

**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 051422
- Alternative 1A 051722
- Alternative 1B 051722
- Alternative 2 051722
- Alternative 3 051722

<b>Section</b>	<b>Output Parameters</b>	<b>Table Numbers</b>	<b>Figure Numbers</b>
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 051422, Monthly Position (KM)**

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	93	92	91	86	79	79	80	82	84	88	91	93
20% Exceedance	92	91	89	84	73	72	73	80	83	86	90	92
30% Exceedance	92	91	87	82	68	65	68	78	82	85	90	92
40% Exceedance	91	89	85	75	64	63	67	71	80	83	87	91
50% Exceedance	90	85	84	71	60	60	64	68	78	81	86	89
60% Exceedance	81	84	81	65	56	57	61	65	75	80	84	80
70% Exceedance	80	83	70	57	54	54	58	63	72	78	83	80
80% Exceedance	78	82	64	54	54	54	54	58	67	77	83	79
90% Exceedance	77	74	57	54	54	54	54	54	58	72	81	78
<b>Full Simulation Period Average<sup>a</sup></b>	85	85	78	70	63	63	65	69	75	80	86	85
<b>Wet Water Years (32%)</b>	78	79	75	58	55	55	57	59	65	74	81	78
<b>Above Normal (15%)</b>	80	82	77	65	58	56	59	63	72	78	83	80
<b>Below Normal (17%)</b>	90	85	76	73	62	63	65	69	77	82	86	90
<b>Dry Water Years (22%)</b>	92	89	79	79	70	68	71	76	82	85	90	92
<b>Critical Water (15%)</b>	93	92	88	84	77	77	79	84	87	90	91	93

**Table 6B3-1-1b. X2, Alternative 1A 051722, Monthly Position (KM)**

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	92.3	91.7	90.7	86.2	78.4	78.9	80.0	82.0	83.8	87.5	90.3	91.7
20% Exceedance	91.7	90.8	89.0	84.1	73.5	71.9	72.6	80.0	83.1	85.2	89.1	91.1
30% Exceedance	91.2	90.3	86.7	81.9	68.2	65.6	68.6	78.1	82.0	84.3	88.7	90.9
40% Exceedance	91.0	89.2	85.3	75.0	64.6	63.7	66.8	71.5	79.8	82.6	86.8	90.5
50% Exceedance	89.6	85.2	83.6	71.7	59.7	60.4	64.3	67.7	77.5	81.2	85.7	88.5
60% Exceedance	80.0	83.9	81.3	65.5	55.6	57.5	60.8	65.1	75.4	79.5	83.4	79.7
70% Exceedance	79.5	82.9	71.7	56.9	54.2	54.5	58.0	62.8	71.7	78.5	82.8	79.1
80% Exceedance	77.8	82.1	65.4	54.6	54.0	54.0	54.2	58.1	66.7	76.7	82.3	78.8
90% Exceedance	76.8	74.6	56.6	54.0	54.0	54.0	54.0	54.1	58.2	72.5	81.1	77.7
<b>Full Simulation Period Average<sup>a</sup></b>	85.0	84.6	78.4	70.0	63.3	62.8	64.9	69.0	75.2	80.3	85.1	84.9
<b>Wet Water Years (32%)</b>	77.4	79.0	75.2	57.8	54.8	55.5	56.8	59.4	65.4	73.6	80.6	77.3
<b>Above Normal (15%)</b>	79.8	82.1	77.3	65.1	57.8	55.9	58.9	63.2	72.4	78.0	82.6	79.2
<b>Below Normal (17%)</b>	89.2	85.3	76.3	73.0	62.0	63.3	65.1	69.3	77.1	81.5	86.0	89.7
<b>Dry Water Years (22%)</b>	91.4	88.7	79.0	79.3	70.5	67.9	70.7	76.4	81.8	84.8	88.9	91.0
<b>Critical Water (15%)</b>	92.3	92.1	87.8	84.0	77.5	77.1	79.1	84.0	87.0	89.2	90.8	92.2

**Table 6B3-1-1c. X2, Alternative 1A 051722 minus No Action Alternative 051422, Monthly Position (KM)**

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-0.6	-0.2	-0.3	0.4	-0.1	0.0	0.1	0.0	0.0	-0.1	-1.0	-0.9
20% Exceedance	-0.6	-0.6	0.0	-0.1	0.5	0.0	0.0	0.0	0.0	-0.5	-0.8	-0.9
30% Exceedance	-0.8	-0.6	0.0	-0.4	0.3	0.6	0.2	0.1	0.0	-0.4	-0.8	-0.7
40% Exceedance	-0.5	0.2	0.0	0.4	0.5	0.5	0.1	0.0	0.0	0.0	0.0	-0.7
50% Exceedance	-0.8	-0.2	-0.1	0.8	0.2	0.3	0.0	0.0	0.0	0.0	0.0	-0.5
60% Exceedance	-0.5	0.0	0.4	0.5	0.1	0.1	0.2	0.1	0.0	0.0	-0.2	-0.5
70% Exceedance	-0.5	-0.1	1.5	0.3	0.1	0.2	0.0	0.1	0.0	0.0	-0.3	-0.6
80% Exceedance	-0.5	-0.1	1.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	-0.7
90% Exceedance	-0.5	0.9	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	-0.6
<b>Full Simulation Period Average<sup>a</sup></b>	-0.4	0.0	0.2	0.2	0.2	0.2	0.1	0.0	0.0	-0.1	-0.4	-0.6
<b>Wet Water Years</b>	-0.3	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	-0.5
<b>Above Normal</b>	-0.4	-0.1	0.3	0.4	0.2	0.2	0.0	-0.1	0.0	0.0	-0.3	-0.5
<b>Below Normal</b>	-0.4	0.3	0.5	0.0	0.1	0.2	0.1	0.0	0.0	0.0	-0.2	-0.4
<b>Dry Water Years</b>	-0.8	-0.4	0.0	0.2	0.3	0.3	0.1	-0.1	0.0	-0.3	-0.8	-0.7
<b>Critical Water</b>	-0.3	-0.1	0.0	0.2	0.1	0.2	0.1	-0.1	-0.1	-0.3	-0.7	-0.7

<sup>a</sup> Based on the 82-year simulation period.

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

\* 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.

**Table 6B3-1-2a. X2, No Action Alternative 051422, Monthly Position (KM)**

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	93	92	91	86	79	79	80	82	84	88	91	93
20% Exceedance	92	91	89	84	73	72	73	80	83	86	90	92
30% Exceedance	92	91	87	82	68	65	68	78	82	85	90	92
40% Exceedance	91	89	85	75	64	63	67	71	80	83	87	91
50% Exceedance	90	85	84	71	60	60	64	68	78	81	86	89
60% Exceedance	81	84	81	65	56	57	61	65	75	80	84	80
70% Exceedance	80	83	70	57	54	54	58	63	72	78	83	80
80% Exceedance	78	82	64	54	54	54	54	58	67	77	83	79
90% Exceedance	77	74	57	54	54	54	54	54	58	72	81	78
<b>Full Simulation Period Average<sup>a</sup></b>	85	85	78	70	63	63	65	69	75	80	86	85
<b>Wet Water Years (32%)</b>	78	79	75	58	55	55	57	59	65	74	81	78
<b>Above Normal (15%)</b>	80	82	77	65	58	56	59	63	72	78	83	80
<b>Below Normal (17%)</b>	90	85	76	73	62	63	65	69	77	82	86	90
<b>Dry Water Years (22%)</b>	92	89	79	79	70	68	71	76	82	85	90	92
<b>Critical Water (15%)</b>	93	92	88	84	77	77	79	84	87	90	91	93

**Table 6B3-1-2b. X2, Alternative 1B 051722, Monthly Position (KM)**

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	92.4	91.7	90.7	86.2	78.4	78.9	80.1	82.0	83.8	87.5	90.3	91.7
20% Exceedance	91.7	91.0	89.0	84.1	73.6	71.9	72.7	80.0	83.1	85.2	89.3	91.2
30% Exceedance	91.2	90.4	86.8	81.9	68.2	65.7	68.6	77.7	82.0	84.3	88.7	90.9
40% Exceedance	90.9	89.3	85.2	75.0	64.6	63.7	66.8	71.6	79.6	82.6	86.8	90.5
50% Exceedance	89.7	84.9	83.6	71.7	59.7	60.4	64.2	67.7	77.6	81.2	85.7	88.6
60% Exceedance	80.0	83.9	81.1	65.8	55.6	57.6	60.8	65.0	75.4	79.4	83.4	79.7
70% Exceedance	79.4	82.9	71.6	56.9	54.2	54.5	58.0	62.4	71.7	78.5	82.8	79.2
80% Exceedance	77.5	82.1	65.1	54.7	54.0	54.0	54.2	58.1	66.7	76.7	82.3	78.9
90% Exceedance	76.8	75.8	56.6	54.0	54.0	54.0	54.0	54.1	58.2	72.5	81.1	77.2
<b>Full Simulation Period Average<sup>a</sup></b>	85.0	84.6	78.3	70.0	63.3	62.8	64.9	68.9	75.2	80.3	85.1	84.9
<b>Wet Water Years (32%)</b>	77.4	79.1	75.2	57.8	54.8	55.5	56.8	59.3	65.4	73.6	80.6	77.4
<b>Above Normal (15%)</b>	79.7	82.1	77.2	65.1	57.8	56.0	59.0	63.2	72.5	78.0	82.6	79.1
<b>Below Normal (17%)</b>	89.2	85.2	76.2	73.3	62.1	63.3	65.1	69.3	77.1	81.5	86.0	89.7
<b>Dry Water Years (22%)</b>	91.4	88.8	79.0	79.1	70.5	67.9	70.8	76.5	81.8	84.8	88.9	91.0
<b>Critical Water (15%)</b>	92.4	92.1	87.7	84.0	77.5	77.1	79.1	84.0	87.0	89.2	90.8	92.2

**Table 6B3-1-2c. X2, Alternative 1B 051722 minus No Action Alternative 051422, Monthly Position (KM)**

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-0.5	-0.2	-0.3	0.4	-0.1	0.0	0.2	0.0	0.0	-0.1	-1.0	-0.9
20% Exceedance	-0.6	-0.4	0.0	-0.1	0.6	0.0	0.1	0.0	0.0	-0.5	-0.6	-0.8
30% Exceedance	-0.8	-0.5	0.0	-0.3	0.3	0.8	0.2	-0.3	0.0	-0.4	-0.8	-0.7
40% Exceedance	-0.5	0.3	0.0	0.4	0.5	0.5	0.1	0.2	-0.2	0.0	0.0	-0.7
50% Exceedance	-0.6	-0.5	-0.1	0.8	0.2	0.3	0.0	0.0	0.0	0.0	0.0	-0.4
60% Exceedance	-0.5	0.0	0.2	0.7	0.1	0.2	0.2	0.0	0.0	-0.1	-0.2	-0.5
70% Exceedance	-0.5	-0.1	1.4	0.3	0.1	0.2	0.0	-0.3	0.0	0.0	-0.3	-0.5
80% Exceedance	-0.7	-0.1	1.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	-0.5
90% Exceedance	-0.4	2.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	-1.2
<b>Full Simulation Period Average<sup>a</sup></b>	-0.5	0.0	0.2	0.2	0.1	0.2	0.1	0.0	0.0	-0.1	-0.4	-0.6
<b>Wet Water Years</b>	-0.3	0.2	0.3	0.2	0.0	0.0	0.0	-0.1	0.0	0.0	-0.3	-0.5
<b>Above Normal</b>	-0.6	-0.2	0.2	0.4	0.2	0.2	0.0	-0.1	0.0	0.0	-0.3	-0.6
<b>Below Normal</b>	-0.4	0.3	0.5	0.3	0.2	0.2	0.1	0.0	0.0	0.0	-0.2	-0.4
<b>Dry Water Years</b>	-0.9	-0.3	0.0	0.0	0.3	0.4	0.1	0.0	0.0	-0.3	-0.7	-0.8
<b>Critical Water</b>	-0.2	0.0	0.0	0.2	0.1	0.2	0.1	0.0	0.0	-0.3	-0.6	-0.7

<sup>a</sup> Based on the 82-year simulation period.

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

\* 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.

**Table 6B3-1-3a. X2, No Action Alternative 051422, Monthly Position (KM)**

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	93	92	91	86	79	79	80	82	84	88	91	93
20% Exceedance	92	91	89	84	73	72	73	80	83	86	90	92
30% Exceedance	92	91	87	82	68	65	68	78	82	85	90	92
40% Exceedance	91	89	85	75	64	63	67	71	80	83	87	91
50% Exceedance	90	85	84	71	60	60	64	68	78	81	86	89
60% Exceedance	81	84	81	65	56	57	61	65	75	80	84	80
70% Exceedance	80	83	70	57	54	54	58	63	72	78	83	80
80% Exceedance	78	82	64	54	54	54	54	58	67	77	83	79
90% Exceedance	77	74	57	54	54	54	54	54	58	72	81	78
<b>Full Simulation Period Average<sup>a</sup></b>	<b>85</b>	<b>85</b>	<b>78</b>	<b>70</b>	<b>63</b>	<b>63</b>	<b>65</b>	<b>69</b>	<b>75</b>	<b>80</b>	<b>86</b>	<b>85</b>
<b>Wet Water Years (32%)</b>	<b>78</b>	<b>79</b>	<b>75</b>	<b>58</b>	<b>55</b>	<b>55</b>	<b>57</b>	<b>59</b>	<b>65</b>	<b>74</b>	<b>81</b>	<b>78</b>
<b>Above Normal (15%)</b>	<b>80</b>	<b>82</b>	<b>77</b>	<b>65</b>	<b>58</b>	<b>56</b>	<b>59</b>	<b>63</b>	<b>72</b>	<b>78</b>	<b>83</b>	<b>80</b>
<b>Below Normal (17%)</b>	<b>90</b>	<b>85</b>	<b>76</b>	<b>73</b>	<b>62</b>	<b>63</b>	<b>65</b>	<b>69</b>	<b>77</b>	<b>82</b>	<b>86</b>	<b>90</b>
<b>Dry Water Years (22%)</b>	<b>92</b>	<b>89</b>	<b>79</b>	<b>79</b>	<b>70</b>	<b>68</b>	<b>71</b>	<b>76</b>	<b>82</b>	<b>85</b>	<b>90</b>	<b>92</b>
<b>Critical Water (15%)</b>	<b>93</b>	<b>92</b>	<b>88</b>	<b>84</b>	<b>77</b>	<b>77</b>	<b>79</b>	<b>84</b>	<b>87</b>	<b>90</b>	<b>91</b>	<b>93</b>

**Table 6B3-1-3b. X2, Alternative 2 051722, Monthly Position (KM)**

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	92.1	91.7	90.7	86.1	78.4	78.9	80.0	82.0	83.8	87.5	90.3	91.8
20% Exceedance	91.7	90.8	89.0	84.1	73.5	71.9	72.6	80.0	83.1	85.3	89.1	91.1
30% Exceedance	91.2	90.3	86.7	81.9	68.2	65.6	68.6	78.1	82.0	84.3	88.7	90.9
40% Exceedance	91.0	89.2	85.2	75.0	64.6	63.7	66.8	71.5	79.8	82.6	86.7	90.5
50% Exceedance	89.5	85.2	83.6	71.7	59.7	60.4	64.3	67.7	77.5	81.2	85.7	88.5
60% Exceedance	80.0	83.9	81.3	65.6	55.6	57.5	60.8	65.1	75.4	79.5	83.3	79.7
70% Exceedance	79.4	82.9	71.7	56.9	54.2	54.5	58.0	62.8	71.7	78.5	82.8	79.1
80% Exceedance	77.7	82.1	65.4	54.6	54.0	54.0	54.2	58.1	66.7	76.7	82.3	78.9
90% Exceedance	76.8	74.6	56.6	54.0	54.0	54.0	54.0	54.1	58.2	72.5	81.1	77.7
<b>Full Simulation Period Average<sup>a</sup></b>	<b>85.0</b>	<b>84.6</b>	<b>78.4</b>	<b>70.0</b>	<b>63.3</b>	<b>62.8</b>	<b>64.9</b>	<b>69.0</b>	<b>75.2</b>	<b>80.3</b>	<b>85.1</b>	<b>84.9</b>
<b>Wet Water Years (32%)</b>	<b>77.4</b>	<b>79.0</b>	<b>75.2</b>	<b>57.8</b>	<b>54.8</b>	<b>55.5</b>	<b>56.8</b>	<b>59.4</b>	<b>65.4</b>	<b>73.6</b>	<b>80.6</b>	<b>77.3</b>
<b>Above Normal (15%)</b>	<b>79.8</b>	<b>82.1</b>	<b>77.3</b>	<b>65.1</b>	<b>57.8</b>	<b>55.9</b>	<b>58.9</b>	<b>63.2</b>	<b>72.4</b>	<b>78.0</b>	<b>82.6</b>	<b>79.2</b>
<b>Below Normal (17%)</b>	<b>89.2</b>	<b>85.3</b>	<b>76.3</b>	<b>73.0</b>	<b>62.0</b>	<b>63.3</b>	<b>65.1</b>	<b>69.3</b>	<b>77.1</b>	<b>81.5</b>	<b>86.0</b>	<b>89.7</b>
<b>Dry Water Years (22%)</b>	<b>91.4</b>	<b>88.7</b>	<b>79.0</b>	<b>79.3</b>	<b>70.5</b>	<b>67.9</b>	<b>70.7</b>	<b>76.4</b>	<b>81.8</b>	<b>84.8</b>	<b>88.9</b>	<b>91.1</b>
<b>Critical Water (15%)</b>	<b>92.3</b>	<b>92.1</b>	<b>87.7</b>	<b>84.0</b>	<b>77.5</b>	<b>77.1</b>	<b>79.1</b>	<b>84.0</b>	<b>87.0</b>	<b>89.2</b>	<b>90.7</b>	<b>92.1</b>

**Table 6B3-1-3c. X2, Alternative 2 051722 minus No Action Alternative 051422, Monthly Position (KM)**

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-0.8	-0.2	-0.3	0.2	-0.1	0.0	0.1	0.1	0.0	-0.1	-1.0	-0.8
20% Exceedance	-0.6	-0.7	0.0	-0.1	0.5	0.0	0.0	0.0	0.0	-0.5	-0.8	-0.9
30% Exceedance	-0.8	-0.6	0.0	-0.4	0.3	0.6	0.2	0.1	0.0	-0.4	-0.9	-0.7
40% Exceedance	-0.5	0.2	0.0	0.4	0.5	0.5	0.1	0.0	0.0	0.0	0.0	-0.7
50% Exceedance	-0.8	-0.2	-0.1	0.8	0.2	0.3	0.0	0.0	0.0	0.0	0.0	-0.5
60% Exceedance	-0.5	0.0	0.4	0.5	0.1	0.1	0.2	0.1	0.0	0.0	-0.2	-0.5
70% Exceedance	-0.6	-0.1	1.5	0.3	0.1	0.2	0.0	0.1	0.0	0.0	-0.3	-0.6
80% Exceedance	-0.5	-0.1	1.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	-0.6
90% Exceedance	-0.5	0.9	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	-0.6
<b>Full Simulation Period Average<sup>a</sup></b>	<b>-0.5</b>	<b>0.0</b>	<b>0.2</b>	<b>0.2</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.1</b>	<b>-0.5</b>	<b>-0.6</b>
<b>Wet Water Years</b>	<b>-0.3</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.3</b>	<b>-0.5</b>
<b>Above Normal</b>	<b>-0.5</b>	<b>-0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>0.2</b>	<b>0.2</b>	<b>0.0</b>	<b>-0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.3</b>	<b>-0.5</b>
<b>Below Normal</b>	<b>-0.4</b>	<b>0.3</b>	<b>0.5</b>	<b>0.0</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.2</b>	<b>-0.4</b>
<b>Dry Water Years</b>	<b>-0.8</b>	<b>-0.4</b>	<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.3</b>	<b>0.1</b>	<b>-0.1</b>	<b>0.0</b>	<b>-0.3</b>	<b>-0.8</b>	<b>-0.7</b>
<b>Critical Water</b>	<b>-0.3</b>	<b>-0.1</b>	<b>0.0</b>	<b>0.2</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.3</b>	<b>-0.7</b>	<b>-0.7</b>

<sup>a</sup> Based on the 82-year simulation period.

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

\* 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.

**Table 6B3-1-4a. X2, No Action Alternative 051422, Monthly Position (KM)**

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	93	92	91	86	79	79	80	82	84	88	91	93
20% Exceedance	92	91	89	84	73	72	73	80	83	86	90	92
30% Exceedance	92	91	87	82	68	65	68	78	82	85	90	92
40% Exceedance	91	89	85	75	64	63	67	71	80	83	87	91
50% Exceedance	90	85	84	71	60	60	64	68	78	81	86	89
60% Exceedance	81	84	81	65	56	57	61	65	75	80	84	80
70% Exceedance	80	83	70	57	54	54	58	63	72	78	83	80
80% Exceedance	78	82	64	54	54	54	54	58	67	77	83	79
90% Exceedance	77	74	57	54	54	54	54	54	58	72	81	78
<b>Full Simulation Period Average<sup>a</sup></b>	<b>85</b>	<b>85</b>	<b>78</b>	<b>70</b>	<b>63</b>	<b>63</b>	<b>65</b>	<b>69</b>	<b>75</b>	<b>80</b>	<b>86</b>	<b>85</b>
<b>Wet Water Years (32%)</b>	<b>78</b>	<b>79</b>	<b>75</b>	<b>58</b>	<b>55</b>	<b>55</b>	<b>57</b>	<b>59</b>	<b>65</b>	<b>74</b>	<b>81</b>	<b>78</b>
<b>Above Normal (15%)</b>	<b>80</b>	<b>82</b>	<b>77</b>	<b>65</b>	<b>58</b>	<b>56</b>	<b>59</b>	<b>63</b>	<b>72</b>	<b>78</b>	<b>83</b>	<b>80</b>
<b>Below Normal (17%)</b>	<b>90</b>	<b>85</b>	<b>76</b>	<b>73</b>	<b>62</b>	<b>63</b>	<b>65</b>	<b>69</b>	<b>77</b>	<b>82</b>	<b>86</b>	<b>90</b>
<b>Dry Water Years (22%)</b>	<b>92</b>	<b>89</b>	<b>79</b>	<b>79</b>	<b>70</b>	<b>68</b>	<b>71</b>	<b>76</b>	<b>82</b>	<b>85</b>	<b>90</b>	<b>92</b>
<b>Critical Water (15%)</b>	<b>93</b>	<b>92</b>	<b>88</b>	<b>84</b>	<b>77</b>	<b>77</b>	<b>79</b>	<b>84</b>	<b>87</b>	<b>90</b>	<b>91</b>	<b>93</b>

**Table 6B3-1-4b. X2, Alternative 3 051722, Monthly Position (KM)**

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	92.4	91.9	90.7	86.1	78.5	78.9	80.1	82.0	83.8	87.5	90.6	92.1
20% Exceedance	91.8	91.0	89.0	84.1	73.6	72.0	72.7	80.0	83.1	85.3	89.4	91.4
30% Exceedance	91.3	90.3	86.7	81.9	68.3	65.6	68.6	77.8	82.0	84.4	88.8	91.0
40% Exceedance	90.9	88.8	85.7	75.0	64.6	63.9	67.2	71.7	79.8	82.5	86.7	90.7
50% Exceedance	87.1	84.8	83.7	71.7	59.8	60.5	64.3	67.6	77.5	81.2	85.8	88.5
60% Exceedance	80.1	83.4	80.8	65.7	55.6	58.0	60.6	65.0	75.4	79.4	83.4	79.9
70% Exceedance	79.4	82.9	71.3	56.9	54.2	54.5	58.1	62.8	71.7	78.5	82.8	79.1
80% Exceedance	78.0	81.1	64.2	54.6	54.0	54.0	54.2	58.1	66.7	76.7	82.3	78.9
90% Exceedance	77.1	74.9	56.3	54.0	54.0	54.0	54.0	54.1	58.2	72.5	81.1	77.0
<b>Full Simulation Period Average<sup>a</sup></b>	<b>84.9</b>	<b>84.3</b>	<b>78.2</b>	<b>70.0</b>	<b>63.3</b>	<b>62.8</b>	<b>64.9</b>	<b>68.9</b>	<b>75.2</b>	<b>80.3</b>	<b>85.2</b>	<b>85.0</b>
<b>Wet Water Years (32%)</b>	<b>77.5</b>	<b>79.1</b>	<b>75.2</b>	<b>57.7</b>	<b>54.8</b>	<b>55.5</b>	<b>56.8</b>	<b>59.3</b>	<b>65.4</b>	<b>73.6</b>	<b>80.6</b>	<b>77.4</b>
<b>Above Normal (15%)</b>	<b>79.6</b>	<b>81.7</b>	<b>77.0</b>	<b>65.1</b>	<b>57.8</b>	<b>56.0</b>	<b>59.0</b>	<b>63.1</b>	<b>72.5</b>	<b>78.0</b>	<b>82.6</b>	<b>79.1</b>
<b>Below Normal (17%)</b>	<b>88.2</b>	<b>83.5</b>	<b>75.8</b>	<b>73.1</b>	<b>62.1</b>	<b>63.5</b>	<b>65.2</b>	<b>69.2</b>	<b>77.1</b>	<b>81.5</b>	<b>86.0</b>	<b>89.7</b>
<b>Dry Water Years (22%)</b>	<b>91.6</b>	<b>88.9</b>	<b>78.8</b>	<b>79.3</b>	<b>70.5</b>	<b>67.9</b>	<b>70.7</b>	<b>76.5</b>	<b>81.8</b>	<b>84.8</b>	<b>89.0</b>	<b>91.1</b>
<b>Critical Water (15%)</b>	<b>92.5</b>	<b>92.1</b>	<b>87.6</b>	<b>84.0</b>	<b>77.5</b>	<b>77.1</b>	<b>79.1</b>	<b>84.0</b>	<b>87.1</b>	<b>89.2</b>	<b>90.9</b>	<b>92.5</b>

**Table 6B3-1-4c. X2, Alternative 3 051722 minus No Action Alternative 051422, Monthly Position (KM)**

Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
10% Exceedance	-0.5	0.0	-0.3	0.3	0.0	0.0	0.2	0.0	0.0	-0.1	-0.8	-0.5
20% Exceedance	-0.4	-0.5	0.0	-0.1	0.6	0.1	0.1	0.0	0.0	-0.5	-0.5	-0.6
30% Exceedance	-0.7	-0.6	0.0	-0.4	0.4	0.6	0.2	-0.3	0.0	-0.3	-0.7	-0.5
40% Exceedance	-0.6	-0.3	0.5	0.4	0.5	0.7	0.5	0.2	0.0	-0.1	-0.1	-0.5
50% Exceedance	-3.2	-0.6	0.0	0.8	0.3	0.3	0.0	0.0	0.0	0.0	0.1	-0.5
60% Exceedance	-0.4	-0.5	0.0	0.6	0.1	0.5	0.0	0.0	0.0	-0.1	-0.2	-0.4
70% Exceedance	-0.6	-0.2	1.2	0.3	0.1	0.2	0.0	0.1	0.0	0.0	-0.3	-0.6
80% Exceedance	-0.3	-1.1	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	-0.5
90% Exceedance	-0.2	1.2	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	-1.3
<b>Full Simulation Period Average<sup>a</sup></b>	<b>-0.6</b>	<b>-0.3</b>	<b>0.0</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.1</b>	<b>-0.4</b>	<b>-0.5</b>
<b>Wet Water Years</b>	<b>-0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.3</b>	<b>-0.4</b>
<b>Above Normal</b>	<b>-0.6</b>	<b>-0.6</b>	<b>-0.1</b>	<b>0.4</b>	<b>0.3</b>	<b>0.2</b>	<b>0.1</b>	<b>-0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.3</b>	<b>-0.6</b>
<b>Below Normal</b>	<b>-1.4</b>	<b>-1.5</b>	<b>0.0</b>	<b>0.1</b>	<b>0.3</b>	<b>0.4</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>	<b>-0.2</b>	<b>-0.4</b>
<b>Dry Water Years</b>	<b>-0.7</b>	<b>-0.3</b>	<b>-0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.3</b>	<b>-0.7</b>	<b>-0.7</b>
<b>Critical Water</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.3</b>	<b>-0.5</b>	<b>-0.3</b>

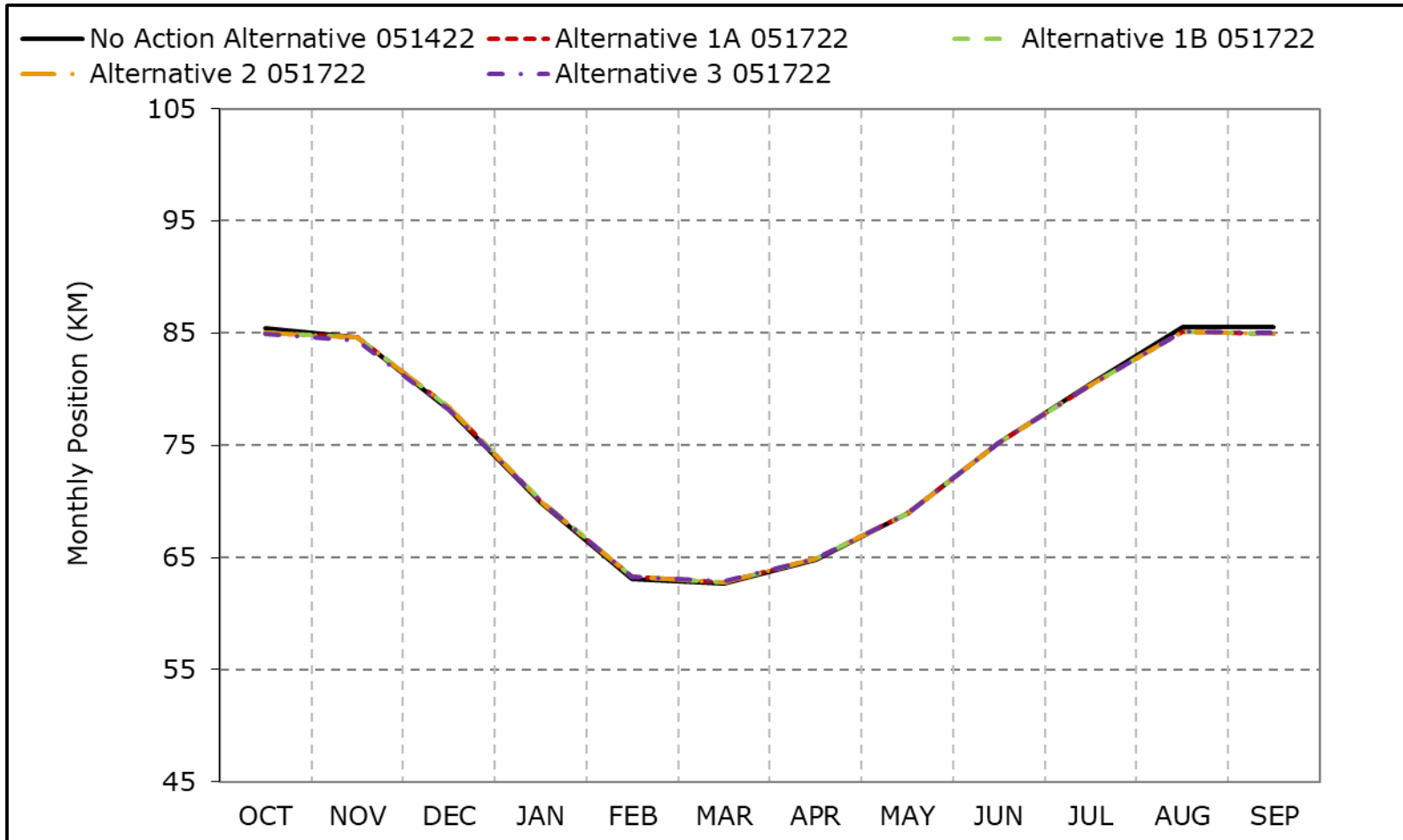
<sup>a</sup> Based on the 82-year simulation period.

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

\* 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.

**Figure 6B3-1-1. X2, Long-Term Average Position**

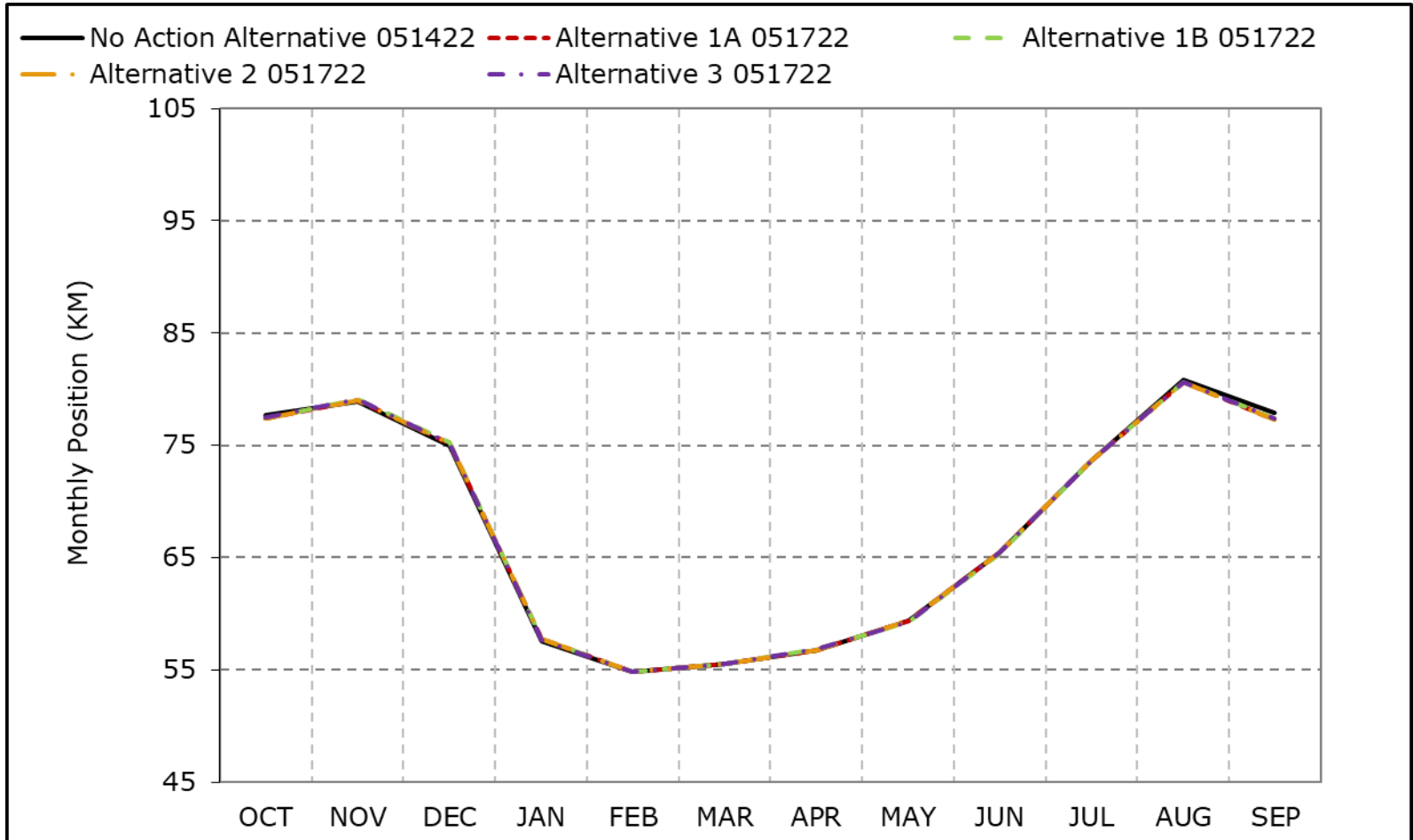


\*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

\*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**



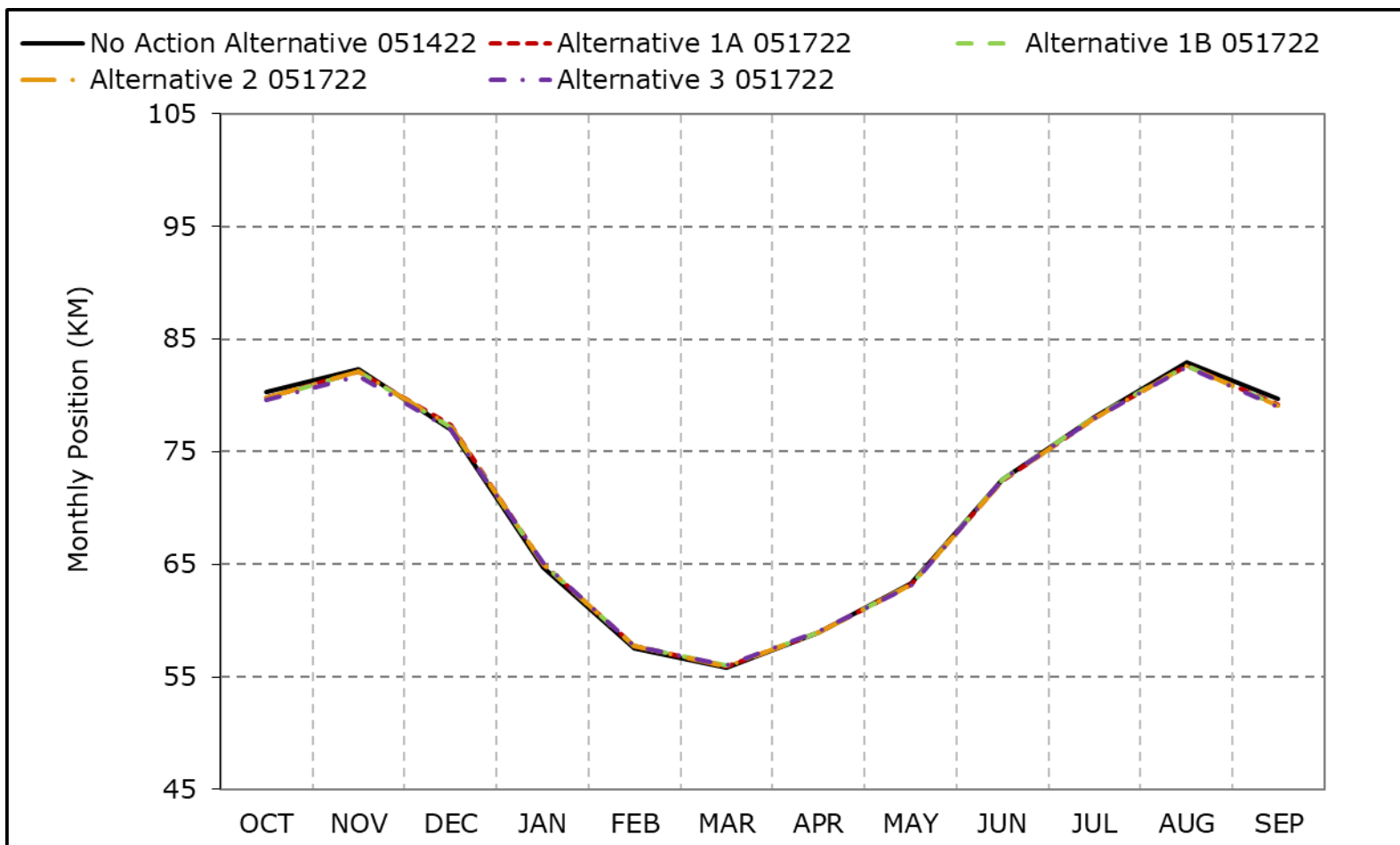
\*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

\*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**

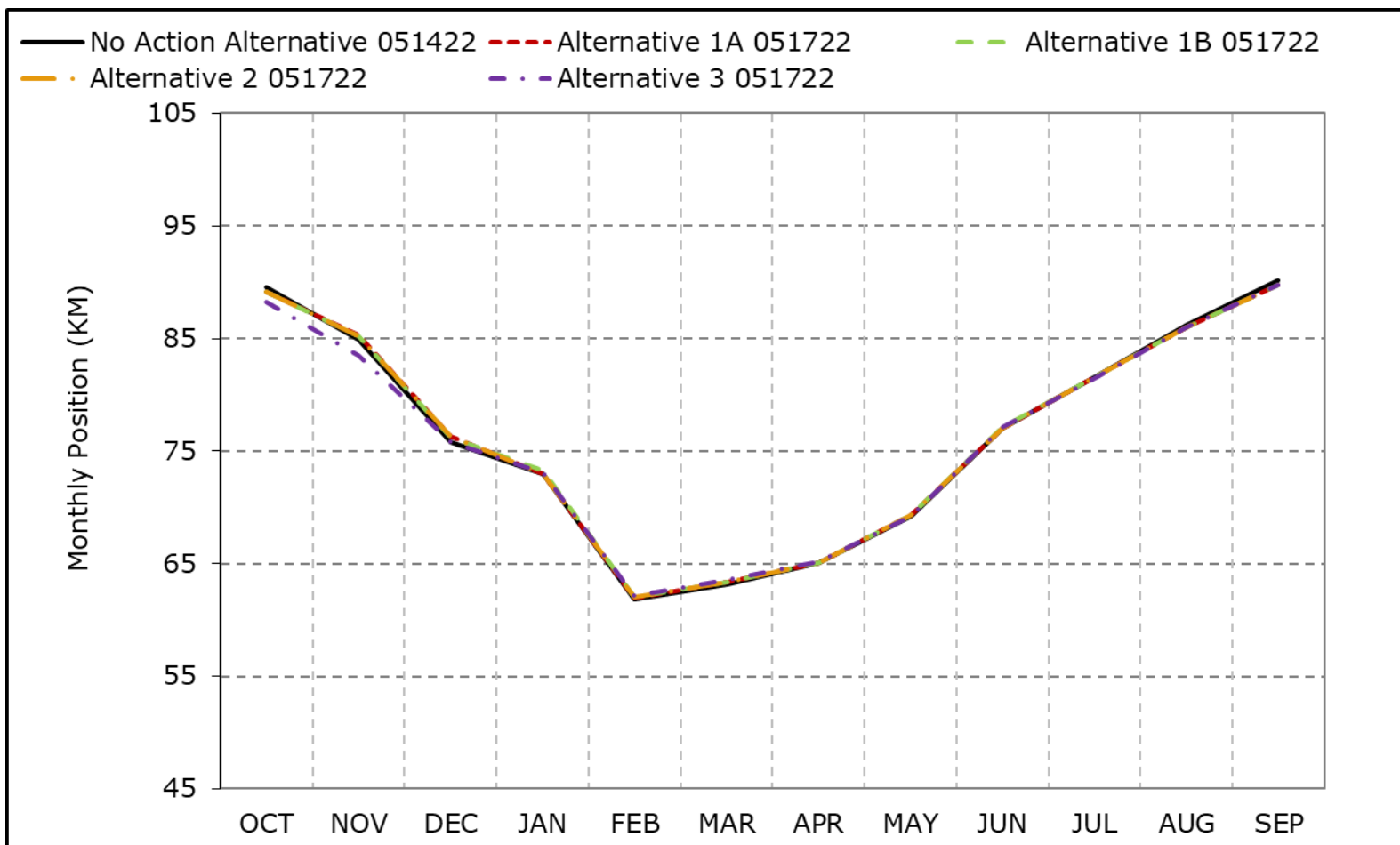


\*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

\*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**

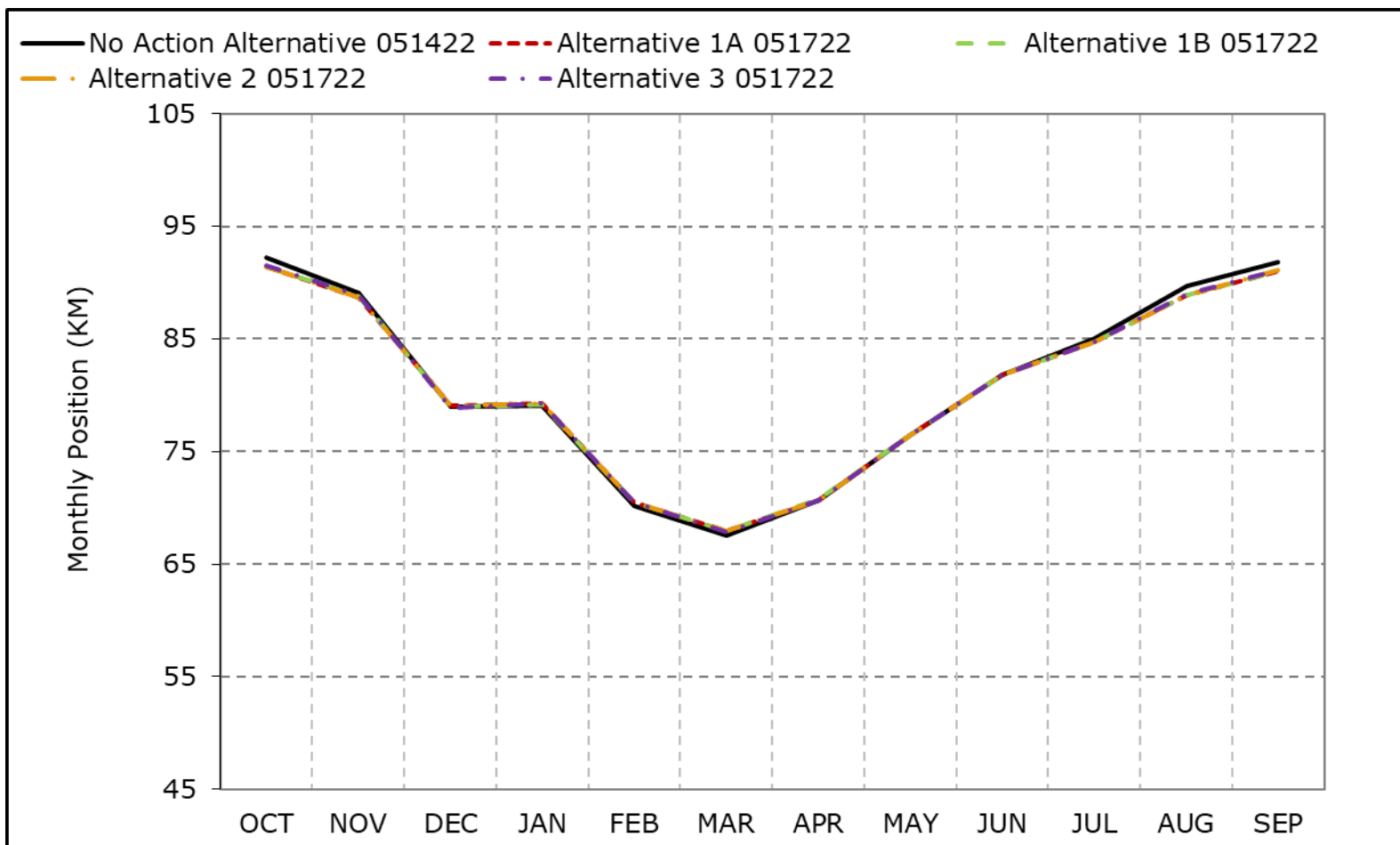


\*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

\*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**

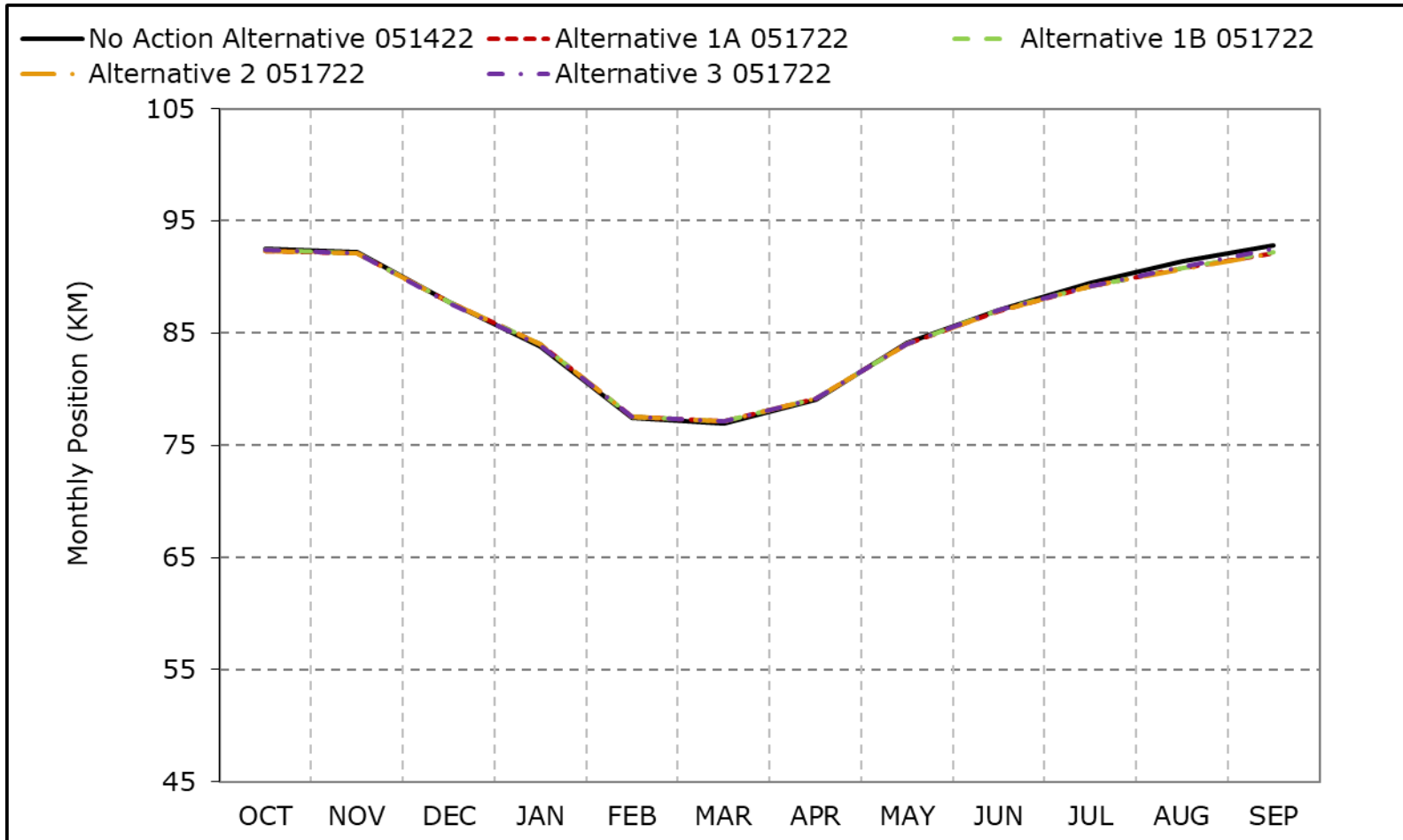


\*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

\*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**

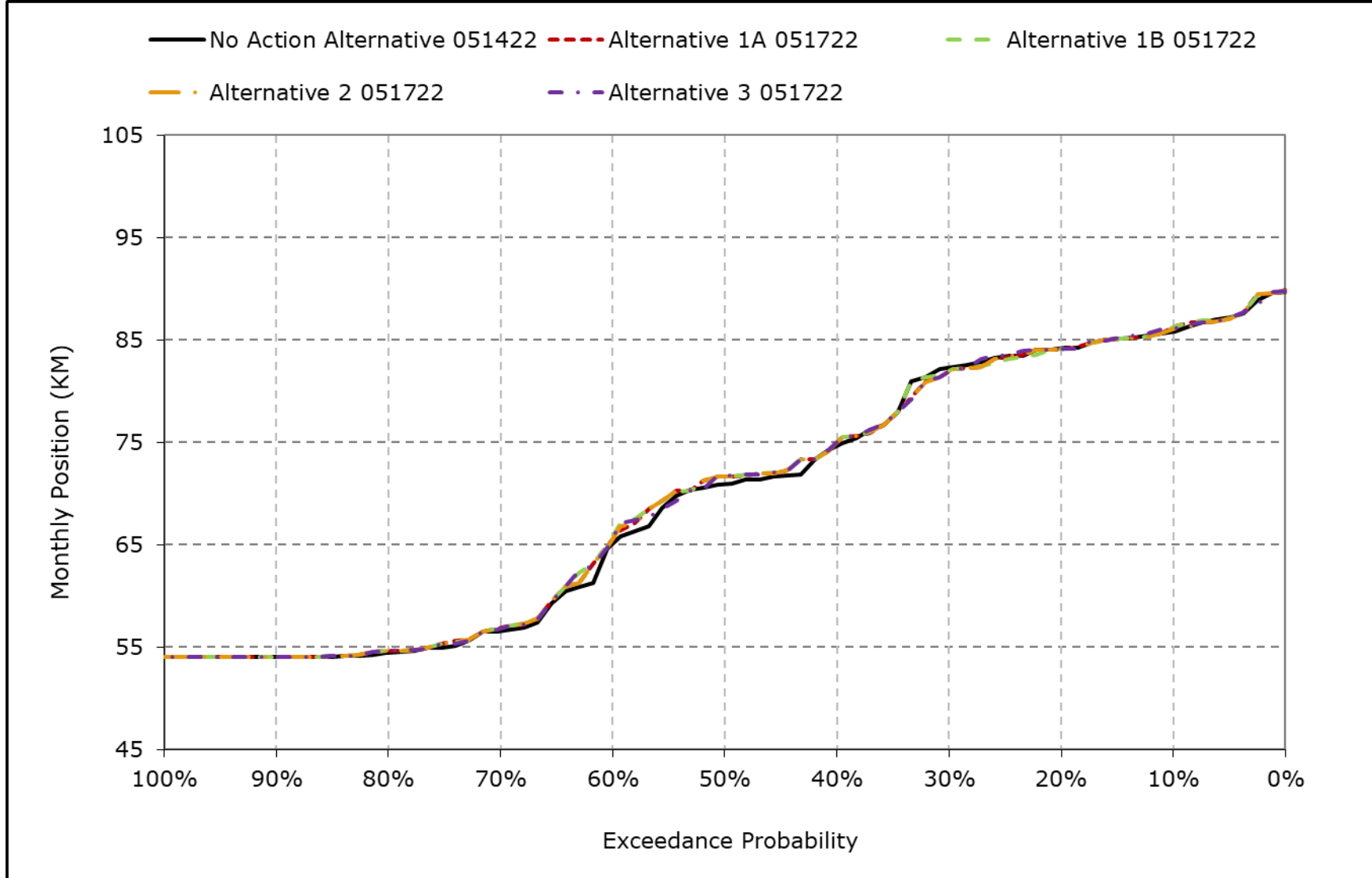


\*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).

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

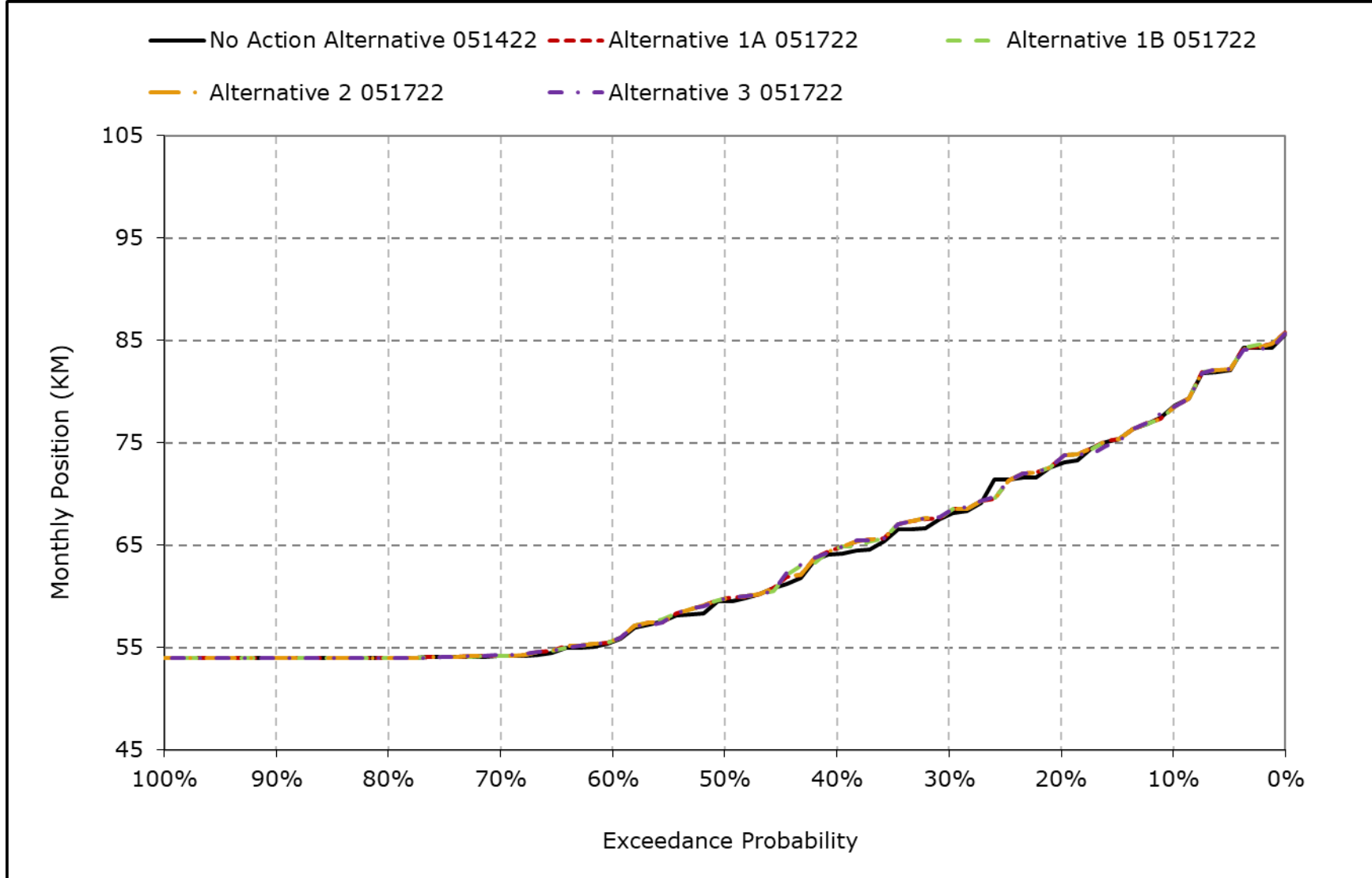
\*All scenarios are simulated at current climate condition and 0 cm sea level rise.

**Figure 6B3-1-7. X2, January Position**



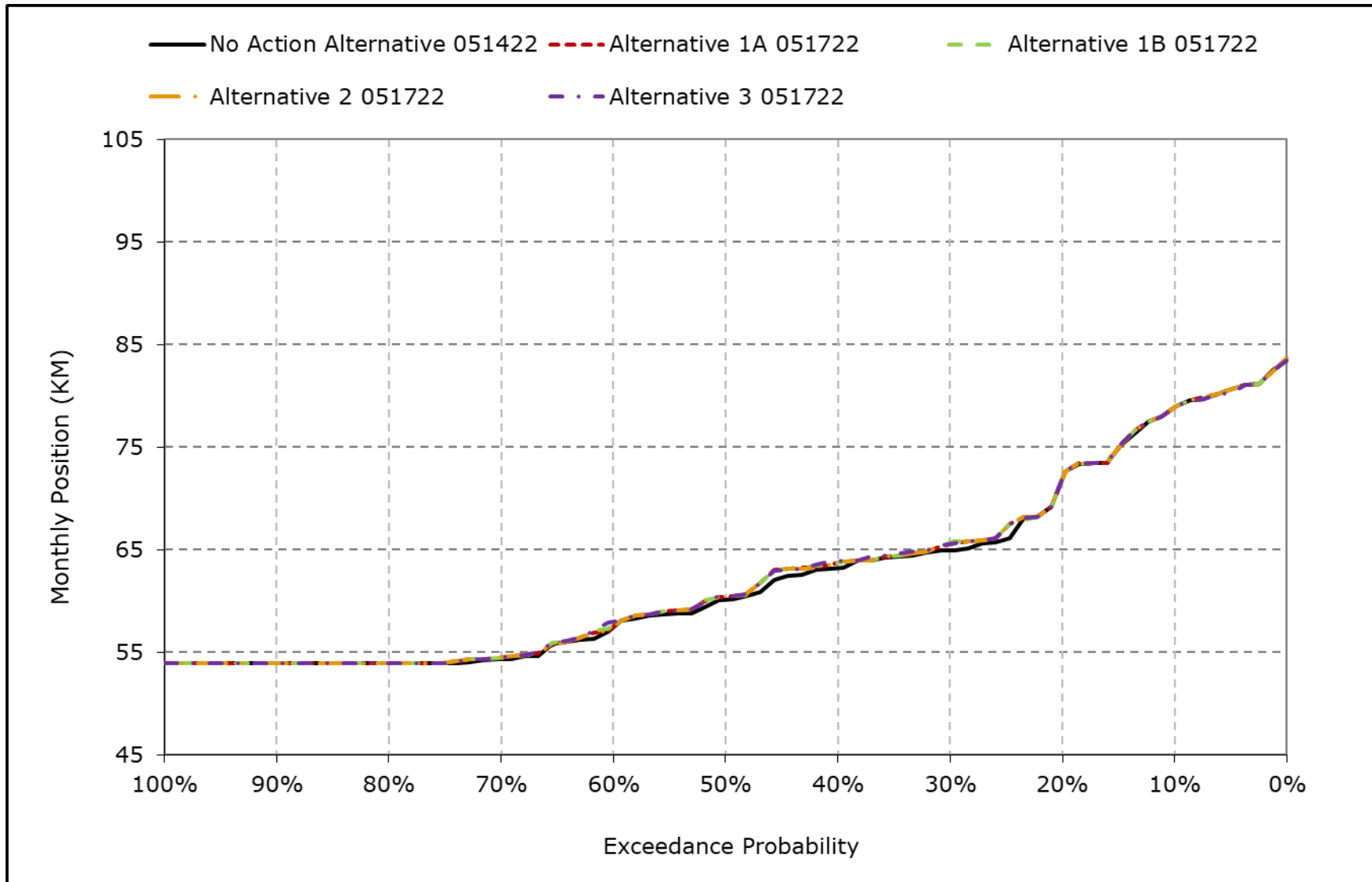
\*All scenarios are simulated at current climate condition and 0 cm sea level rise.

**Figure 6B3-1-8. X2, February Position**



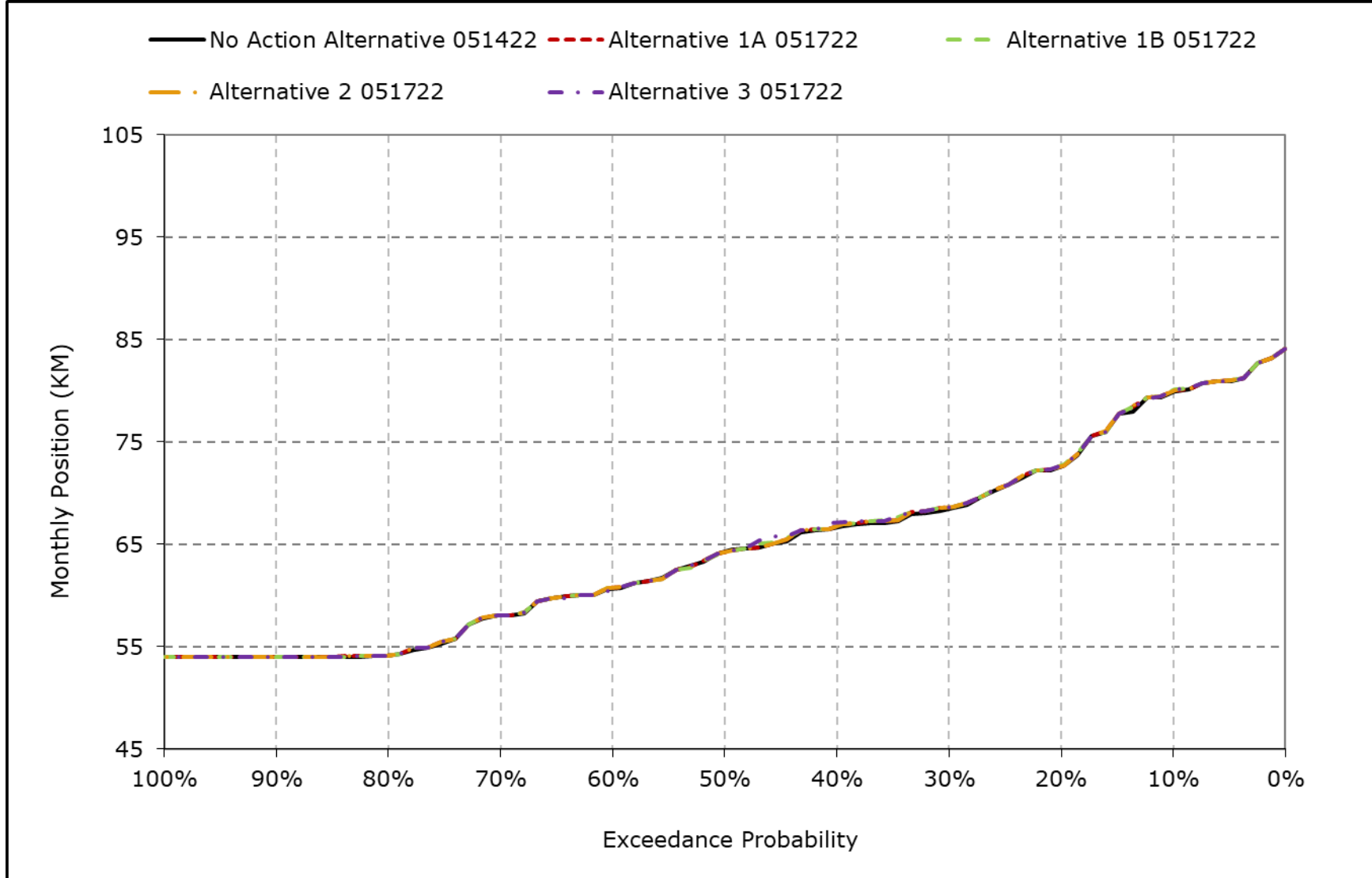
\*All scenarios are simulated at current climate condition and 0 cm sea level rise.

**Figure 6B3-1-9. X2, March Position**



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

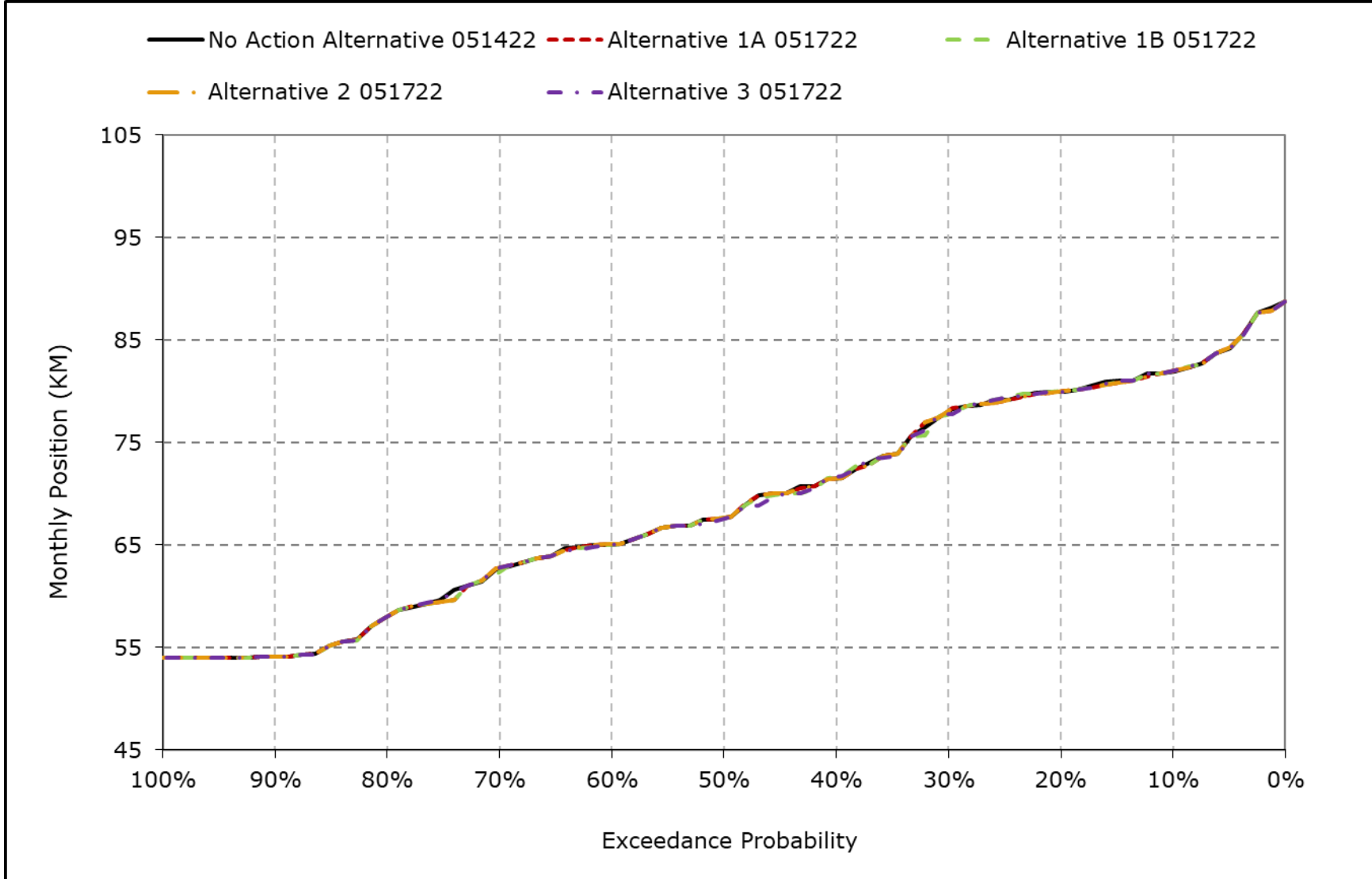
**Figure 6B3-1-10. X2, April Position**



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

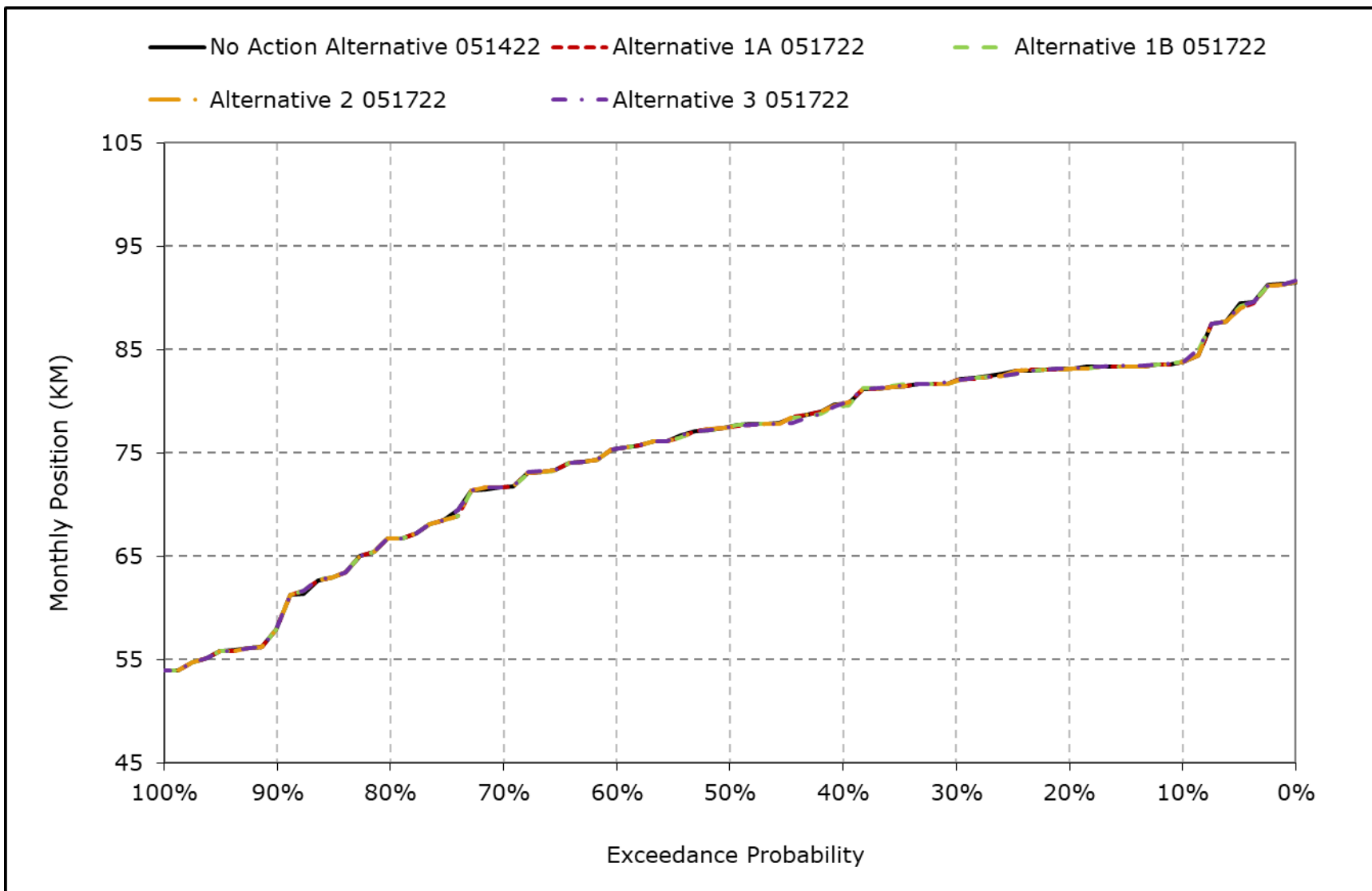


**Figure 6B3-1-11. X2, May Position**



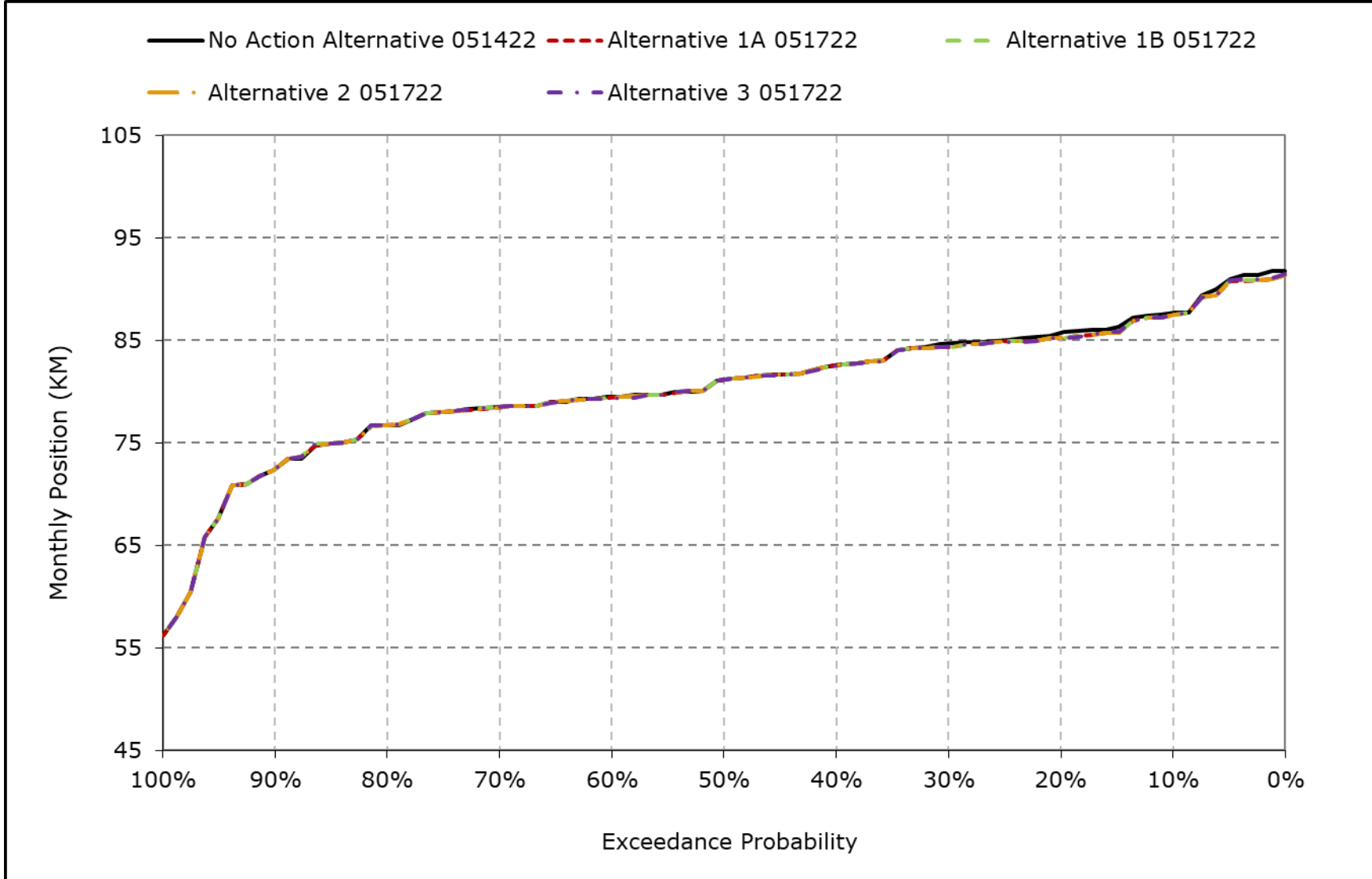
\*All scenarios are simulated at current climate condition and 0 cm sea level rise.

**Figure 6B3-1-12. X2, June Position**



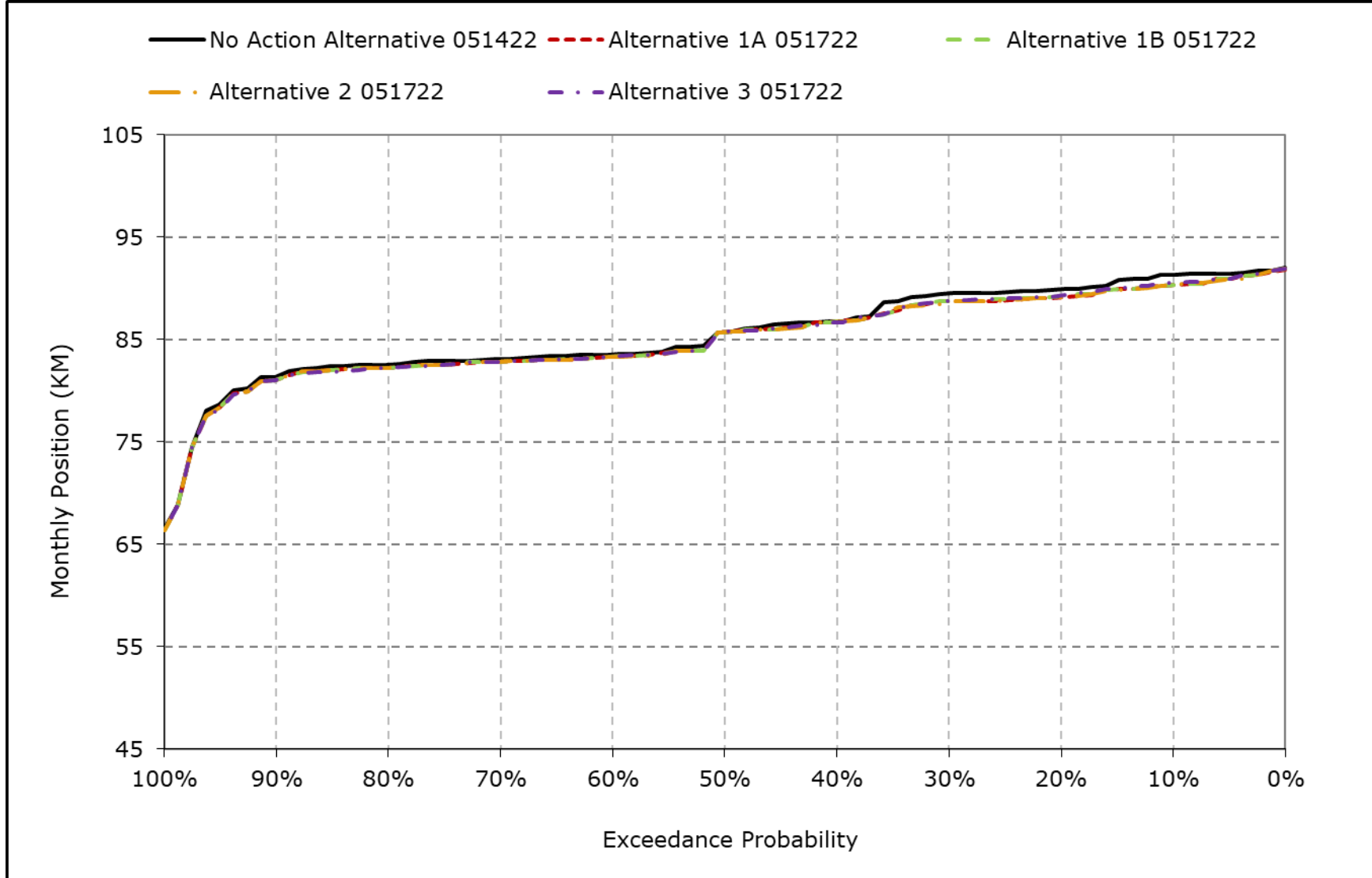
\*All scenarios are simulated at current climate condition and 0 cm sea level rise.

**Figure 6B3-1-13. X2, July Position**



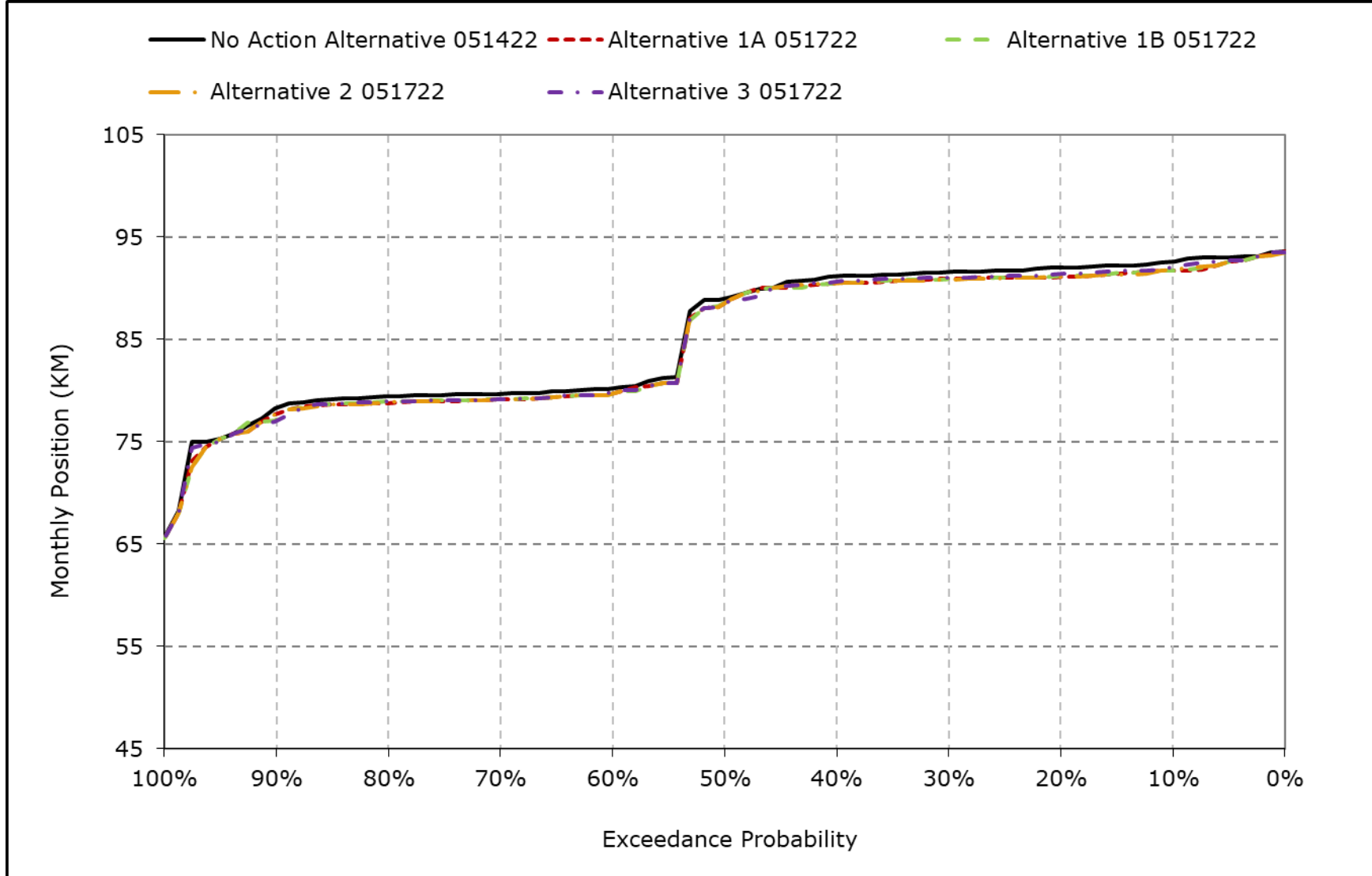
\*All scenarios are simulated at current climate condition and 0 cm sea level rise.

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



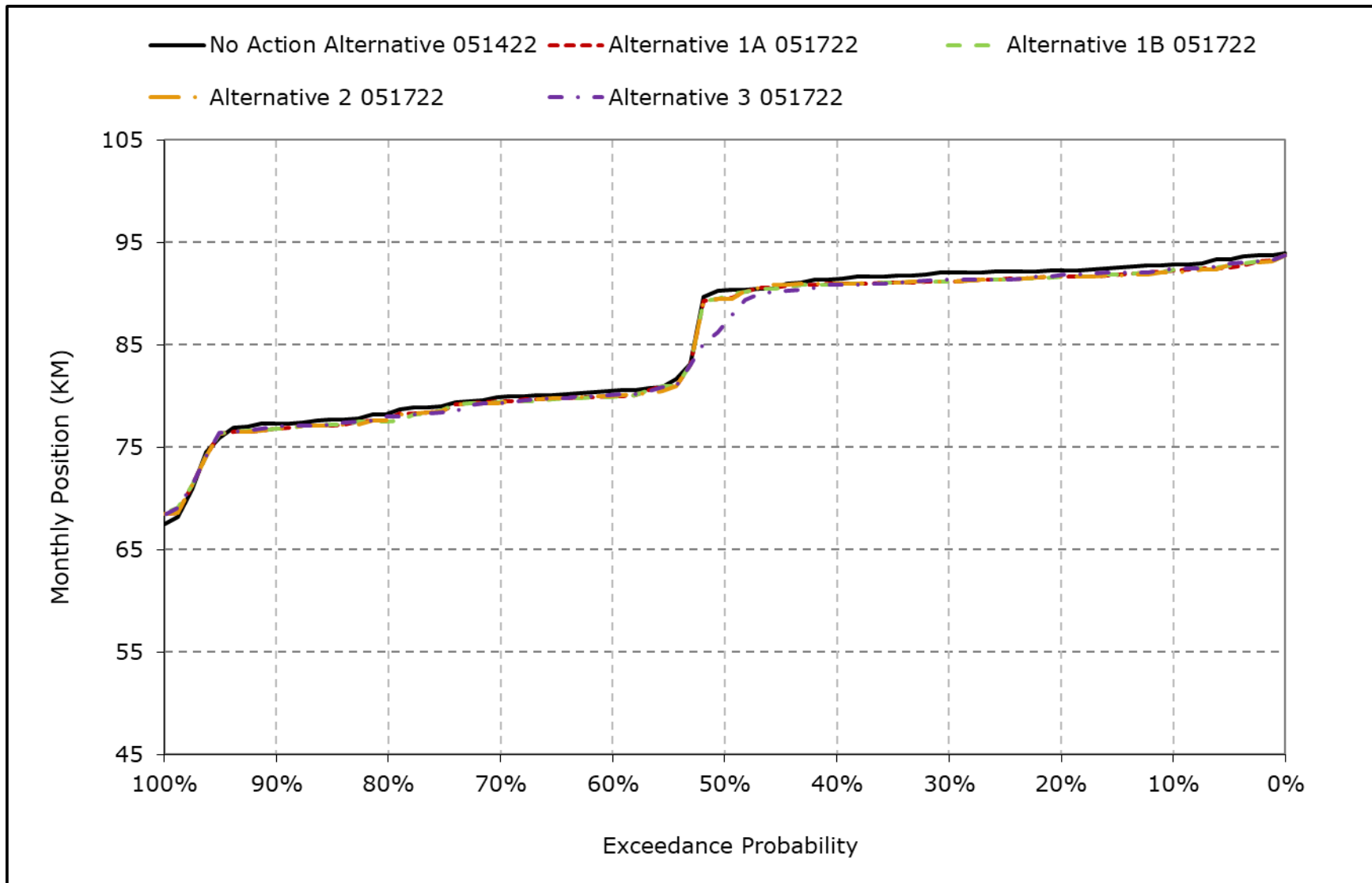
\*All scenarios are simulated at current climate condition and 0 cm sea level rise.

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



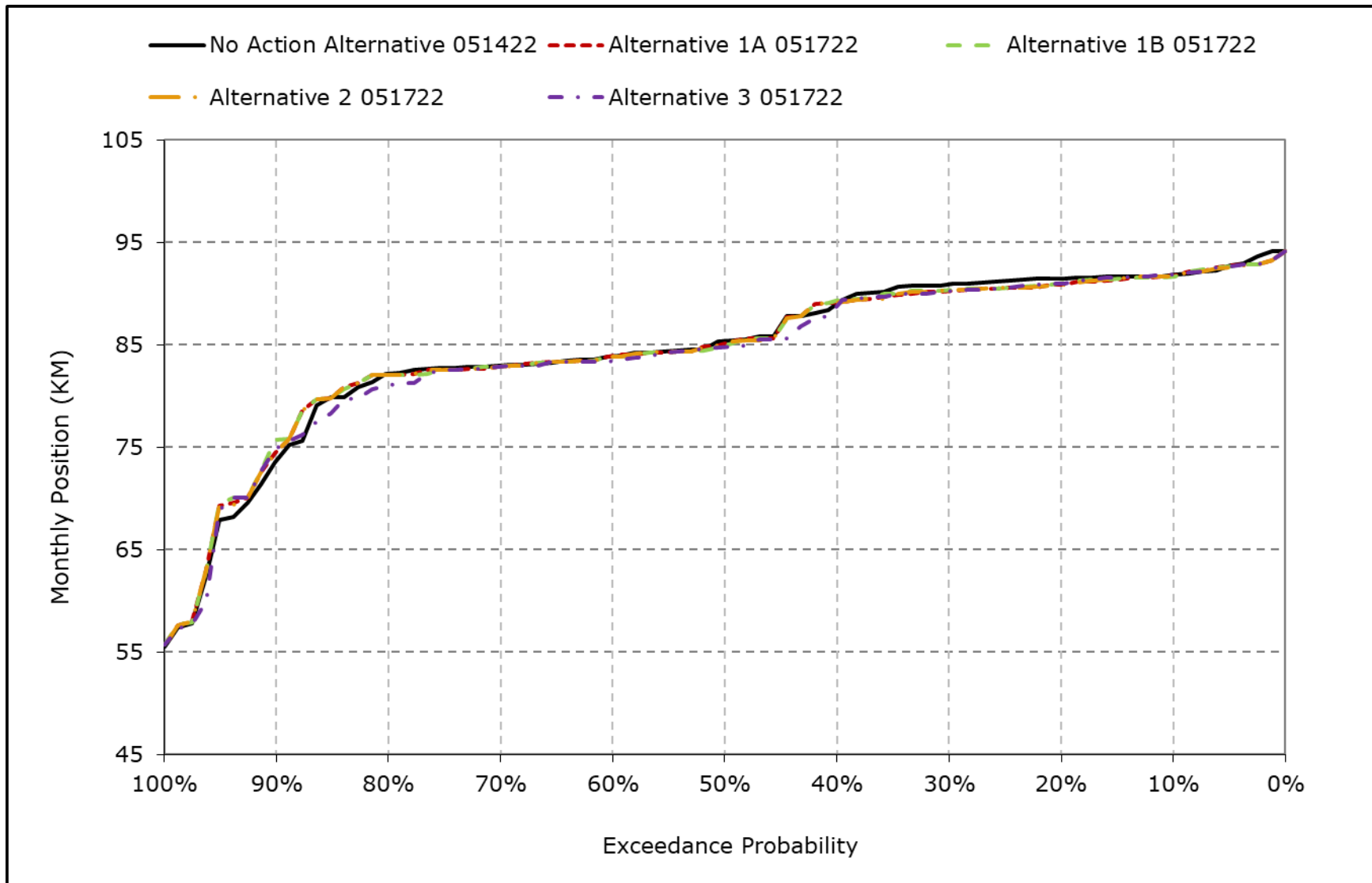
\*All scenarios are simulated at current climate condition and 0 cm sea level rise.

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



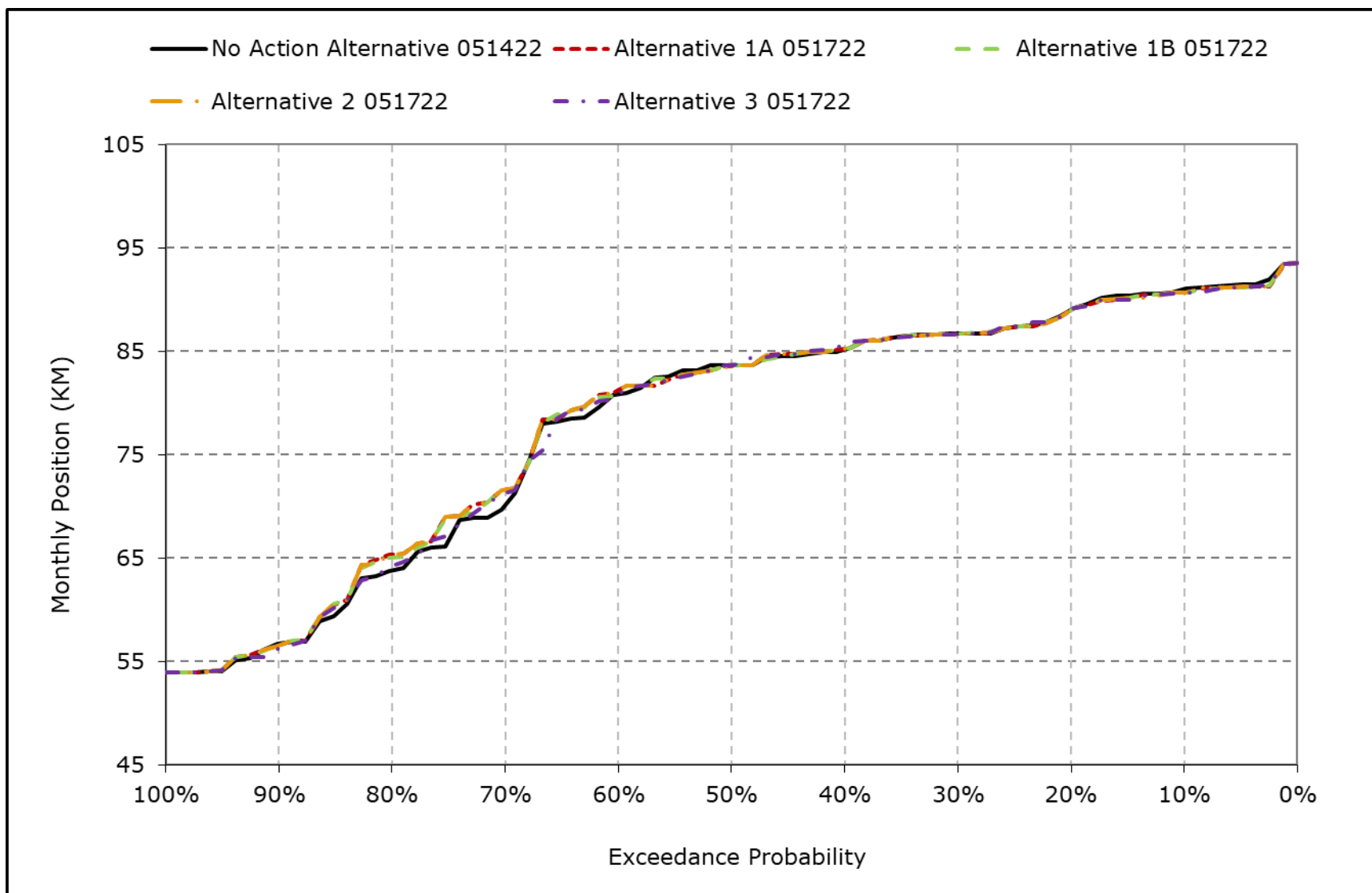
\*All scenarios are simulated at current climate condition and 0 cm sea level rise.

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



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

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



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