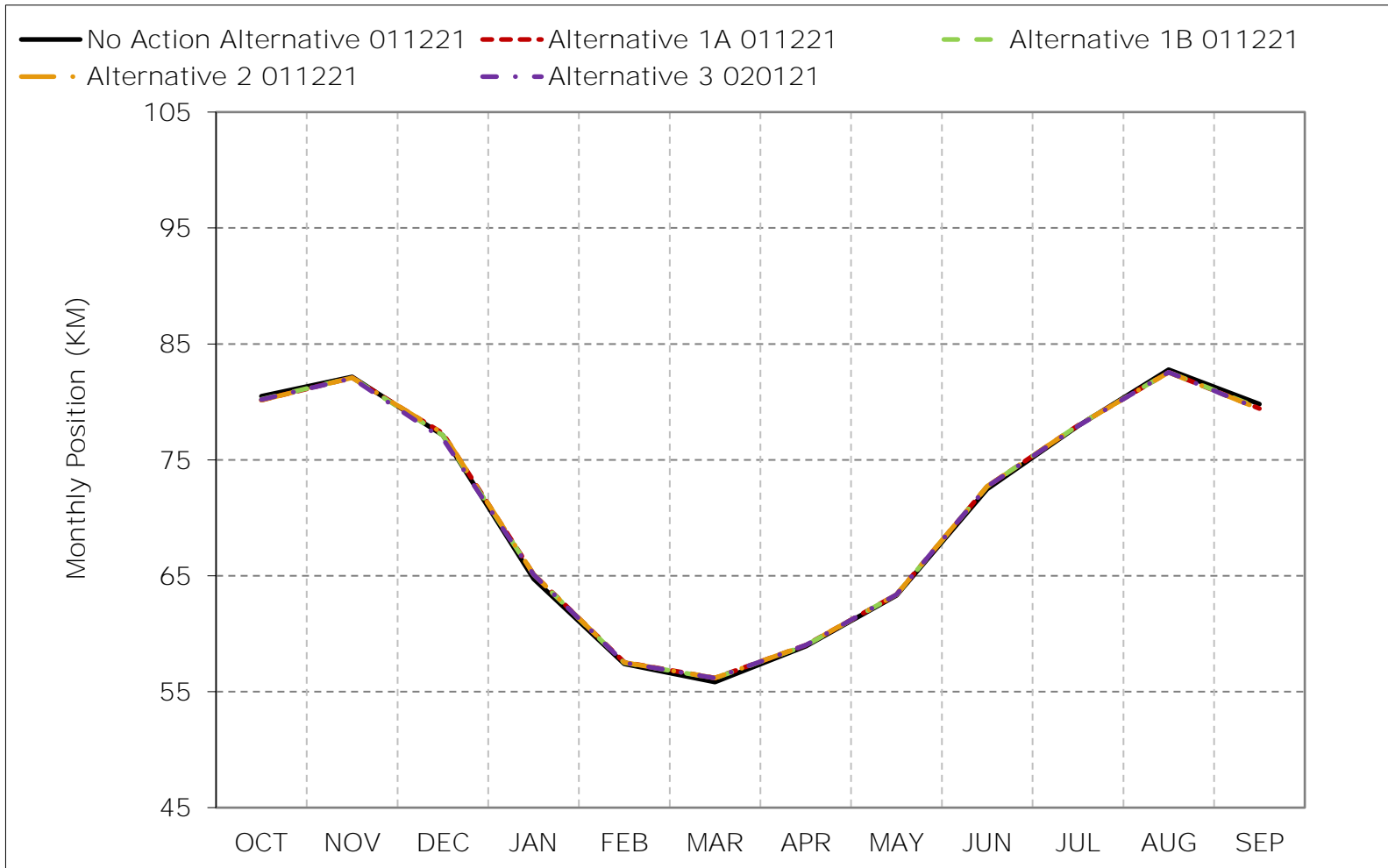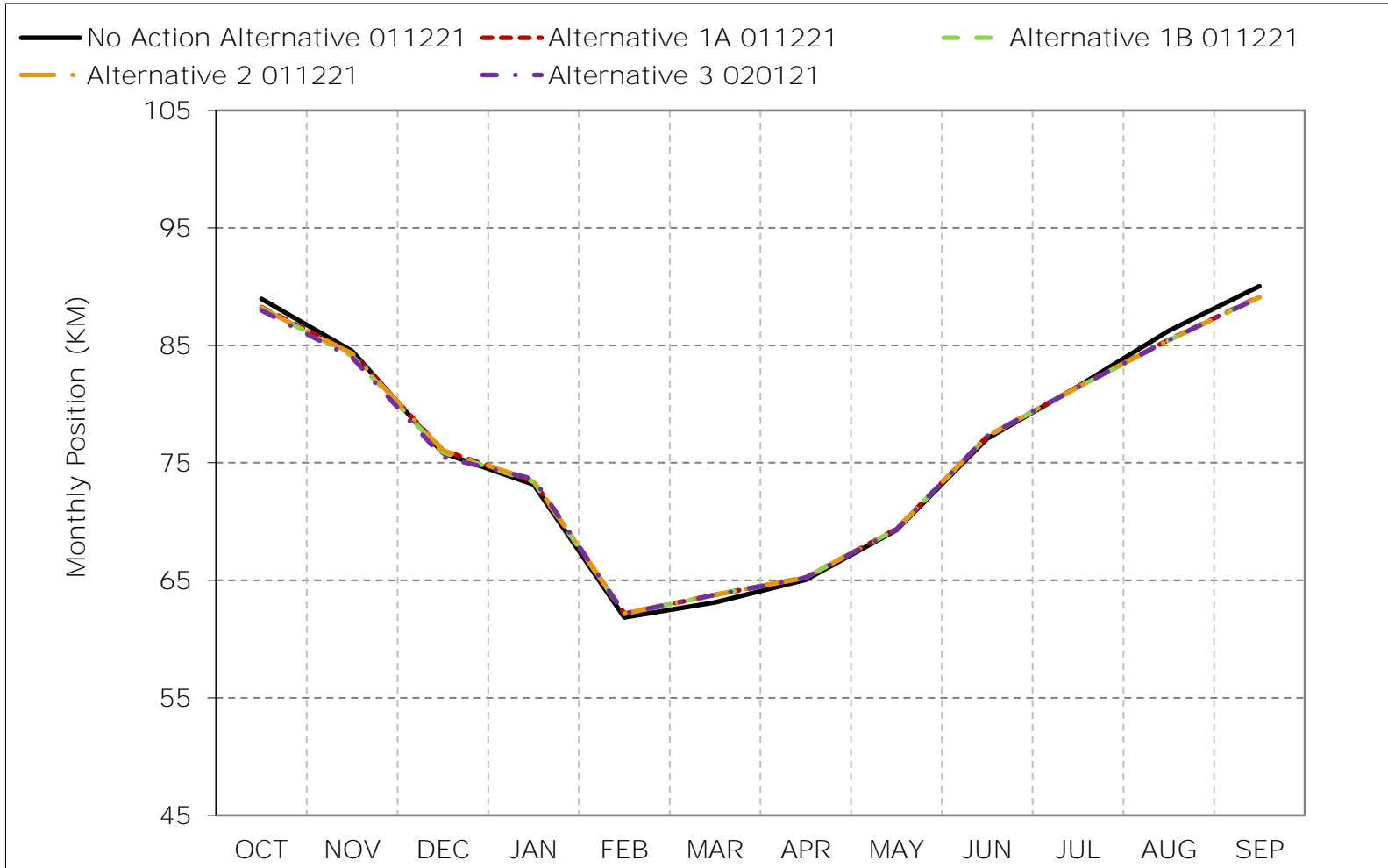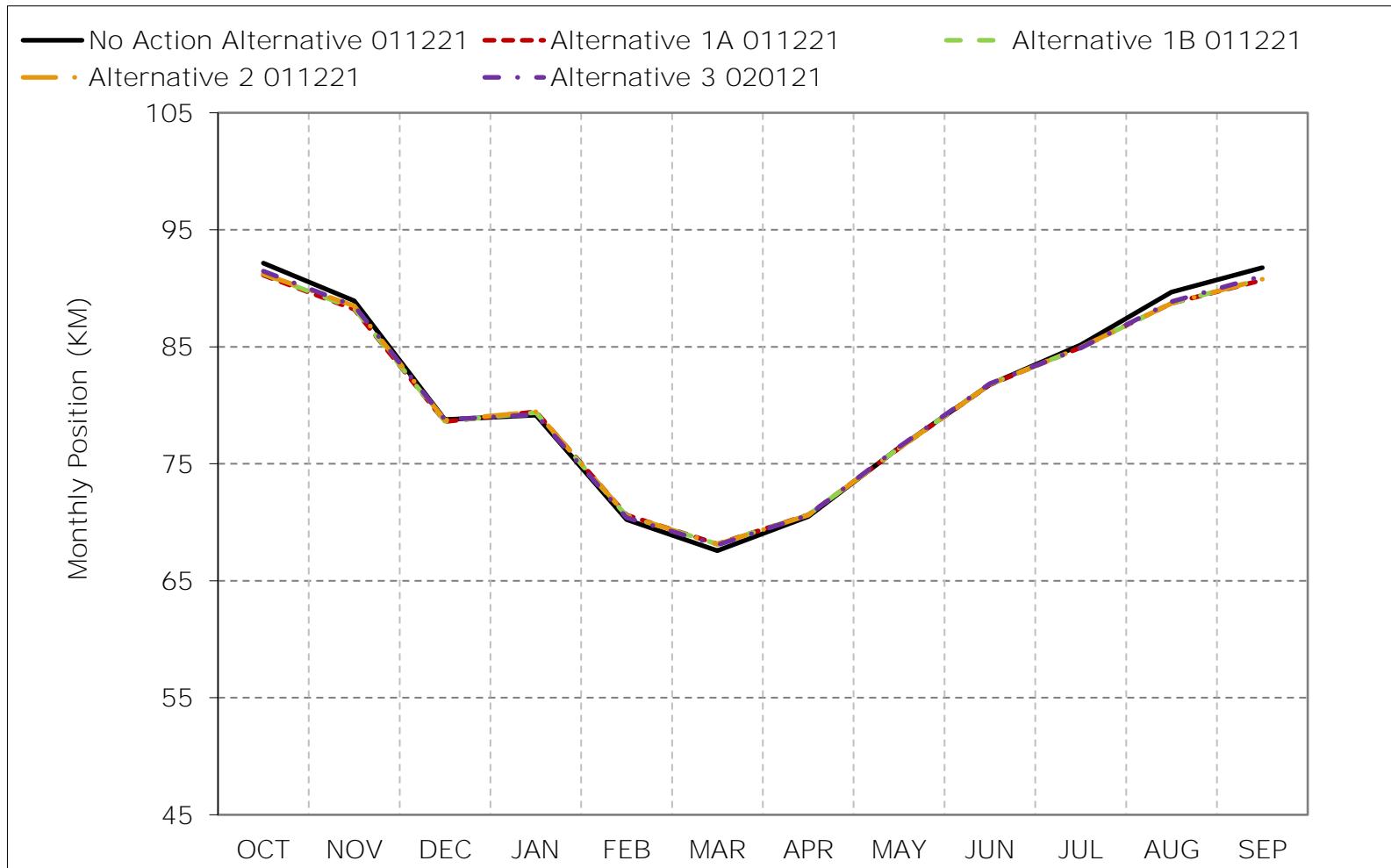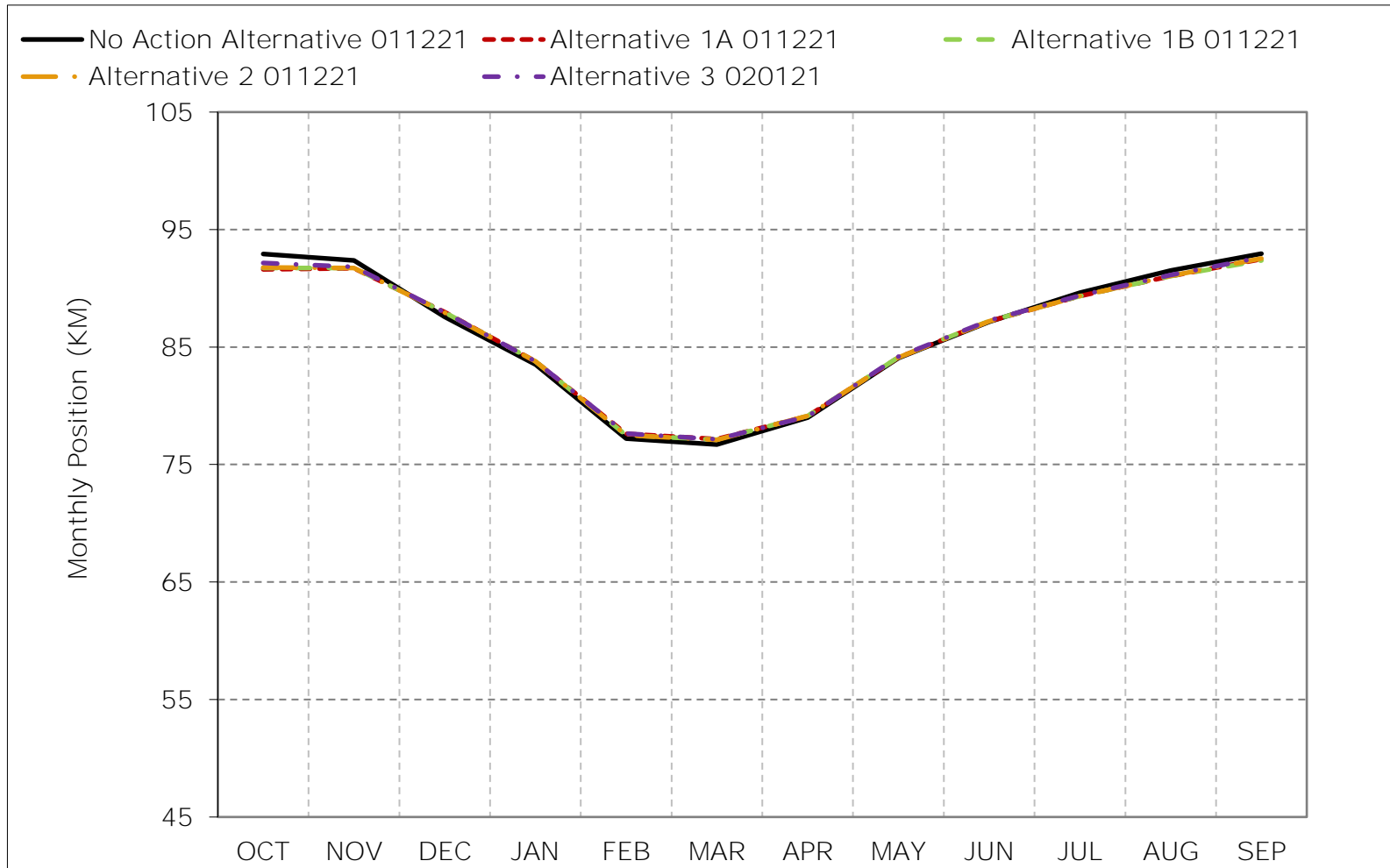Figure 6B3-1-2. X2, Wet Year Average Position

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with calendar year - year type sorting.

*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 6B3-1-3. X2, Above Normal Year Average Position

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with calendar year - year type sorting.

*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 6B3-1-4. X2, Below Normal Year Average Position

Legend:
- No Action Alternative 011221
- Alternative 1A 011221
- Alternative 1B 011221
- Alternative 2 011221
- Alternative 3 020121

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with calendar year - year type sorting.

*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 6B3-1-5. X2, Dry Year Average Position

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with calendar year - year type sorting.

*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 6B3-1-6. X2, Critical Year Average Position

*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

*These results are displayed with calendar year - year type sorting.

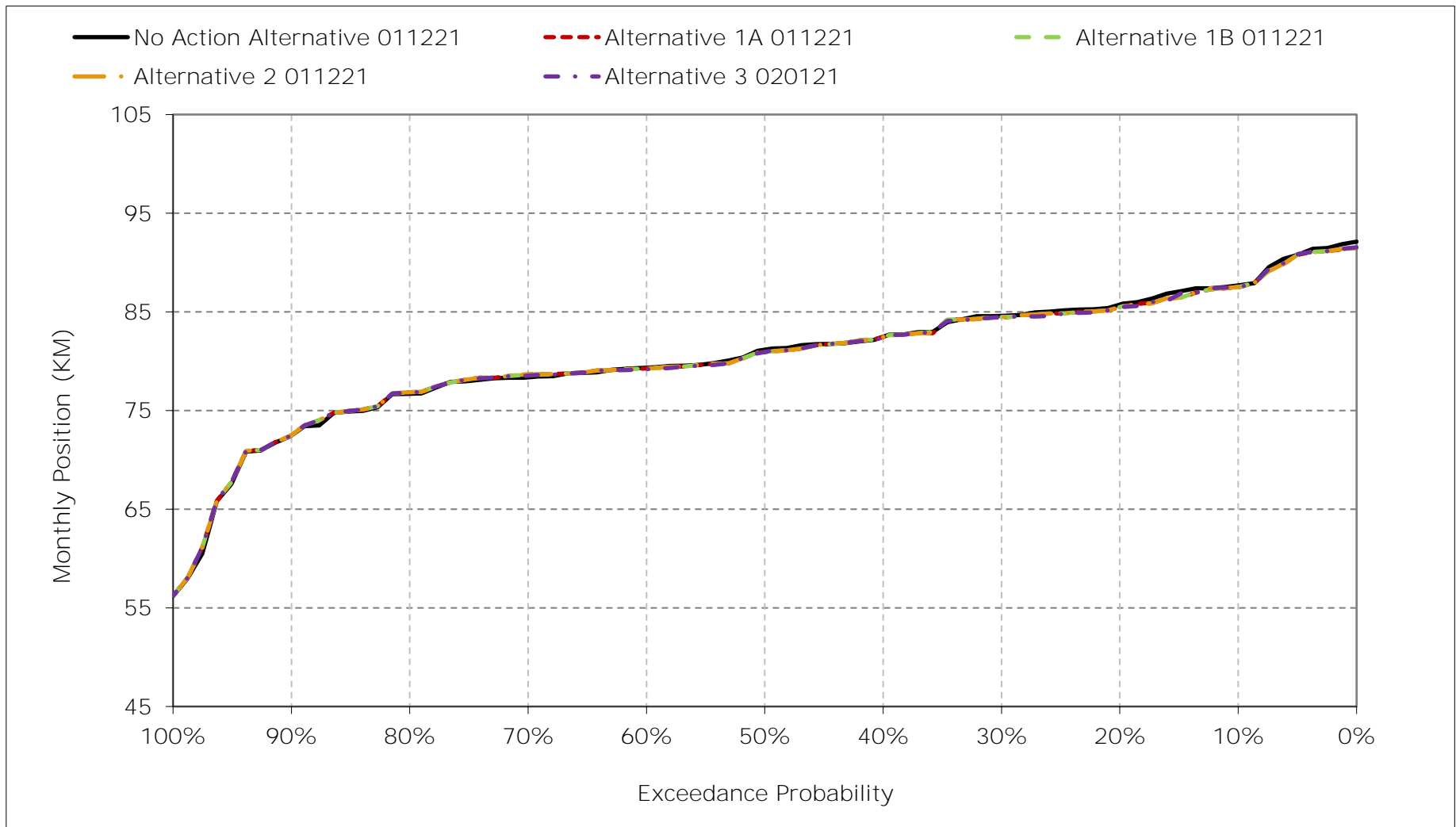*All scenarios are simulated at current climate condition and 0 cm sea level rise.
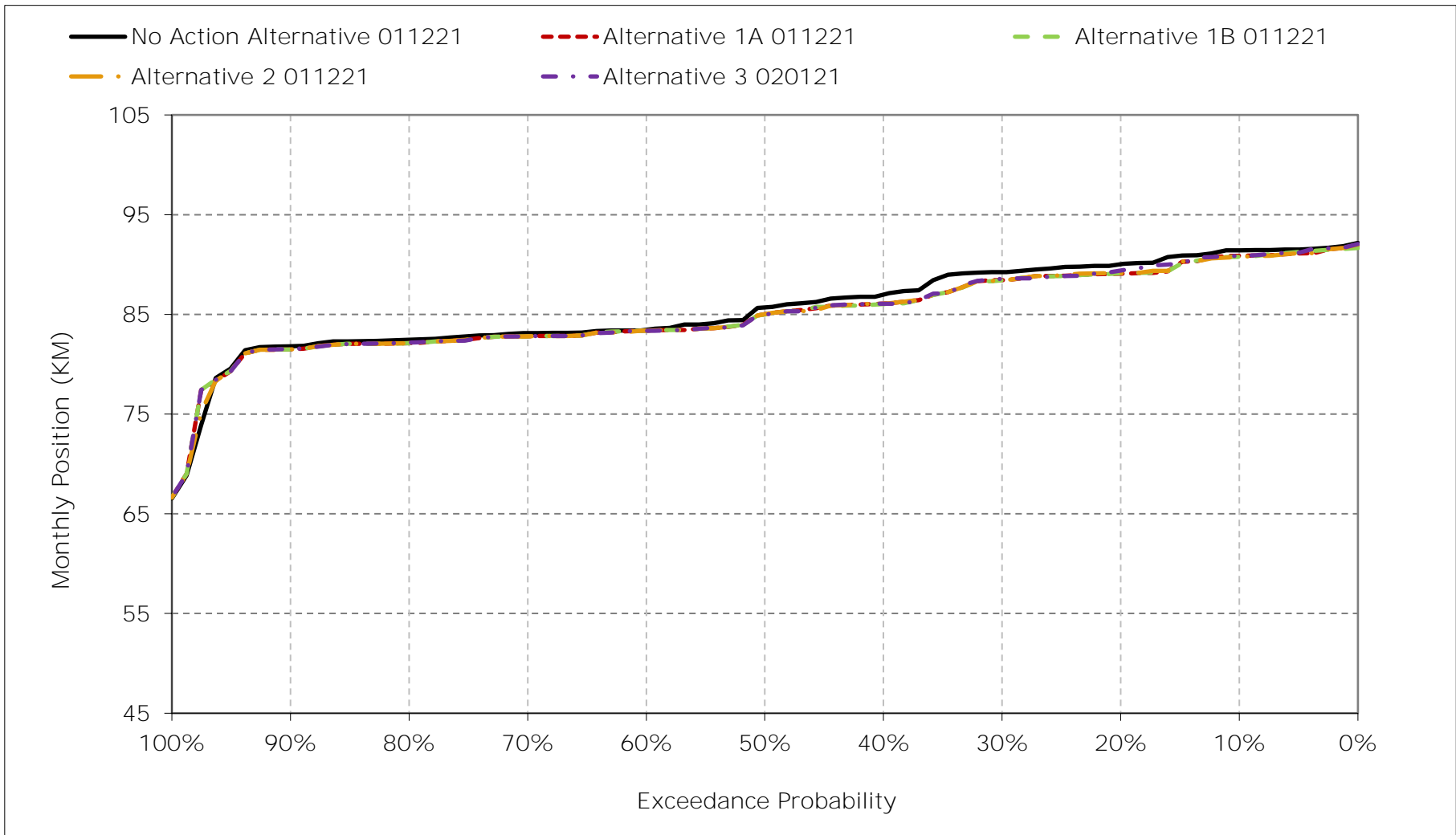
Figure 6B3-1-7. X2, January Position
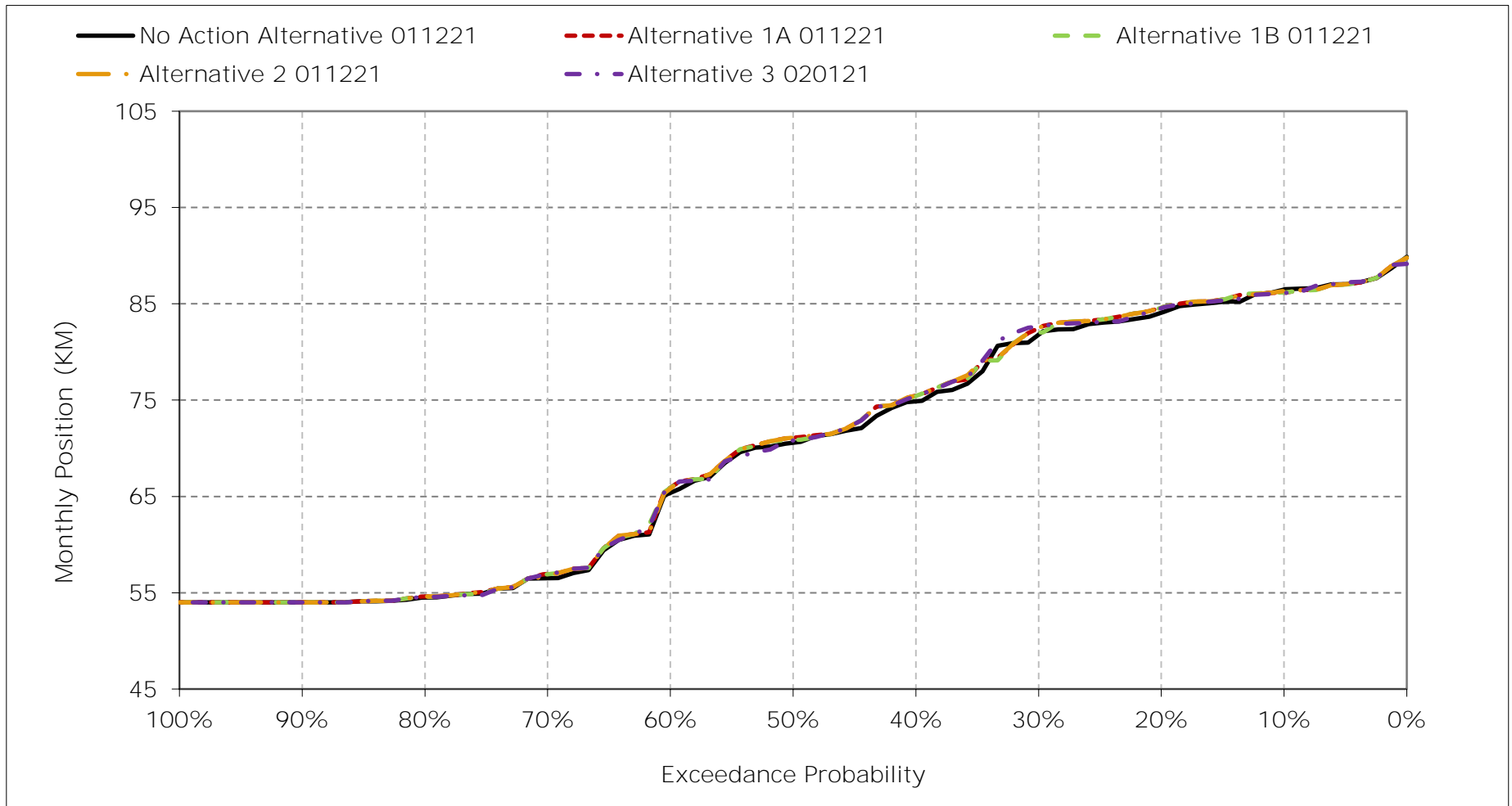
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

*Results are monthly averaged from DSM2.

Figure 6B3-1-8. X2, February Position
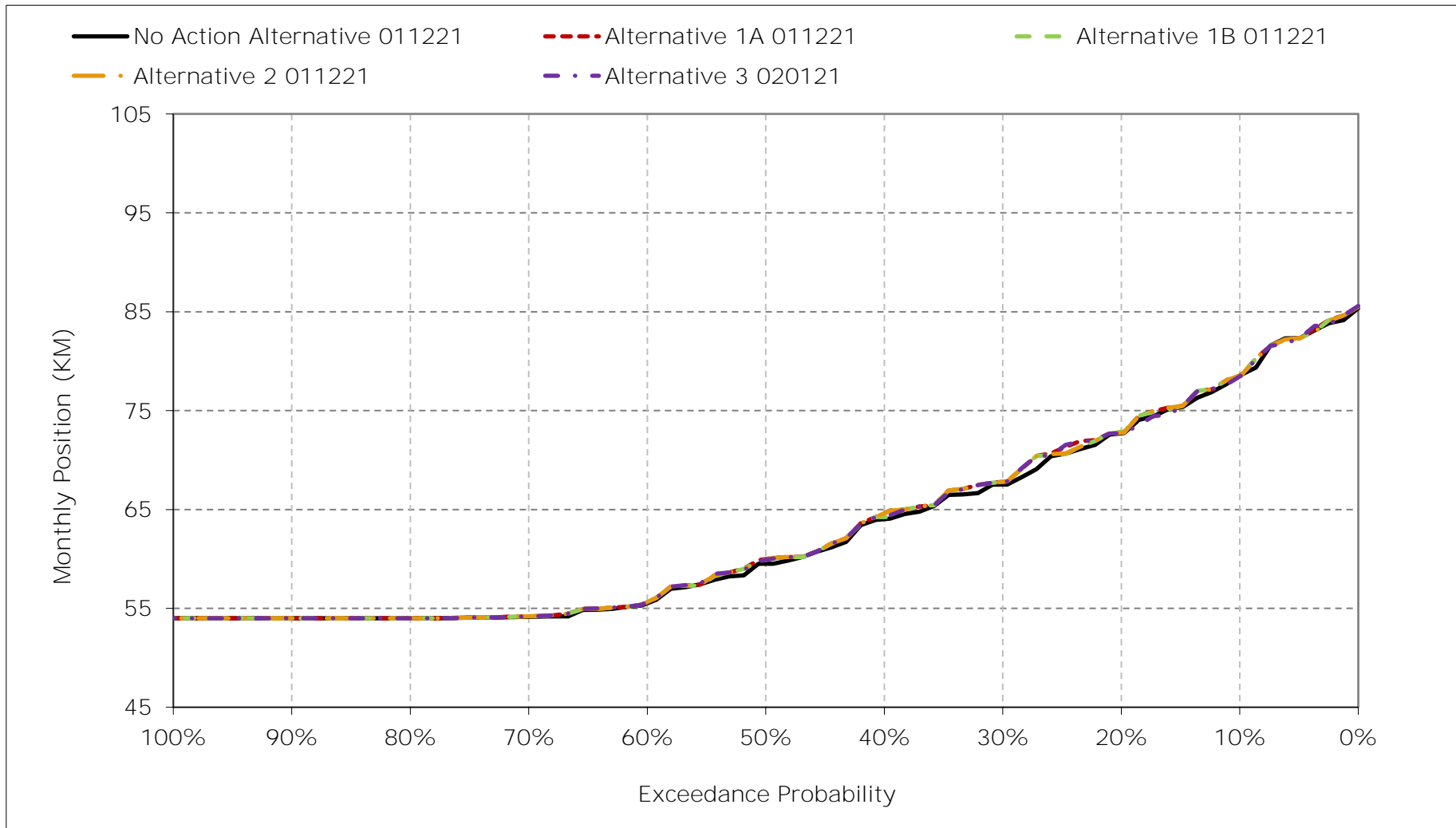
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

*Results are monthly averaged from DSM2.

Figure 6B3-1-9. X2, March Position
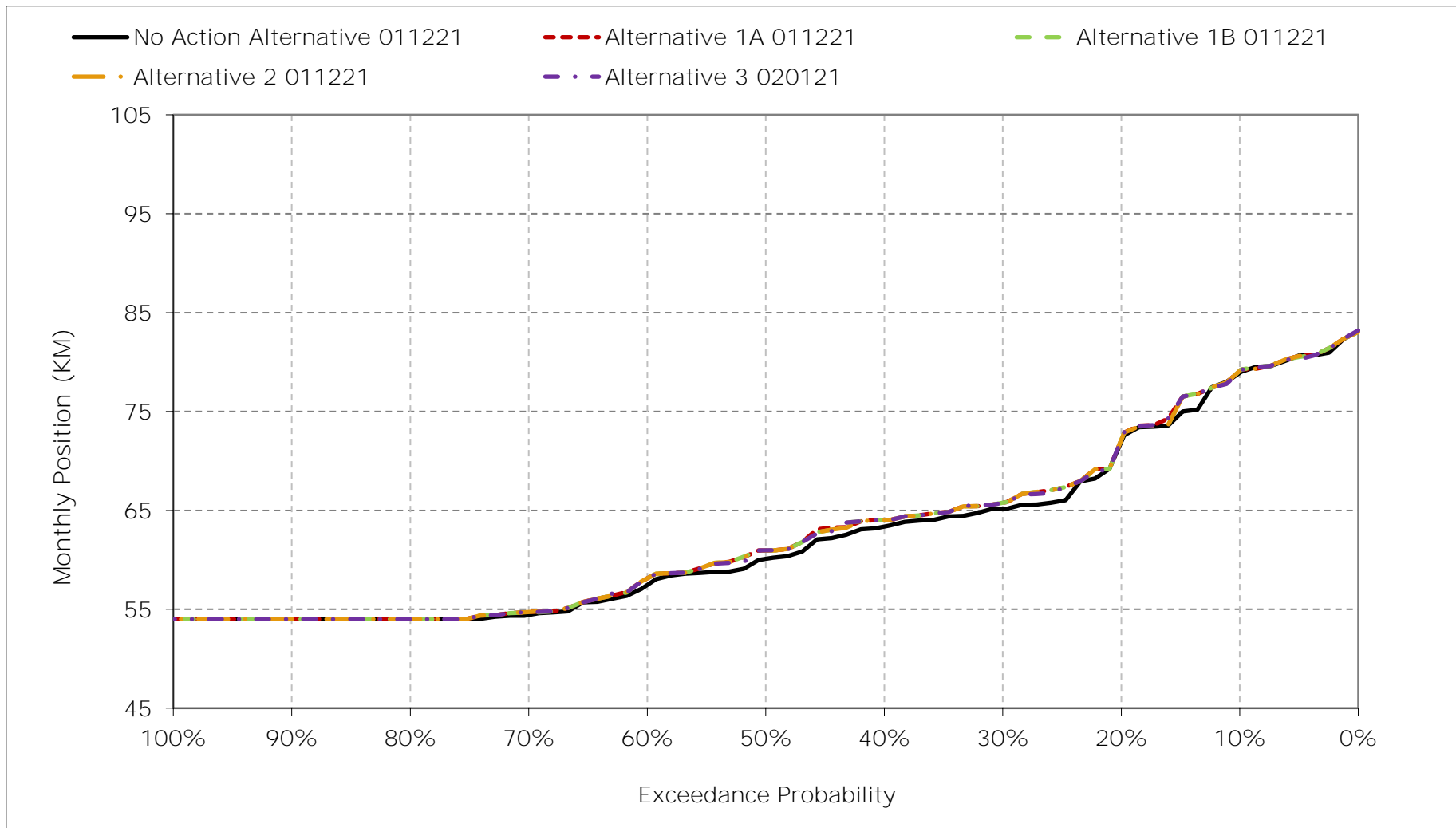
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

*Results are monthly averaged from DSM2.

Figure 6B3-1-10. X2, April Position
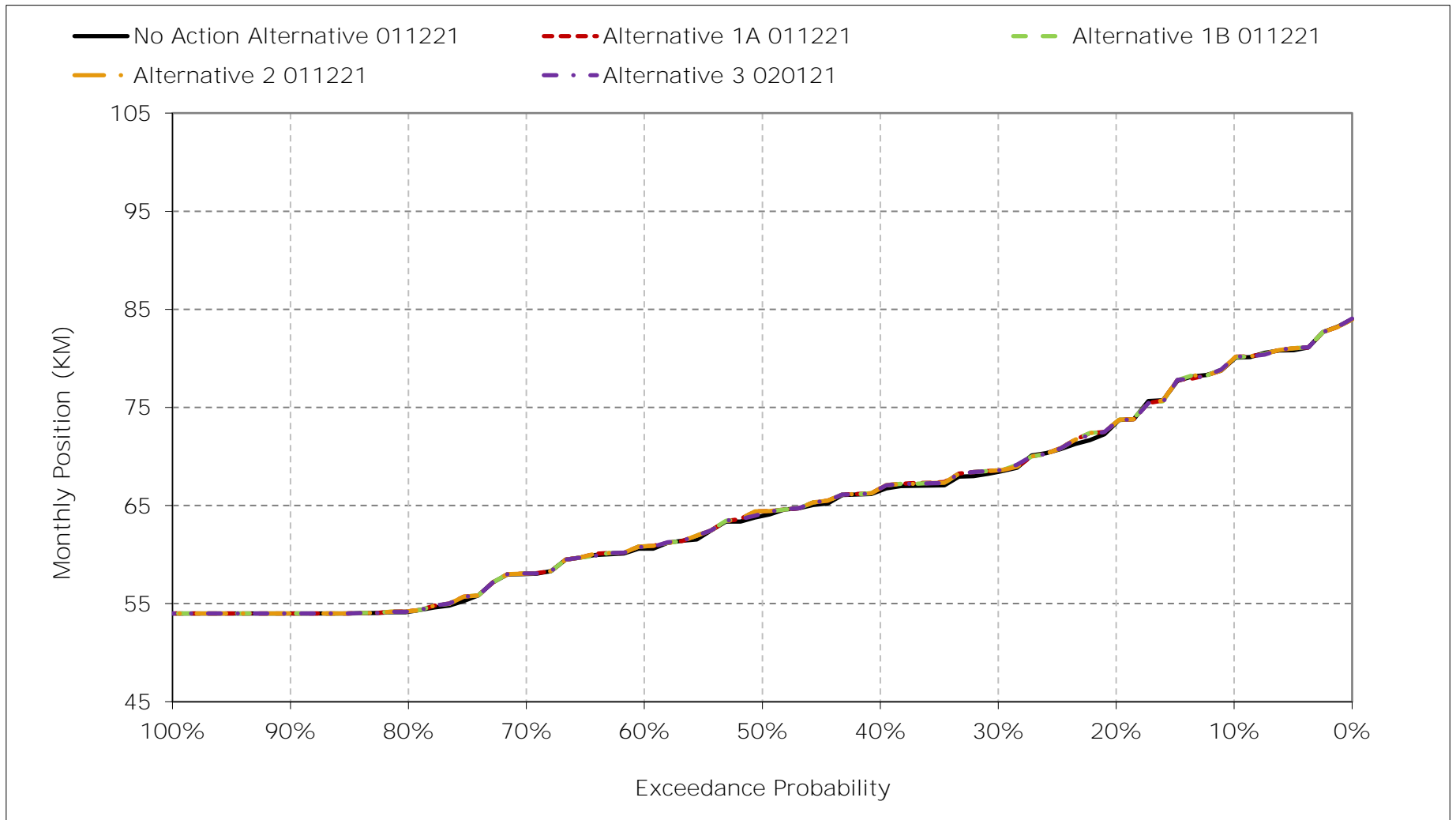
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

*Results are monthly averaged from DSM2.

Figure 6B3-1-11. X2, May Position
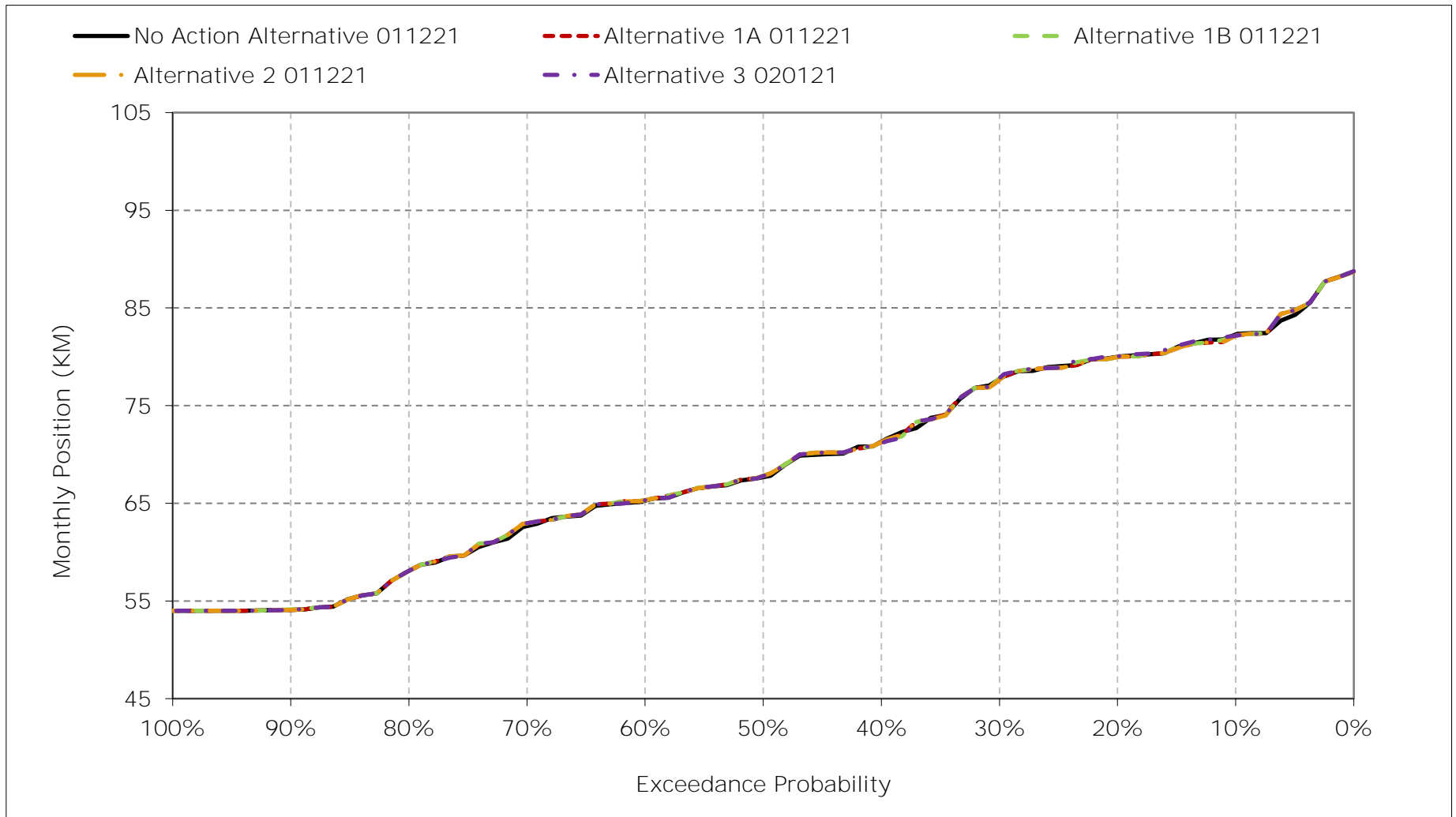
*All scenarios are simulated at current climate condition and 0 cm sea level rise.
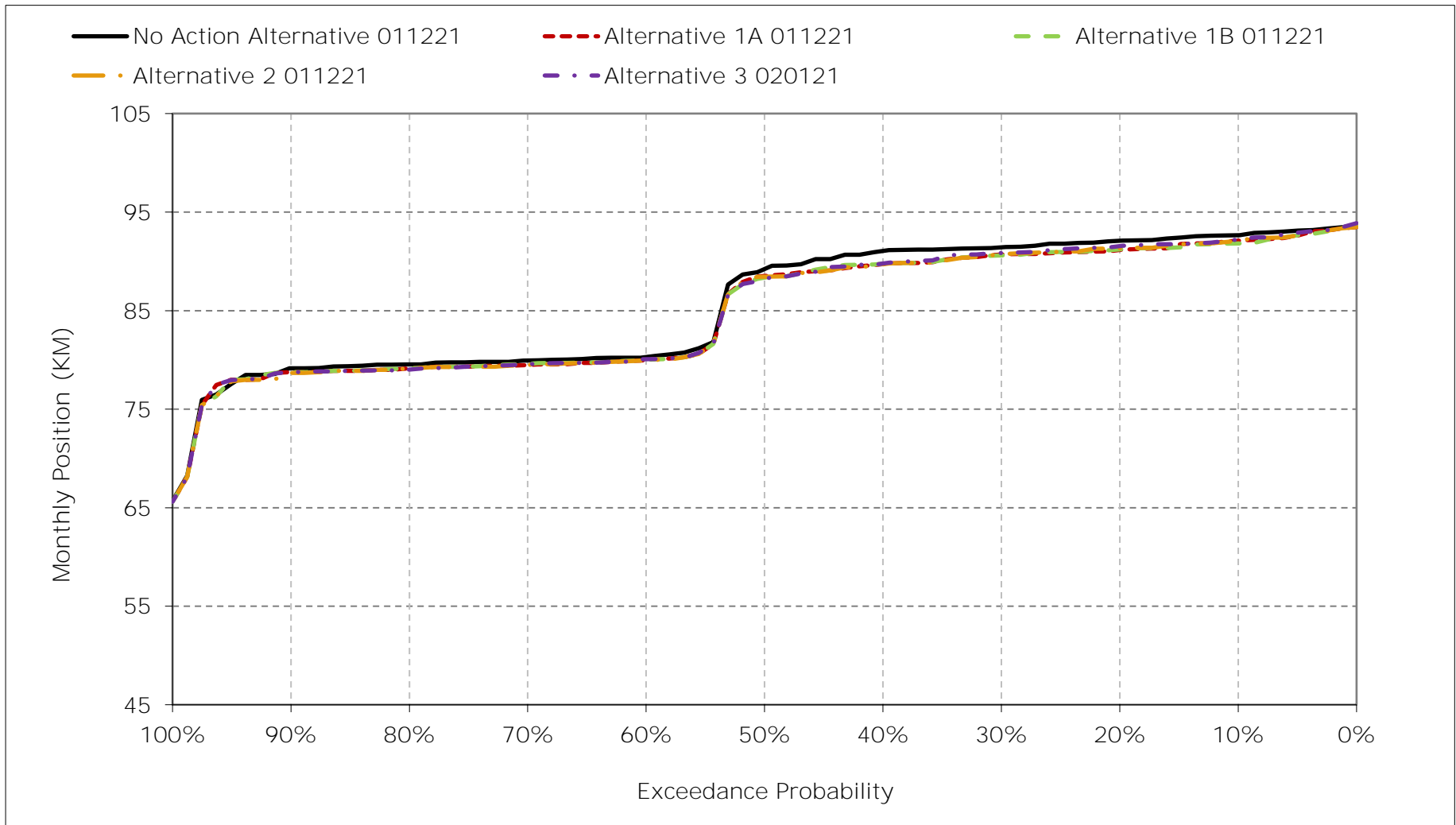
*Results are monthly averaged from DSM2.

Figure 6B3-1-12. X2, June Position
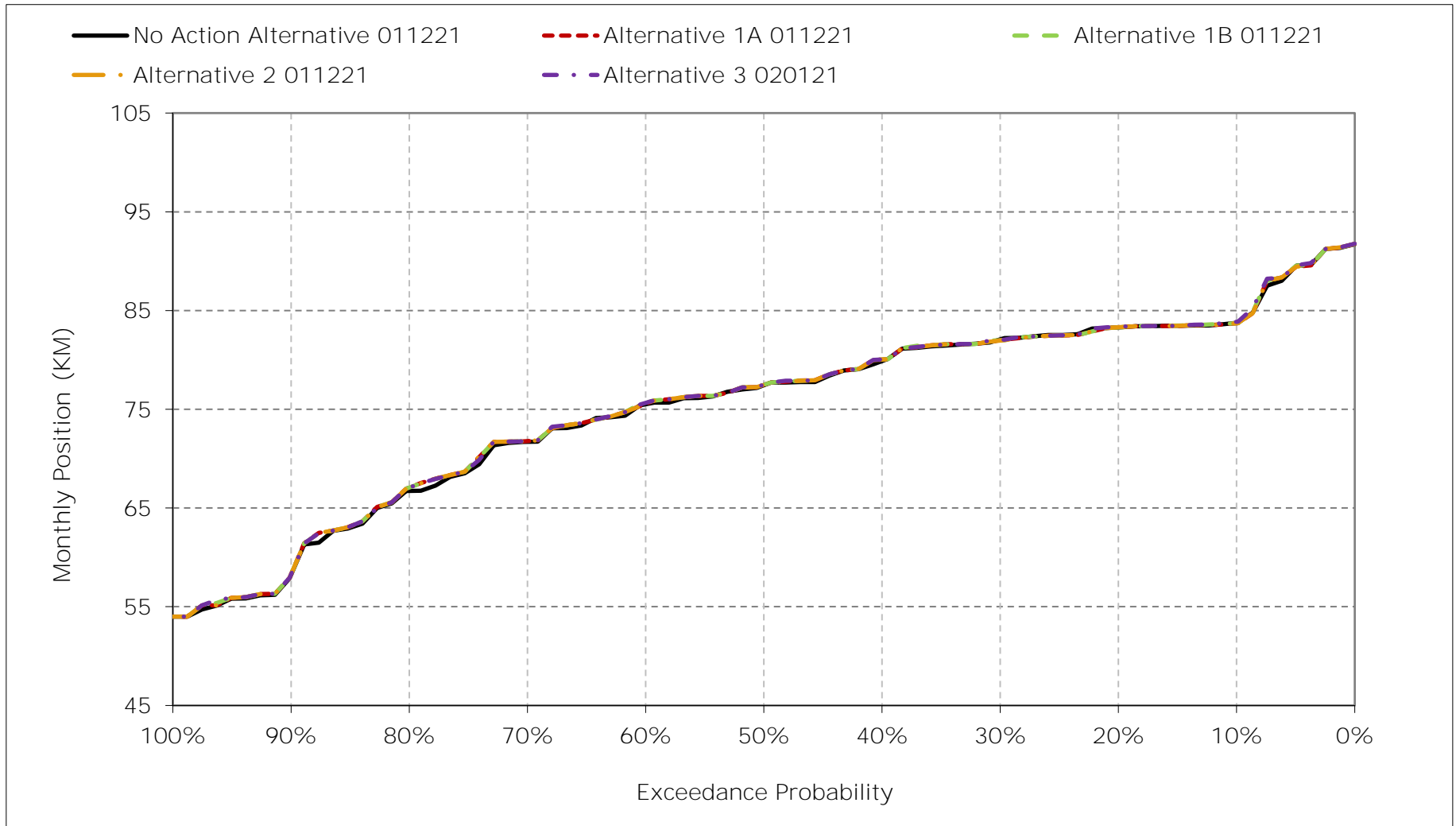
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

*Results are monthly averaged from DSM2.
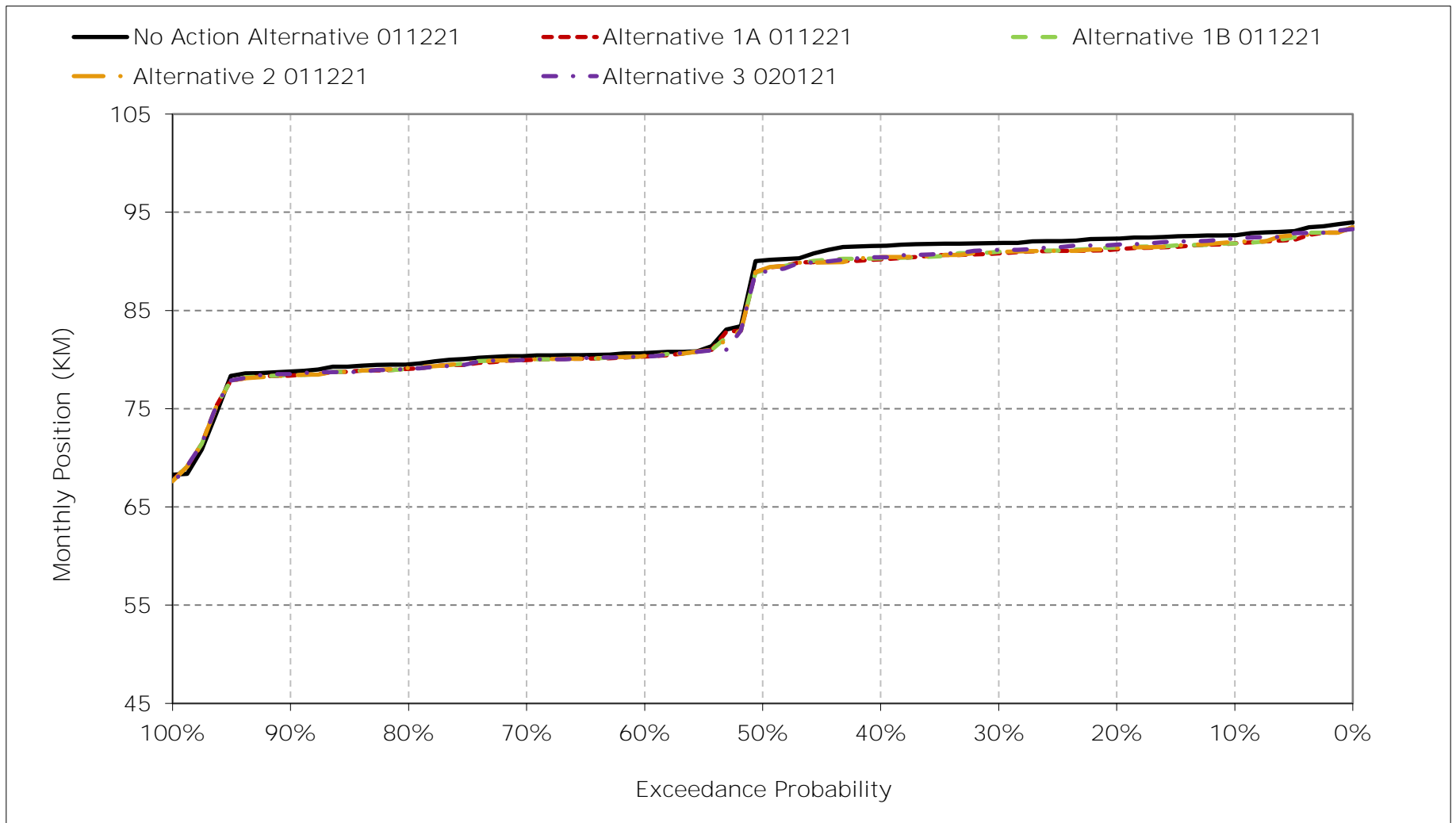
Figure 6B3-1-13. X2, July Position

*All scenarios are simulated at current climate condition and 0 cm sea level rise.

*Results are monthly averaged from DSM2.

Figure 6B3-1-14. X2, August Position

*All scenarios are simulated at current climate condition and 0 cm sea level rise.

*Results are monthly averaged from DSM2.

Figure 6B3-1-15. X2, September Position

*All scenarios are simulated at current climate condition and 0 cm sea level rise.

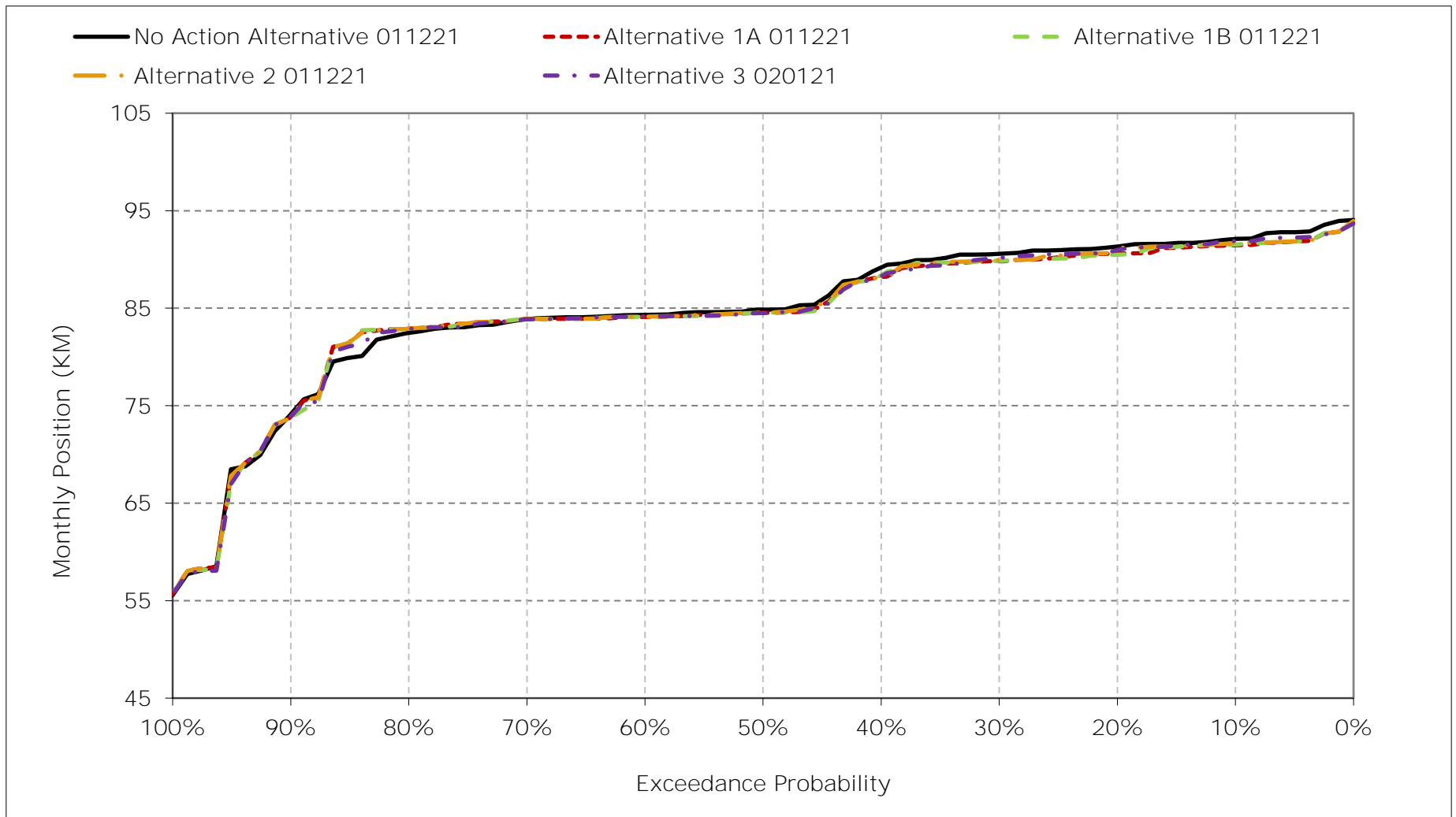*Results are monthly averaged from DSM2.

Figure 6B3-1-16. X2, October Position

Legend:
- No Action Alternative 011221
- Alternative 1A 011221
- Alternative 1B 011221
- Alternative 2 011221
- Alternative 3 020121

Y-axis: Monthly Position (KM)

X-axis: Exceedance Probability

*All scenarios are simulated at current climate condition and 0 cm sea level rise.

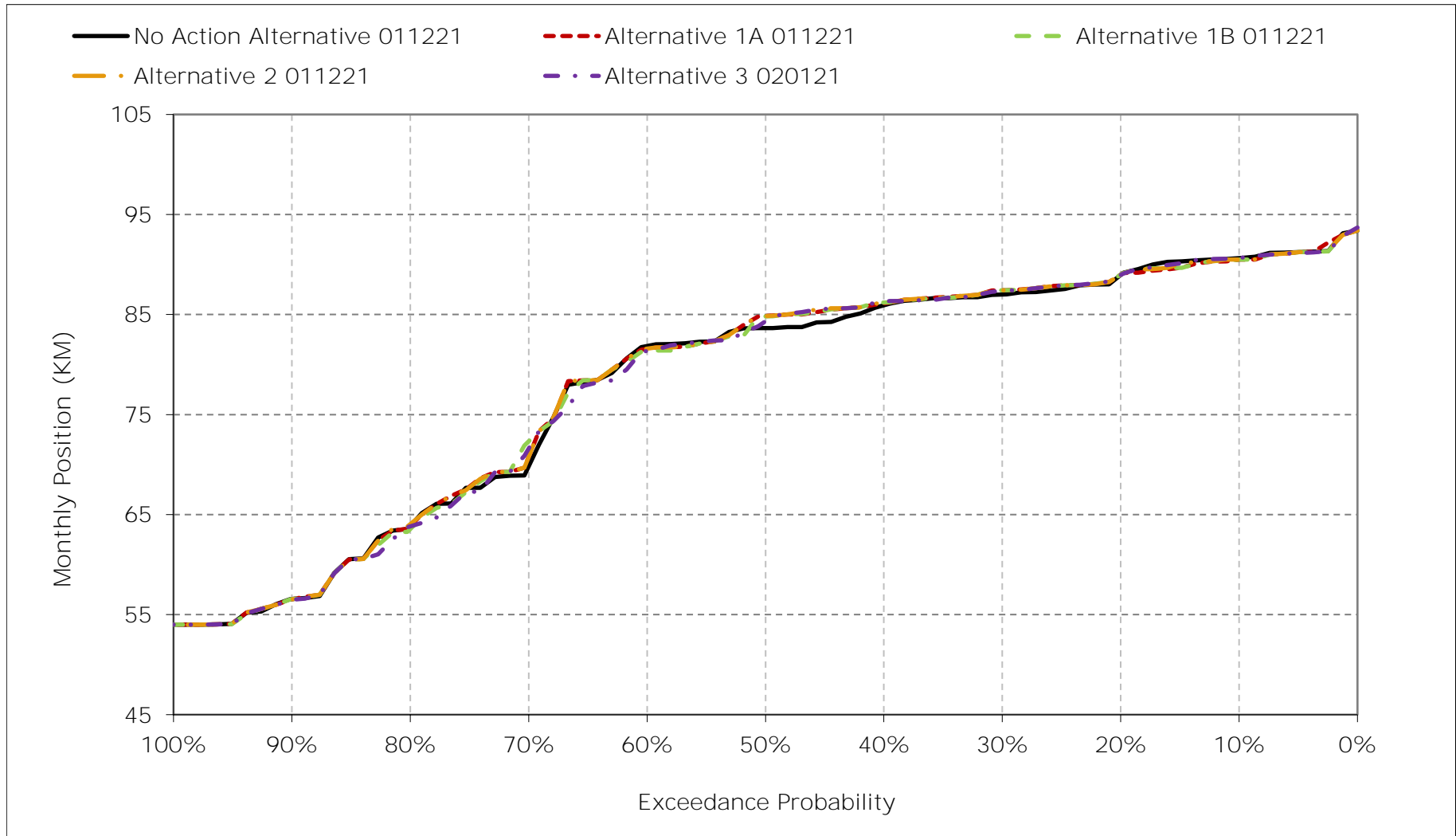*Results are monthly averaged from DSM2.

Figure 6B3-1-17. X2, November Position

*All scenarios are simulated at current climate condition and 0 cm sea level rise.

*Results are monthly averaged from DSM2.

Figure 6B3-1-18. X2, December Position

*All scenarios are simulated at current climate condition and 0 cm sea level rise.