Appendix 4L

Attachment 5: X2 Results (CalSim 3)

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Attachment 5: X2 Results (CalSim 3)

The following results of the CalSim 3 model are included for X2 position conditions for the following scenarios:

- Baseline Conditions (082624)
- Proposed Project ITP Spring Outflow (091224)

Title	Model Parameter	Table Numbers	Figure Numbers
X2 Position	X2_PRV	4L-5-1-1a to 4L-5-1-1c	4L-5-1a to 4L-5-1r

Report formats:

- Monthly tables comparing two scenarios (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 scenarios.
- Monthly exceedance charts (all months) including all scenarios.

Table 4L-5-1-1a. X2 Position, Baseline Conditions 082624, Monthly Distance (Km)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	93.9	92.7	90.7	86.0	79.8	77.4	78.6	82.1	87.0	90.1	91.8	92.9
20% Exceedance	92.4	91.9	89.0	83.3	74.4	71.6	75.6	78.6	82.3	85.6	89.1	91.6
30% Exceedance	91.8	90.7	87.4	81.1	68.0	66.0	71.5	76.6	81.2	85.2	88.3	90.4
40% Exceedance	91.0	90.1	86.4	73.2	65.1	64.0	67.9	72.8	80.6	83.3	87.1	89.8
50% Exceedance	89.5	88.0	84.5	69.4	60.8	61.7	64.0	69.0	77.7	82.5	85.8	88.5
60% Exceedance	80.1	85.4	80.0	65.2	57.0	57.4	61.5	65.9	76.2	80.2	83.9	80.1
70% Exceedance	80.0	84.5	72.0	59.0	54.3	55.3	60.1	62.8	70.2	78.3	82.5	80.0
80% Exceedance	80.0	83.5	63.4	53.9	52.7	52.9	55.0	58.3	64.4	75.4	82.0	79.9
90% Exceedance	79.9	77.0	56.9	52.2	51.7	51.8	53.0	54.8	59.7	72.3	80.4	79.7
Full Simulation Period Average[a]	86.1	86.1	78.3	69.1	63.3	62.5	65.6	69.1	75.0	80.9	85.2	85.6
Wet Water Years (32%)	84.0	82.5	67.8	56.6	53.2	53.5	56.2	58.9	64.5	73.1	79.7	78.0
Above Normal Water Years (9%)	85.6	86.3	78.1	61.4	57.0	56.7	60.5	63.9	70.7	78.0	83.1	80.0
Below Normal Water Years (20%)	85.5	86.8	82.2	71.8	63.4	61.4	64.6	68.4	76.9	82.2	85.8	88.5
Dry Water Years (21%)	86.4	87.0	82.5	77.9	69.6	68.0	71.8	75.8	81.1	85.2	88.4	90.8
Critical Water Years (18%)	90.2	90.7	87.7	82.0	76.9	76.2	78.7	82.8	86.6	89.6	91.8	92.9

Table 4L-5-1-1b. X2 Position, Proposed Project ITP Spring Outflow 091224, Monthly Distance (Km)

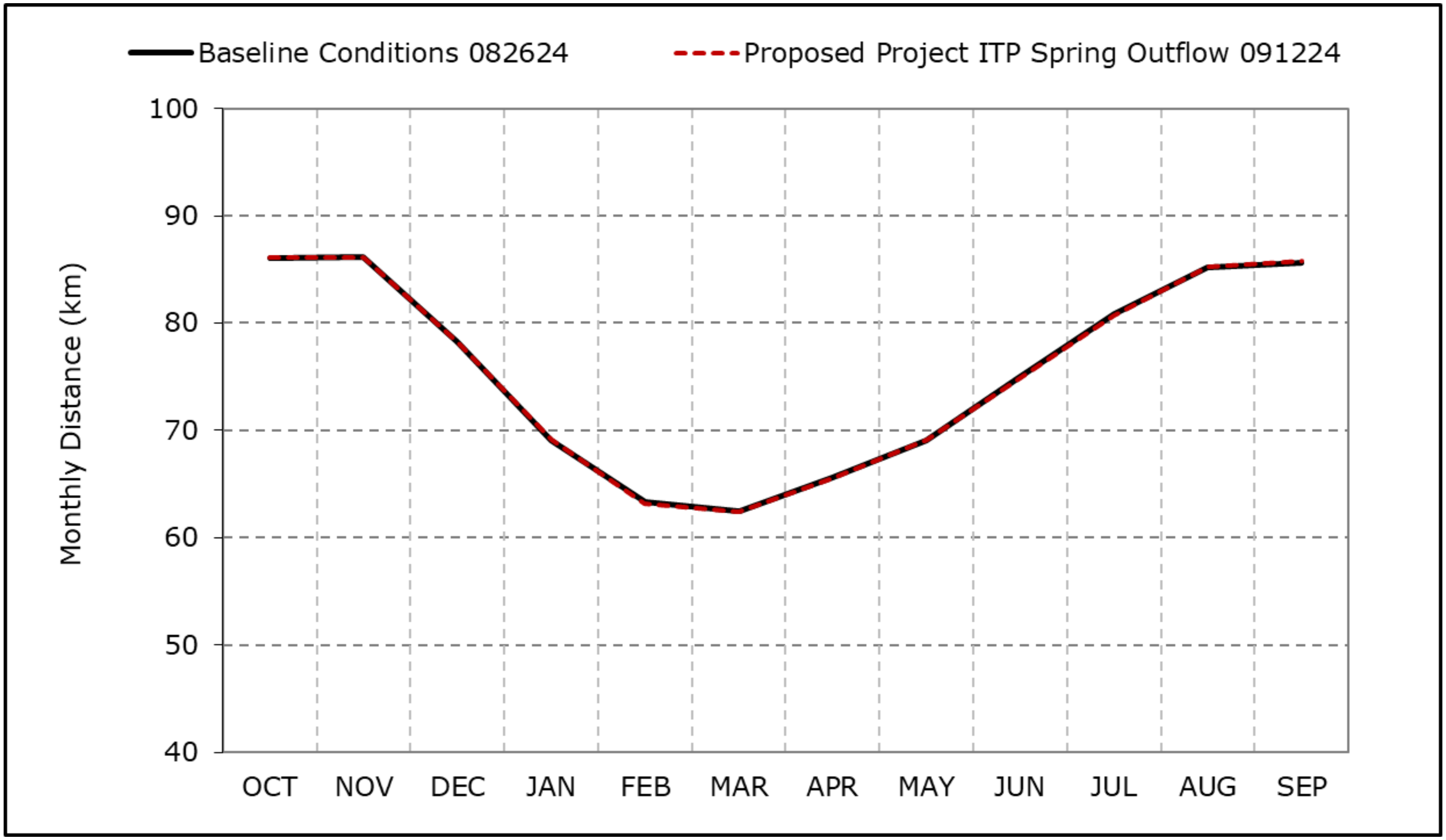
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	93.9	92.7	90.8	85.8	79.5	77.2	78.6	82.1	87.0	90.1	91.9	92.8
20% Exceedance	92.6	91.7	89.1	83.5	74.2	71.4	75.4	78.7	82.2	85.8	89.3	91.7
30% Exceedance	91.9	90.6	87.5	81.5	68.1	66.0	71.6	76.5	81.1	85.4	88.6	90.8
40% Exceedance	90.9	89.7	86.5	73.2	64.7	63.8	68.0	72.8	80.5	83.5	86.1	89.8
50% Exceedance	89.4	88.1	84.5	69.3	60.7	61.6	63.9	69.1	77.8	82.0	85.3	88.4
60% Exceedance	80.1	85.2	79.7	65.0	57.0	57.5	61.6	65.9	76.1	79.9	83.5	80.1
70% Exceedance	80.0	84.5	71.3	58.9	54.3	55.4	60.1	62.8	69.6	78.2	82.7	79.9
80% Exceedance	80.0	83.6	63.6	53.9	52.7	52.9	54.9	58.3	63.9	74.6	82.2	79.9
90% Exceedance	79.9	78.0	57.0	52.3	51.7	51.8	53.1	54.9	59.5	71.8	81.5	79.8
Full Simulation Period Average[a]	86.1	86.1	78.2	69.1	63.1	62.4	65.6	69.1	74.9	80.7	85.3	85.8
Wet Water Years (32%)	84.1	82.5	67.6	56.5	53.2	53.6	56.2	58.9	64.2	73.1	80.1	78.4
Above Normal Water Years (9%)	85.6	86.3	78.3	61.8	56.9	56.7	60.5	63.9	70.4	77.0	82.8	79.9
Below Normal Water Years (20%)	85.6	86.8	82.2	71.8	63.3	61.2	64.5	68.6	76.9	81.7	85.3	88.6
Dry Water Years (21%)	86.3	86.9	82.6	78.0	69.5	67.8	71.8	75.8	81.1	85.4	88.7	91.0
Critical Water Years (18%)	90.3	90.7	87.7	82.0	76.3	75.9	78.7	82.6	86.5	89.6	91.8	92.9

Table 4L-5-1-1c. X2 Position, Proposed Project ITP Spring Outflow 091224 minus Baseline Conditions 082624, Monthly Distance (Km)

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	0.0	0.0	0.1	-0.2	-0.3	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
20% Exceedance	0.1	-0.1	0.1	0.1	-0.3	-0.2	-0.1	0.1	0.0	0.2	0.2	0.1
30% Exceedance	0.0	0.0	0.1	0.4	0.1	0.0	0.1	0.0	0.0	0.2	0.3	0.4
40% Exceedance	-0.1	-0.5	0.1	0.0	-0.4	-0.2	0.0	0.0	-0.1	0.2	-1.0	0.0
50% Exceedance	-0.1	0.1	0.0	-0.1	-0.1	-0.1	0.0	0.1	0.1	-0.6	-0.5	-0.1
60% Exceedance	0.0	-0.2	-0.3	-0.2	-0.1	0.2	0.0	0.0	-0.1	-0.3	-0.4	0.0
70% Exceedance	0.0	0.0	-0.7	-0.1	0.0	0.1	0.0	0.0	-0.6	-0.1	0.2	-0.1
80% Exceedance	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	-0.5	-0.8	0.2	0.0
90% Exceedance	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.3	-0.5	1.1	0.0
Full Simulation Period Average[a]	0.1	0.0	0.0	0.0	-0.2	-0.1	0.0	0.0	-0.1	-0.2	0.0	0.2
Wet Water Years (32%)	0.1	-0.1	-0.2	-0.1	0.0	0.0	0.0	0.0	-0.3	-0.1	0.4	0.4
Above Normal Water Years (9%)	0.0	0.0	0.2	0.4	-0.1	0.1	0.0	0.1	-0.3	-1.1	-0.3	-0.1
Below Normal Water Years (20%)	0.1	0.0	-0.1	0.0	-0.1	-0.1	0.0	0.2	0.0	-0.5	-0.5	0.1
Dry Water Years (21%)	-0.1	-0.1	0.1	0.1	-0.1	-0.1	0.0	0.1	0.0	0.1	0.3	0.2
Critical Water Years (18%)	0.1	-0.1	0.0	0.0	-0.6	-0.3	-0.1	-0.2	-0.1	0.0	0.0	0.0

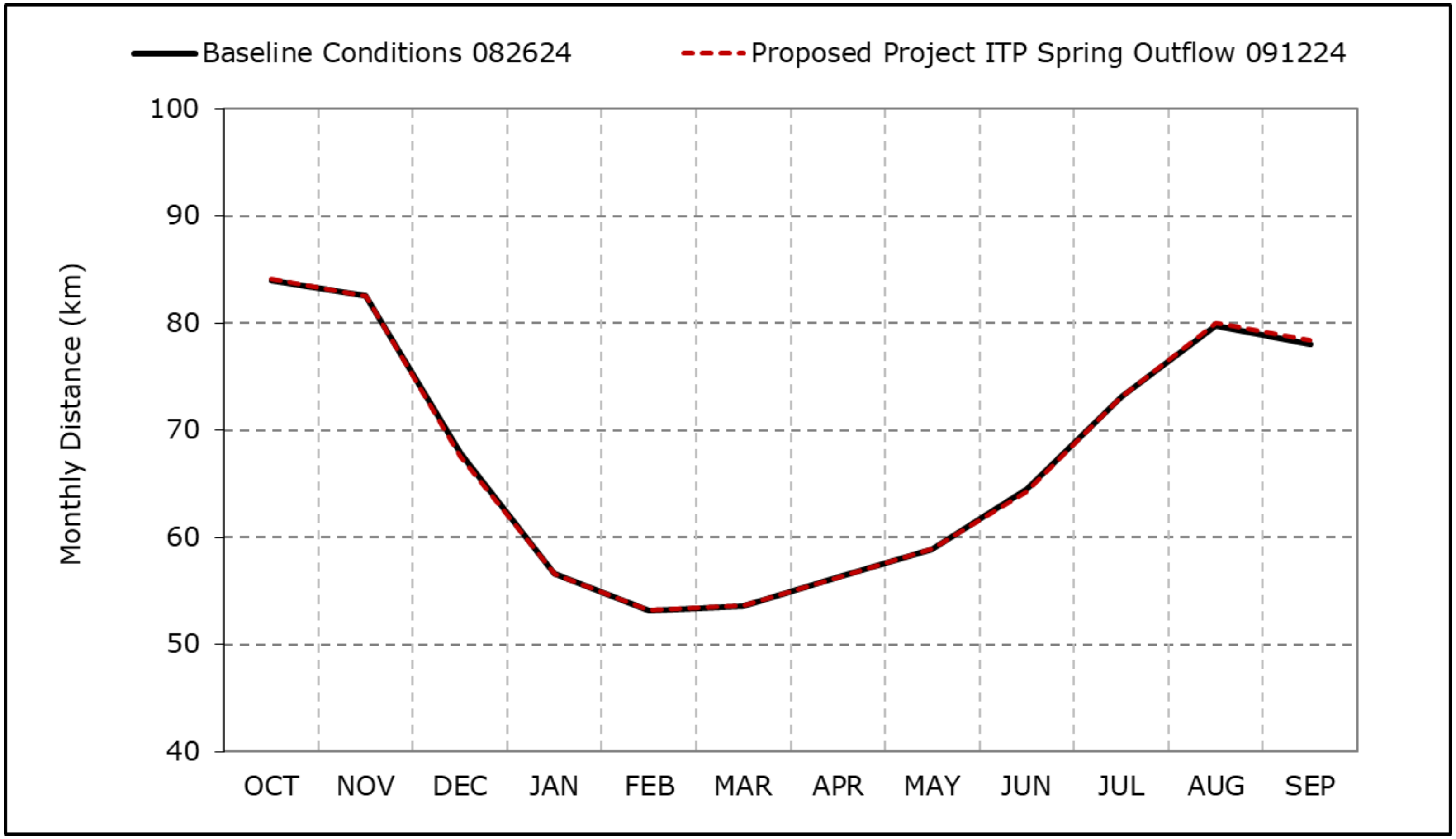
[a] Based on the 100-year simulation period.
* All scenarios are simulated at current climate condition and 0 cm sea level rise.
* Water Year Types defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
* Water Year Types results are displayed with water year - year type sorting.

Figure 4L-5-1a. X2 Position, Long-Term Average Distance



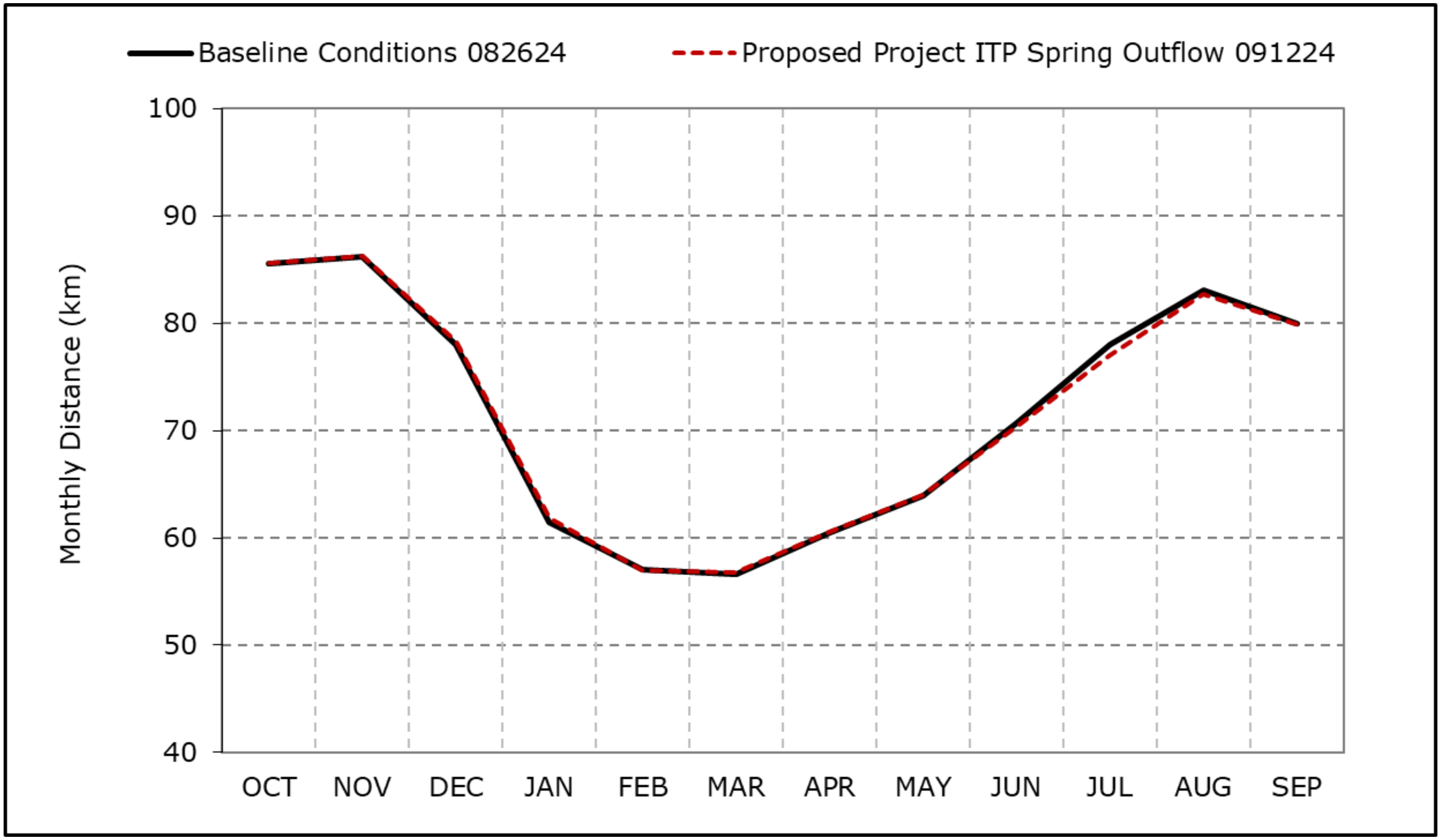
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4L-5-1b. X2 Position, Wet Year Average Distance



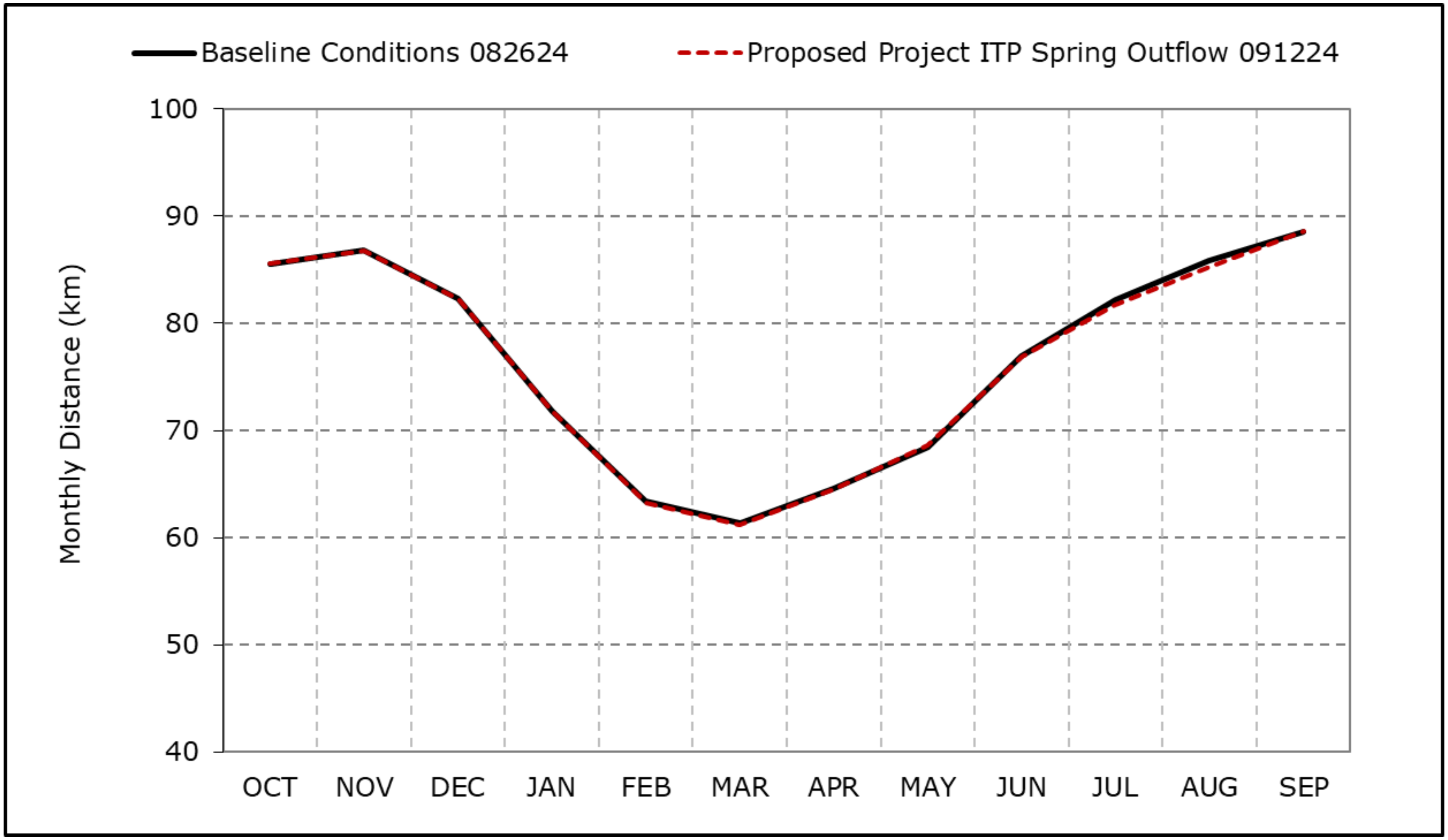
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4L-5-1c. X2 Position, Above Normal Year Average Distance



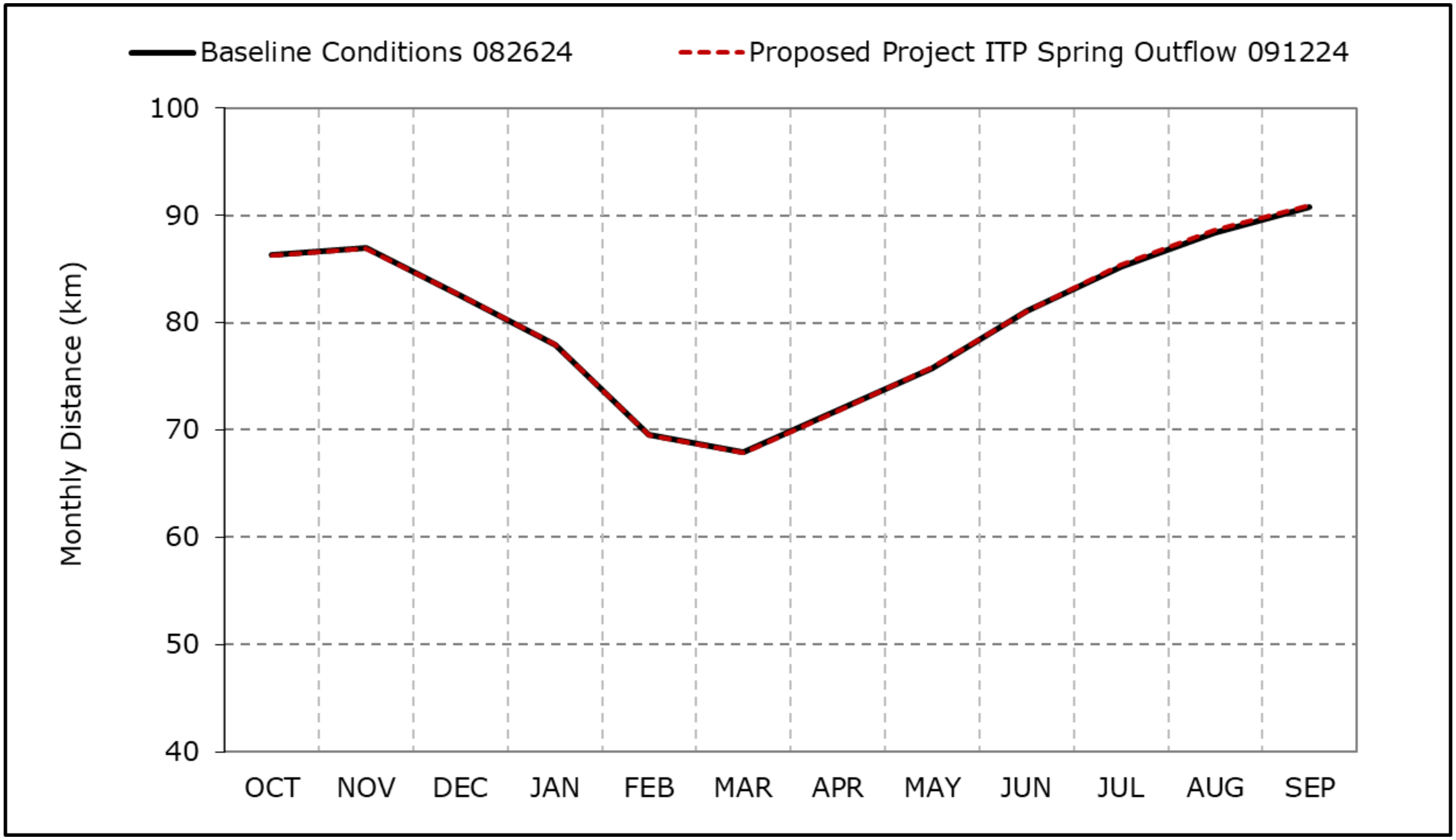
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4L-5-1d. X2 Position, Below Normal Year Average Distance



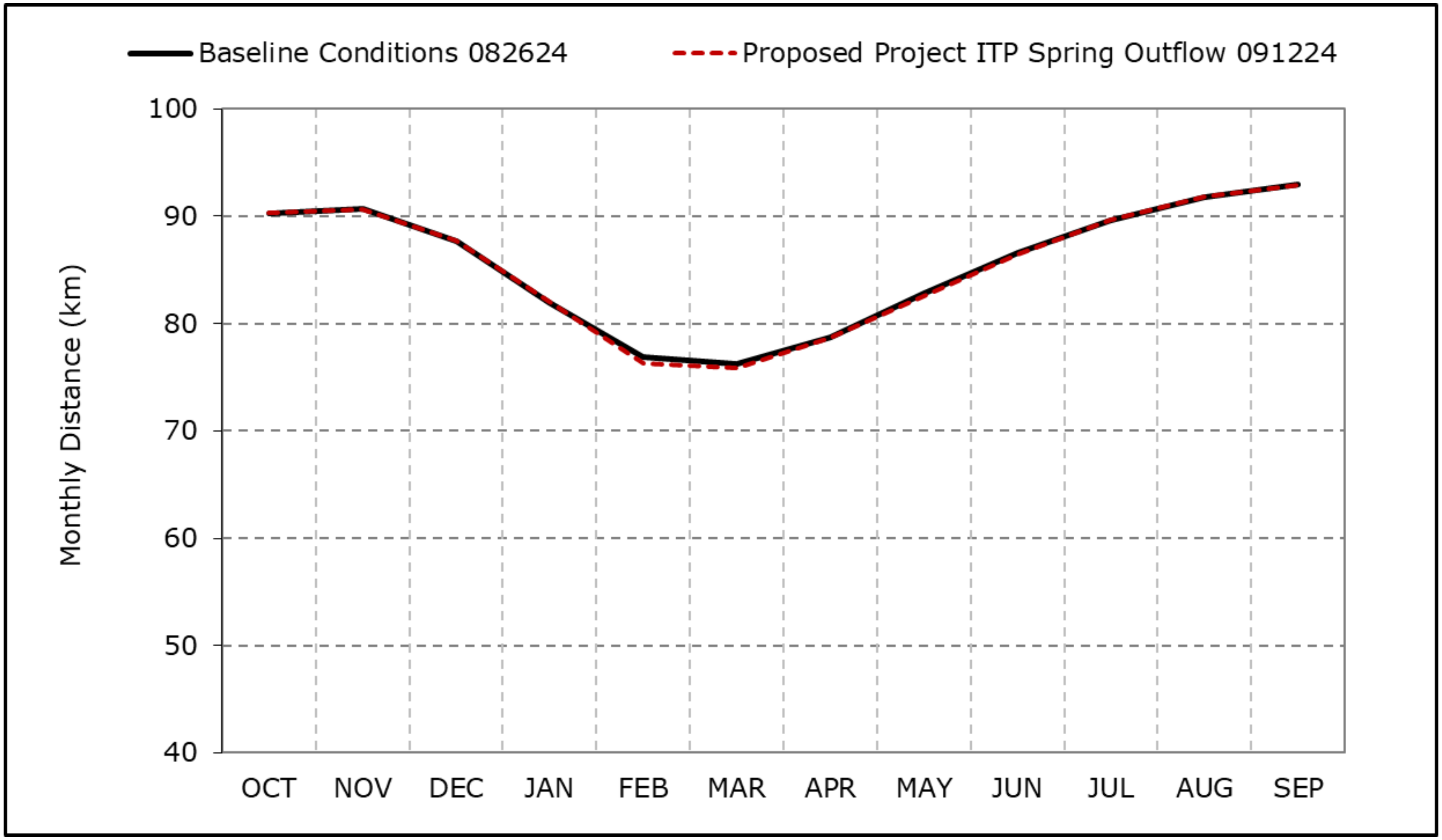
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4L-5-1e. X2 Position, Dry Year Average Distance



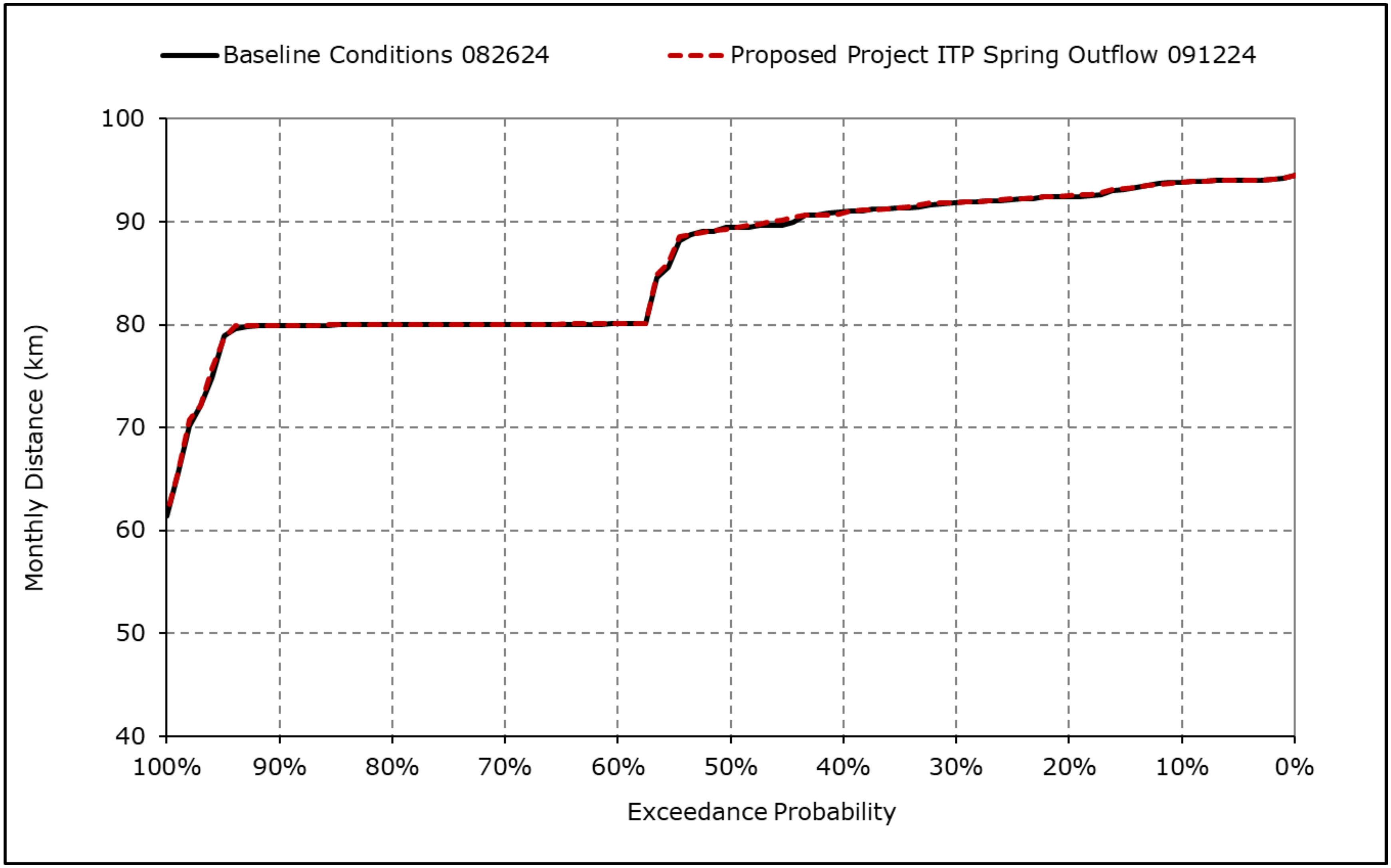
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4L-5-1f. X2 Position, Critical Year Average Distance



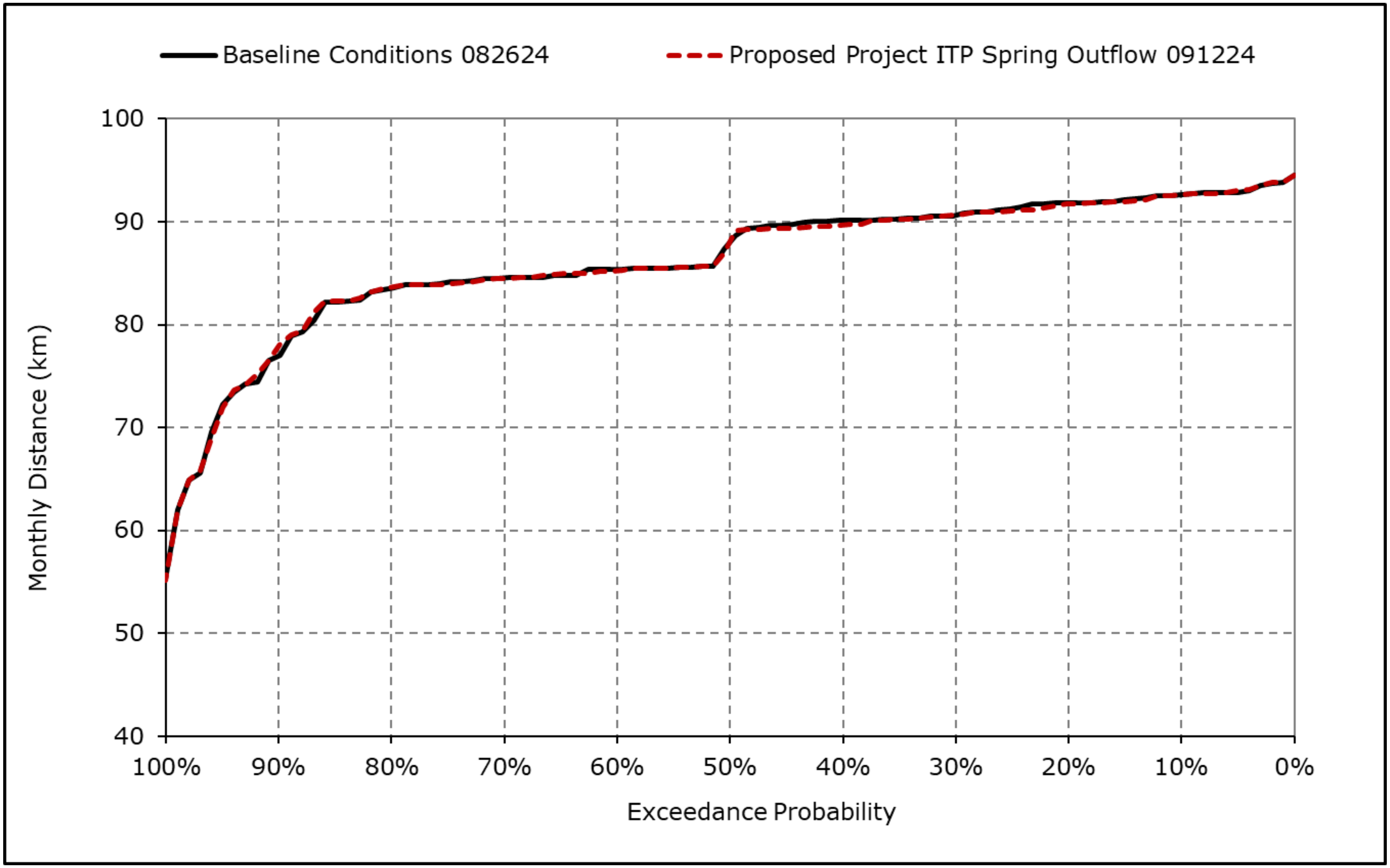
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4L-5-1g. X2 Position, October



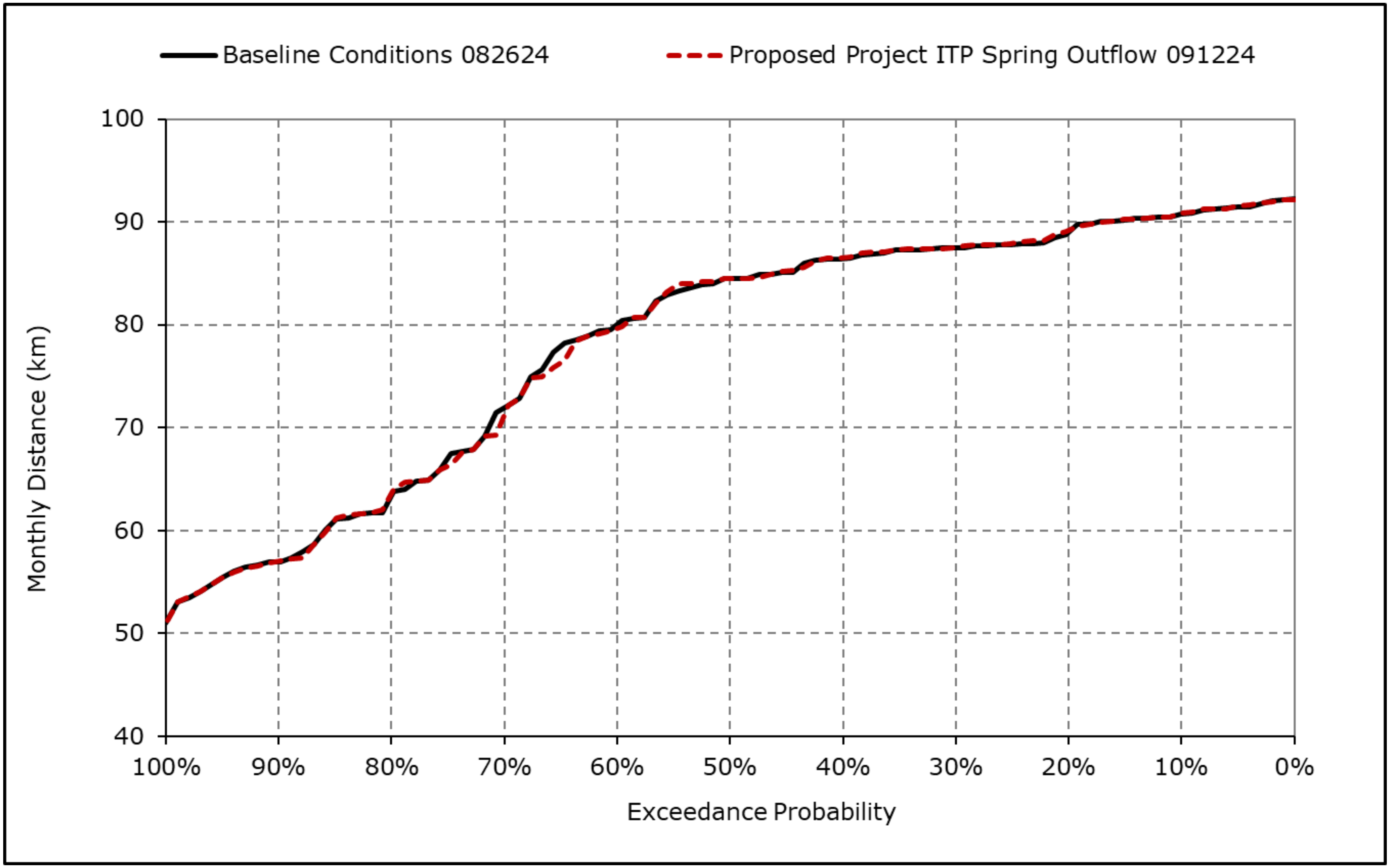
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4L-5-1h. X2 Position, November



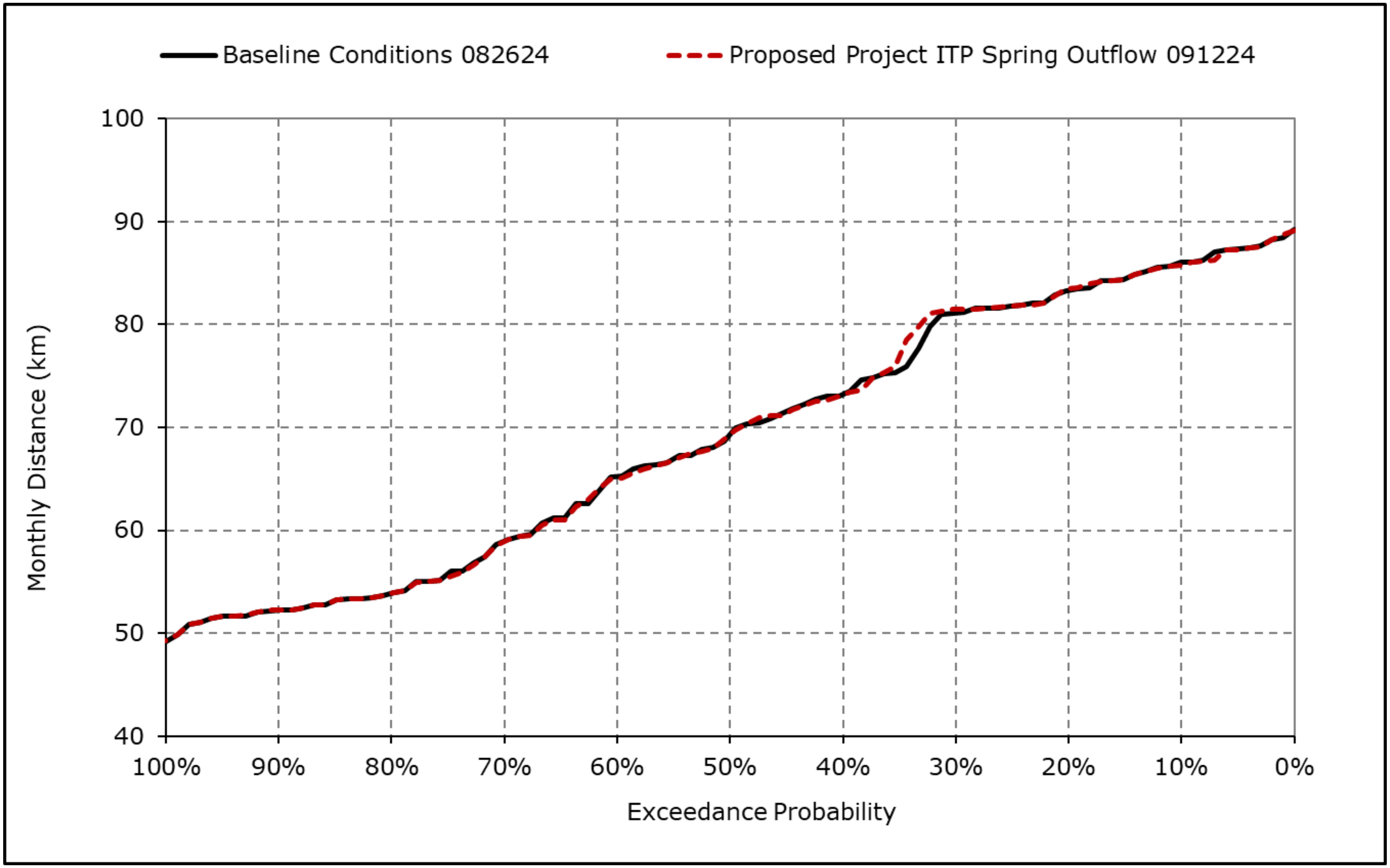
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4L-5-1i. X2 Position, December



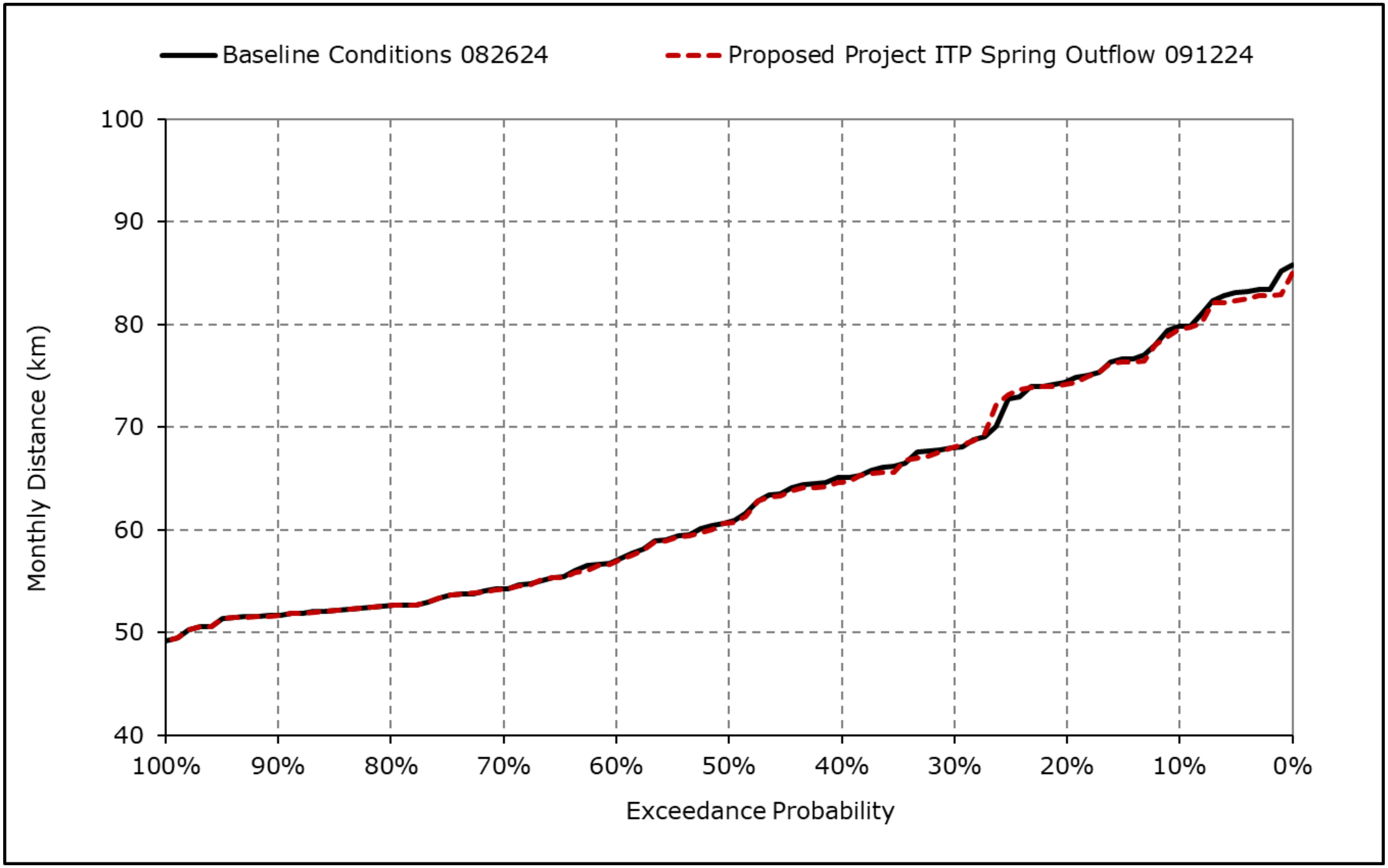
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4L-5-1j. X2 Position, January



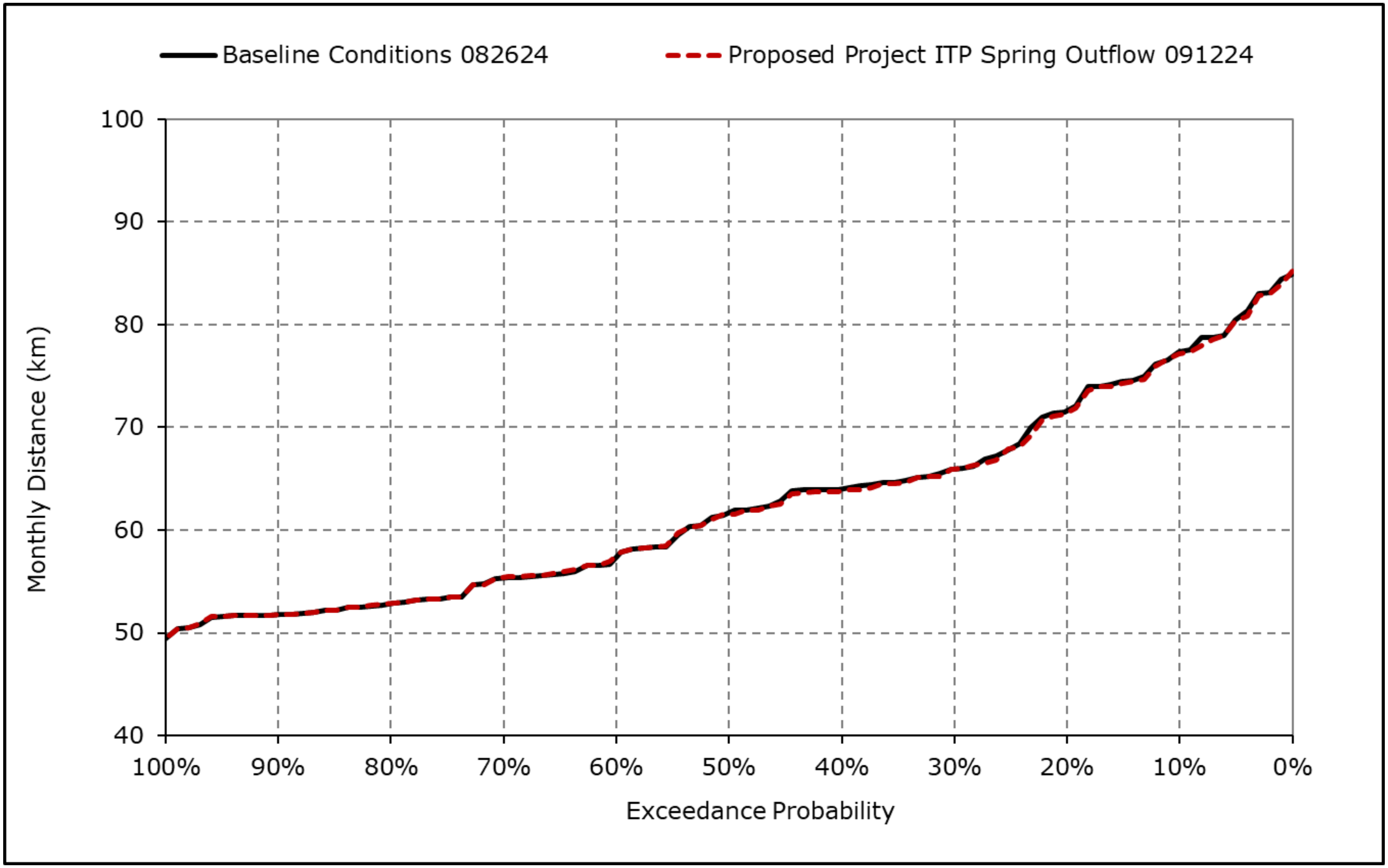
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4L-5-1k. X2 Position, February



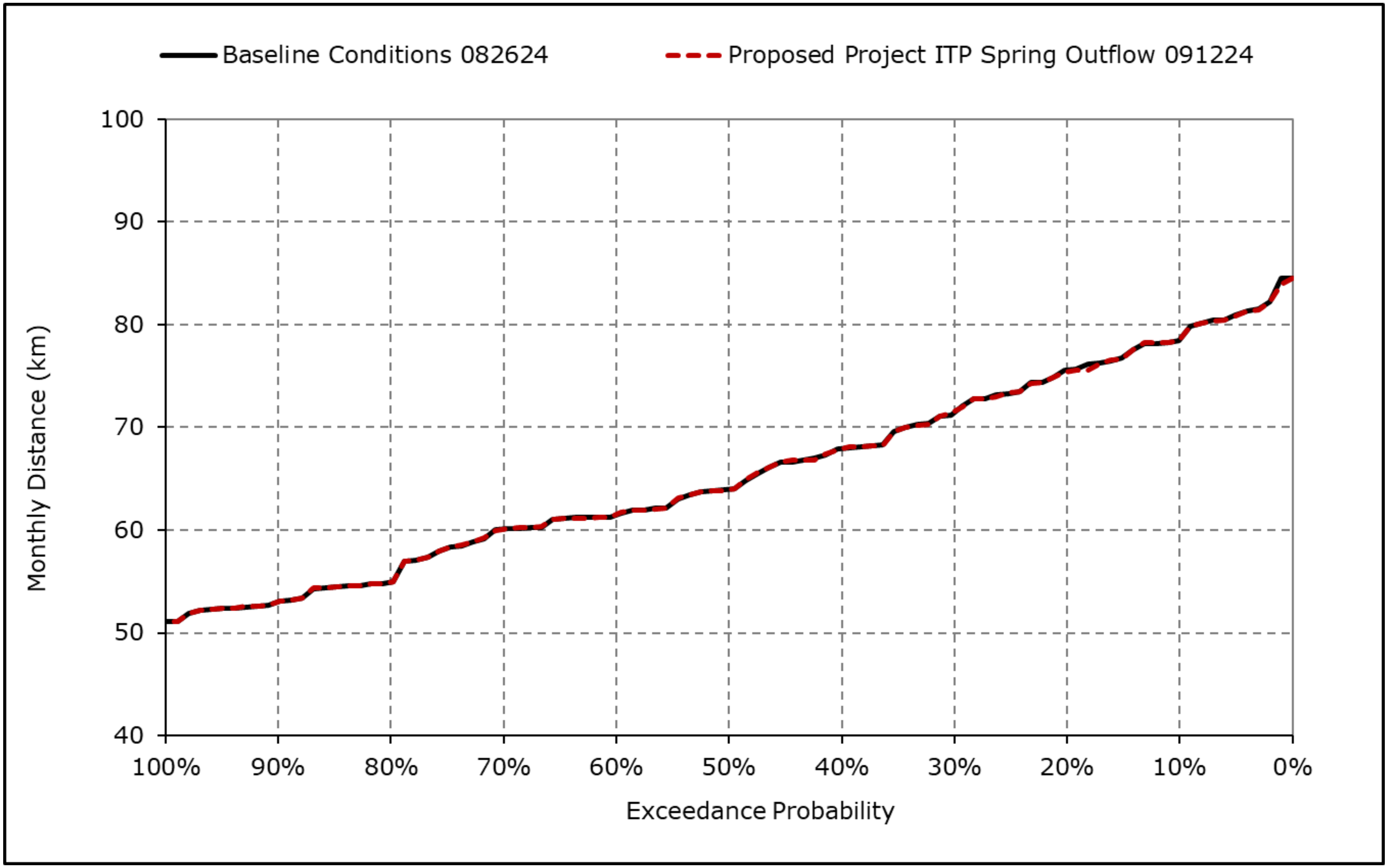
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4L-5-1l. X2 Position, March



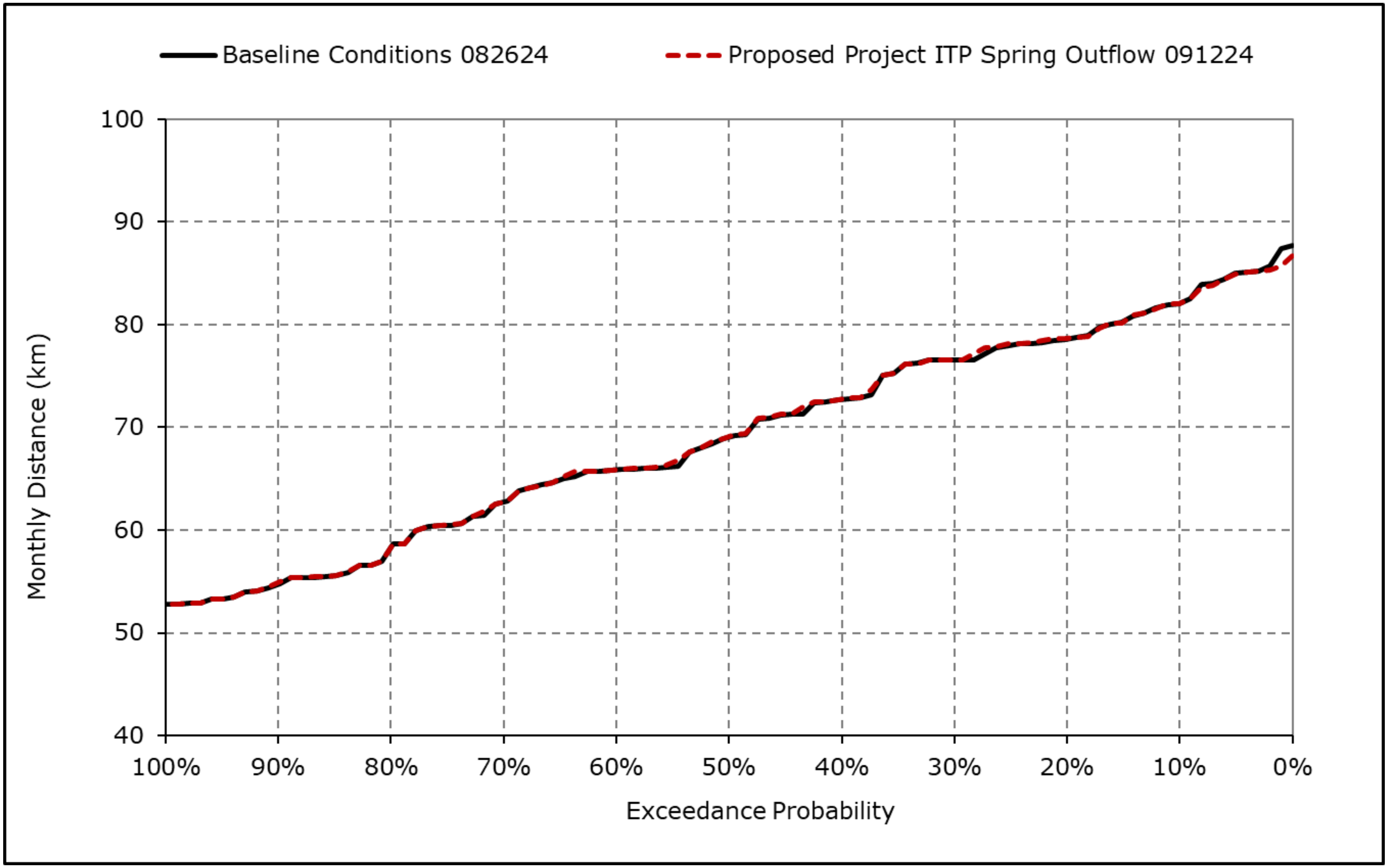
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4L-5-1m. X2 Position, April



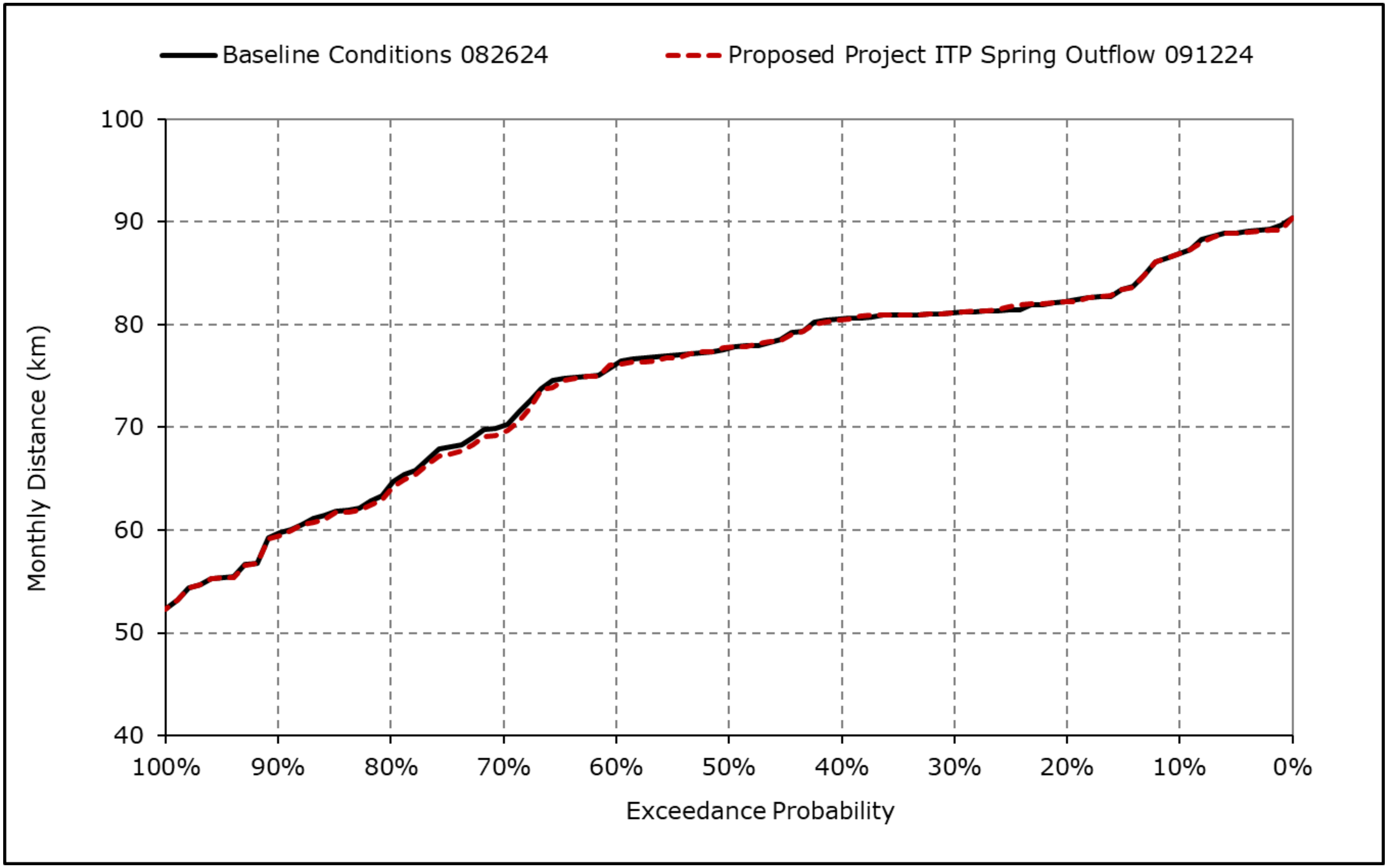
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4L-5-1n. X2 Position, May



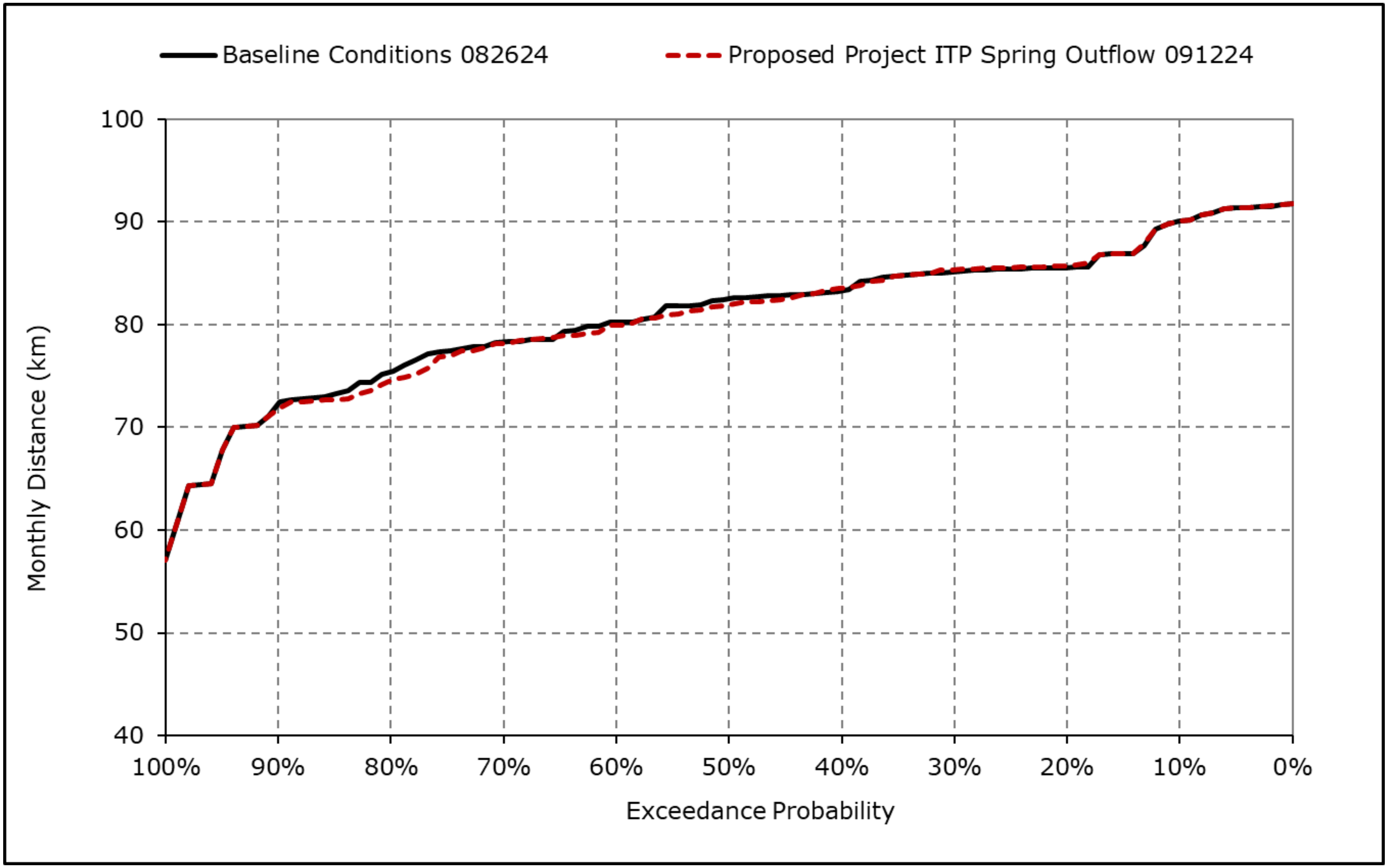
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4L-5-1o. X2 Position, June



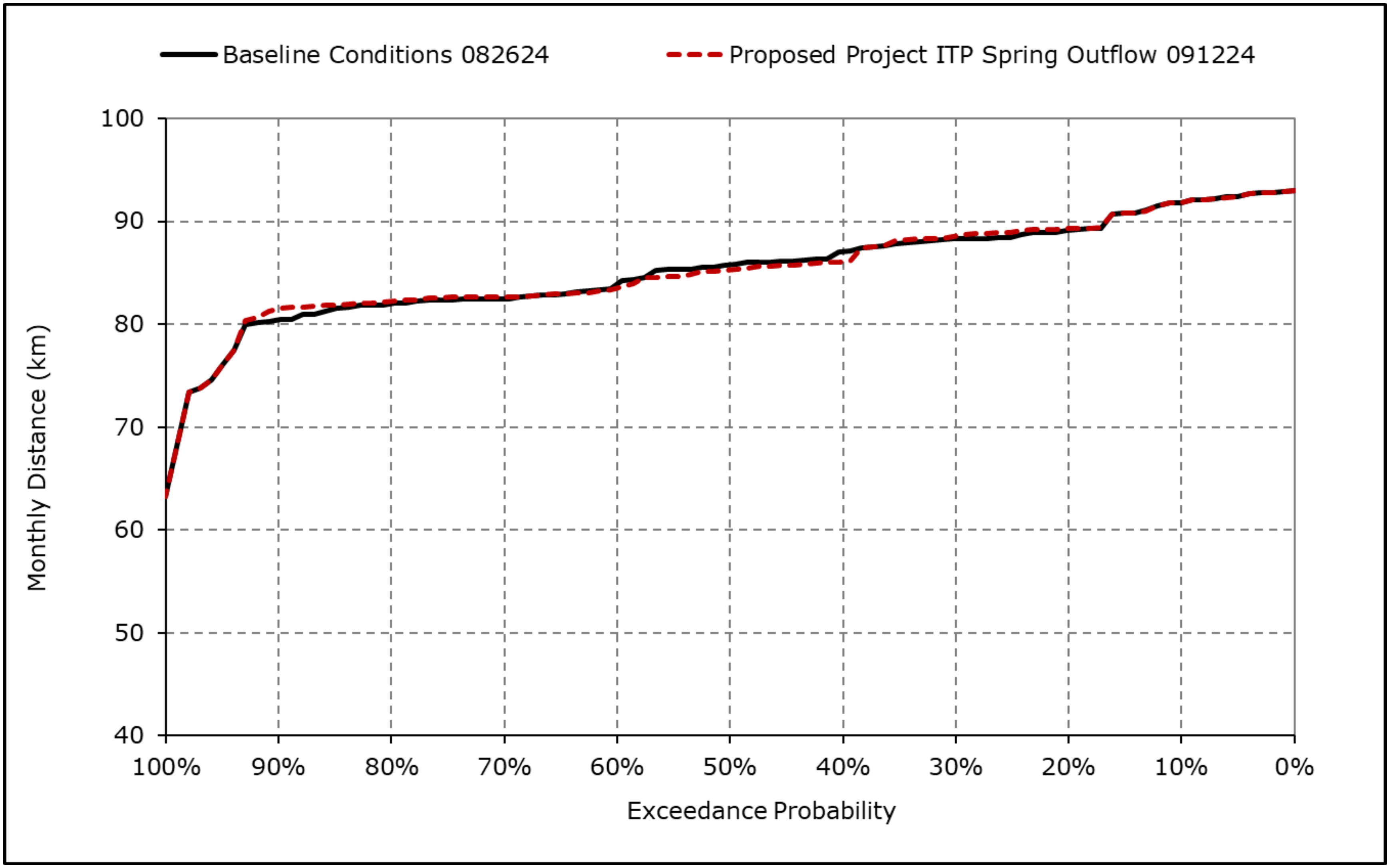
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4L-5-1p. X2 Position, July



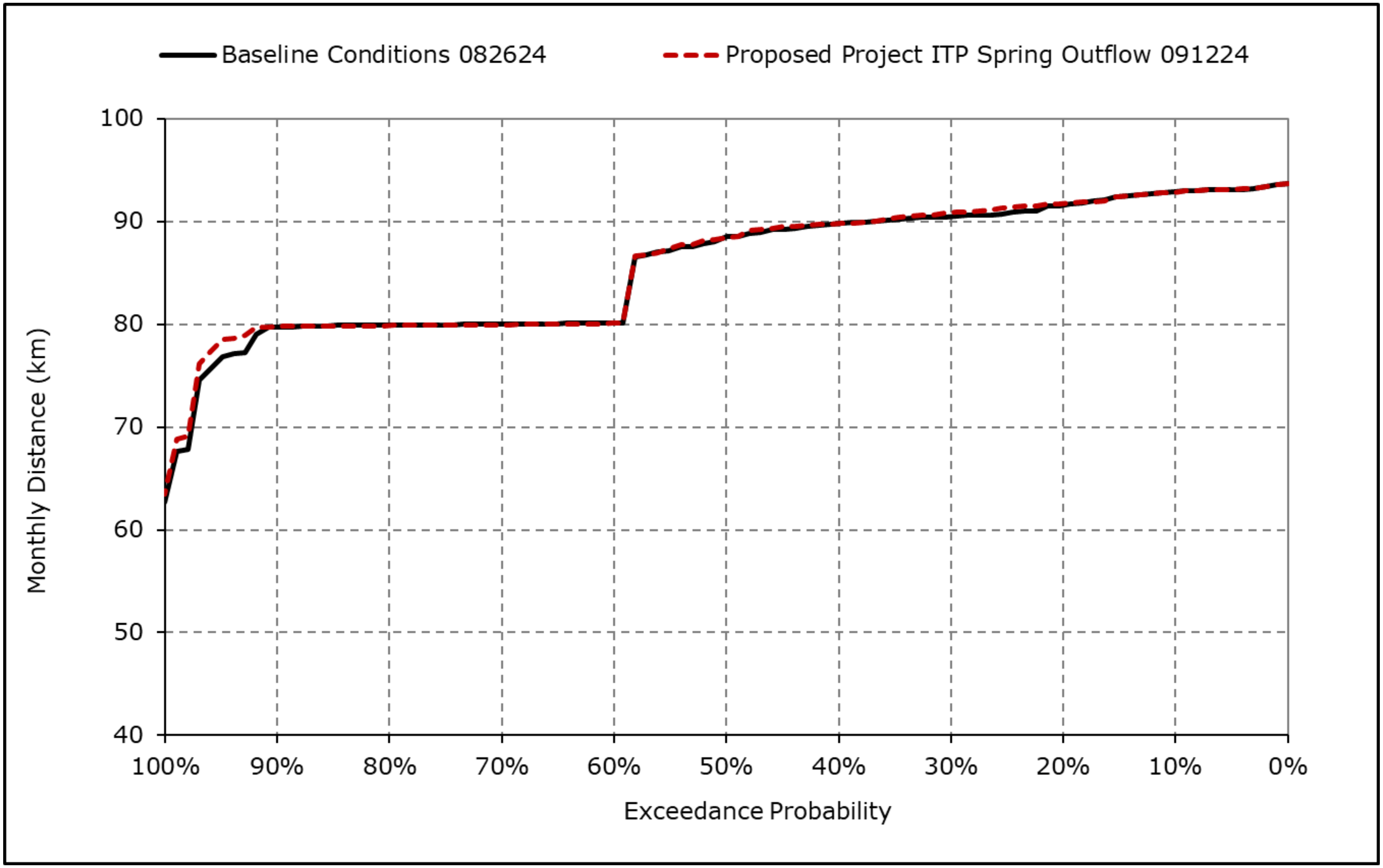
*All scenarios are simulated at current climate condition and 0 cm sea level rise.

Figure 4L-5-1q. X2 Position, August



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

Figure 4L-5-1r. X2 Position, September



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