

1 **Appendix 9F**

2 **Reservoir Fish Analysis Documentation**

3 This appendix provides information about the methods and assumptions used for  
4 the Coordinated Long Term Operation of the Central Valley Project (CVP) and  
5 State Water Project (SWP) Environmental Impact Statement (EIS) analysis of  
6 reservoir fish. It is organized in two main sections:

- 7 • Section 9F.1: Reservoir Fish Analysis Methodology and Assumptions
- 8 – The reservoir fish impacts analysis uses modeled monthly reservoir  
9 elevations to develop rates of water level change to evaluate the effects on  
10 reservoir fish that spawn in the nearshore areas. The species analyzed  
11 were Largemouth Bass, Smallmouth Bass, and Spotted Bass. This section  
12 describes the overall analytical approach and assumptions.
- 13 • Section 9F.2: Reservoir Fish Analysis Results
- 14 – This section presents the survival estimates for each reservoir and fish  
15 species evaluated during the spawning period. Statistics are presented in  
16 exceedance plots and in tabular format.

17 **9F.1 Reservoir Fish Analysis Methodology and**  
18 **Assumptions**

19 **9F.1.1 Reservoir Fish Analysis Methodology**

20 Reservoir storage and surface water elevations in the reservoirs from the  
21 CalSim II model were used to analyze the potential effects on reservoir fishes.  
22 Although aquatic habitat within the CVP and SWP water supply reservoirs may  
23 not be limiting, storage volume is used as an indicator of how much habitat is  
24 available to fish species inhabiting these reservoirs. Warm water fish species that  
25 inhabit the upper layer of these reservoirs may be affected by fluctuations in  
26 storage through changes in reservoir water surface elevations.

27 The evaluation method used to assess the influence of fluctuating water levels in  
28 the reservoirs was developed using the relationship presented in Lee (1999) and  
29 by examining literature on nest success levels found in self-sustaining populations  
30 of black bass (*Micropterus* spp.). Available literature suggests that nest failure is  
31 highly variable among water bodies and between years, but it is not uncommon to  
32 have up to 40 percent of nests fail (60 percent survival) (Scott and Crossman  
33 1973). Many self-sustaining black bass populations in North America experience  
34 nest success (that is, the nest produces swim-up fry) rates of 21 to 96 percent,  
35 with many reported survival rates in the 40 to 60 percent range (Forbes 1981;  
36 Hunt and Annett 2002; Steinhart 2004) suggesting that much less than  
37 100 percent survival is required to support a self-sustaining population. Based on  
38 the literature review, nest survival probability in excess of 40 percent is assumed  
39 to be sufficient to provide for a self-sustaining bass fishery.

1 The conceptual approach used to evaluate the effects of water surface elevation  
2 fluctuations on bass nests was based on a relationship between black bass nest  
3 success and water surface elevation reductions developed by Lee (1999) from  
4 research conducted on five California reservoirs. Lee (1999) examined the  
5 relationship between water surface elevation fluctuation rates and nesting success  
6 for Black Bass, and developed nest survival curves for Largemouth, Smallmouth,  
7 and Spotted bass. The equations corresponding to the relationship curves are the  
8 following:

9 • *Largemouth Bass*  $Y = -56.378 * \ln(X) - 102.59$

10 • *Smallmouth Bass*  $Y = -46.466 * \ln(X) - 83.34$

11 • *Spotted Bass*  $Y = -79.095 * \ln(X) - 94.162$

12 – where: X is the fluctuation rate (meter/day) and Y is the percentage of  
13 successful nests

14 Based on the work by Lee (1999), the maximum receding water level rate  
15 providing 100 percent successful nesting varied among species, with receding  
16 water level rates of less than 0.02, less than 0.01, and less than 0.065 meters per  
17 day (m/day ) providing successful nesting of 100 percent of the Largemouth Bass,  
18 Smallmouth Bass, and Spotted Bass, nests, respectively. Recession rates of 0.07,  
19 0.06, and 0.17 m/day would allow for successful nesting of 50 percent of the  
20 Largemouth Bass, Smallmouth Bass, and Spotted Bass, nests, respectively.

21 For this analysis, water surface elevations at the end of each month from the  
22 CalSim II model output were used to calculate the monthly, and subsequently,  
23 daily fluctuation rates used to compute the percentage of successful nests using  
24 the equations from Lee (1999). CalSim II reports end-of-month (EOM) water  
25 surface elevations; therefore, water surface elevations from February through June  
26 were used in this analysis (that is, the March fluctuation rate is equal to the March  
27 EOM elevation minus the February EOM elevation). The average daily  
28 fluctuation rate used as “X” in the equations presented previously to compute the  
29 percentage of successful nests during that month was approximated by use of the  
30 monthly change in elevation divided by the number of days in that month. The  
31 percentage of successful nests was computed based on the equations from Lee  
32 (1999) for each month of the potential spawning season for these species.

33 This assessment is not intended to predict the absolute rate of survival in Black  
34 Bass nests, but rather to provide the basis for evaluating the relative differences  
35 among alternatives. These results should be viewed as indicators of the relative  
36 performance of the alternatives evaluated.

### 37 **9F.1.2 Reservoir Fish Analysis Scenario Assumptions**

38 This section describes the assumptions for the Reservoir Fish Analysis for the No  
39 Action Alternative, Second Basis of Comparison, and other alternatives.

40 The following CalSim II model simulations were performed as the basis for  
41 evaluating the impacts of the other alternatives:

1 • No Action Alternative

2 • Second Basis of Comparison

3 The following model simulations of other alternatives were performed:

4 • Alternative 1 – for simulation purposes, considered the same as Second Basis  
5 of Comparison

6 • Alternative 2 – for simulation purposes, considered the same as No Action  
7 Alternative

8 • Alternative 3

9 • Alternative 4 – for simulation purposes, considered the same as Second Basis  
10 of Comparison

11 • Alternative 5

12 Assumptions for each of these alternatives were developed with the surface water  
13 modeling tools and are described in Appendix 5A, Section B.

14 Alternative 1 modeling assumptions are the same as those for the Second Basis of  
15 Comparison and Alternative 2 modeling assumptions are the same as those for the  
16 No Action Alternative; therefore, the assumptions for those alternatives are not  
17 discussed separately in this document.

18 Assumptions for each of these alternatives are reflected to monthly CalSim II  
19 reservoir storage elevations that are used in the Reservoir Fish analysis described  
20 in this section.

## 21 **9F.2 Reservoir Fish Results**

22 Results are provided for each of the following runs separately:

23 • No Action Alternative

24 • Second Basis of Comparison

25 • Alternative 1

26 • Alternative 3

27 • Alternative 5

28 In addition, the same statistics are provided for the following comparisons to  
29 establish changes of the alternative with respect to one of the bases of  
30 comparison:

31 • Alternative 1 compared to No Action Alternative

32 • Alternative 3 compared to No Action Alternative

33 • Alternative 5 compared to No Action Alternative

34 • No Action Alternative compared to Second Basis of Comparison

- 1 • Alternative 1 compared to Second Basis of Comparison
- 2 • Alternative 3 compared to Second Basis of Comparison
- 3 • Alternative 5 compared to Second Basis of Comparison

4 The first set of results is provided as probability exceedance curves of nest  
5 survival percentage for each reservoir and species of bass. For this analysis,  
6 exceedance plots for the percentage of nest survival were generated based on the  
7 82-year CalSim II time period for each of the alternatives and bases of  
8 comparison. Differences among alternatives were evaluated using the exceedance  
9 probability corresponding to varying levels of survival.

10 The second set of results is provided as tables summarizing the monthly nest  
11 survival percentage for each reservoir and species of bass (as described  
12 previously) with monthly exceedance probabilities and long-term averages over  
13 the entire CalSim II simulation period. Averages are also provided by water year  
14 type.

15 Exceedance plots and tables, numbered to correspond to the following model  
16 results, are presented at the end of this appendix:

- 17 • B.1. Trinity Largemouth Bass Survival Percentage
- 18 • B.2. Trinity Smallmouth Bass Survival Percentage
- 19 • B.3. Trinity Spotted Bass Survival Percentage
- 20 • B.4. Shasta Largemouth Bass Survival Percentage
- 21 • B.5. Shasta Smallmouth Bass Survival Percentage
- 22 • B.6. Shasta Spotted Bass Survival Percentage
- 23 • B.7. Oroville Largemouth Bass Survival Percentage
- 24 • B.8. Oroville Smallmouth Bass Survival Percentage
- 25 • B.9. Oroville Spotted Bass Survival Percentage
- 26 • B.10. Folsom Largemouth Bass Survival Percentage
- 27 • B.11. Folsom Smallmouth Bass Survival Percentage
- 28 • B.12. Folsom Spotted Bass Survival Percentage
- 29 • B.13. New Melones Largemouth Bass Survival Percentage
- 30 • B.14. New Melones Smallmouth Bass Survival Percentage
- 31 • B.15. New Melones Spotted Bass Survival Percentage

1 **9F.3 References**

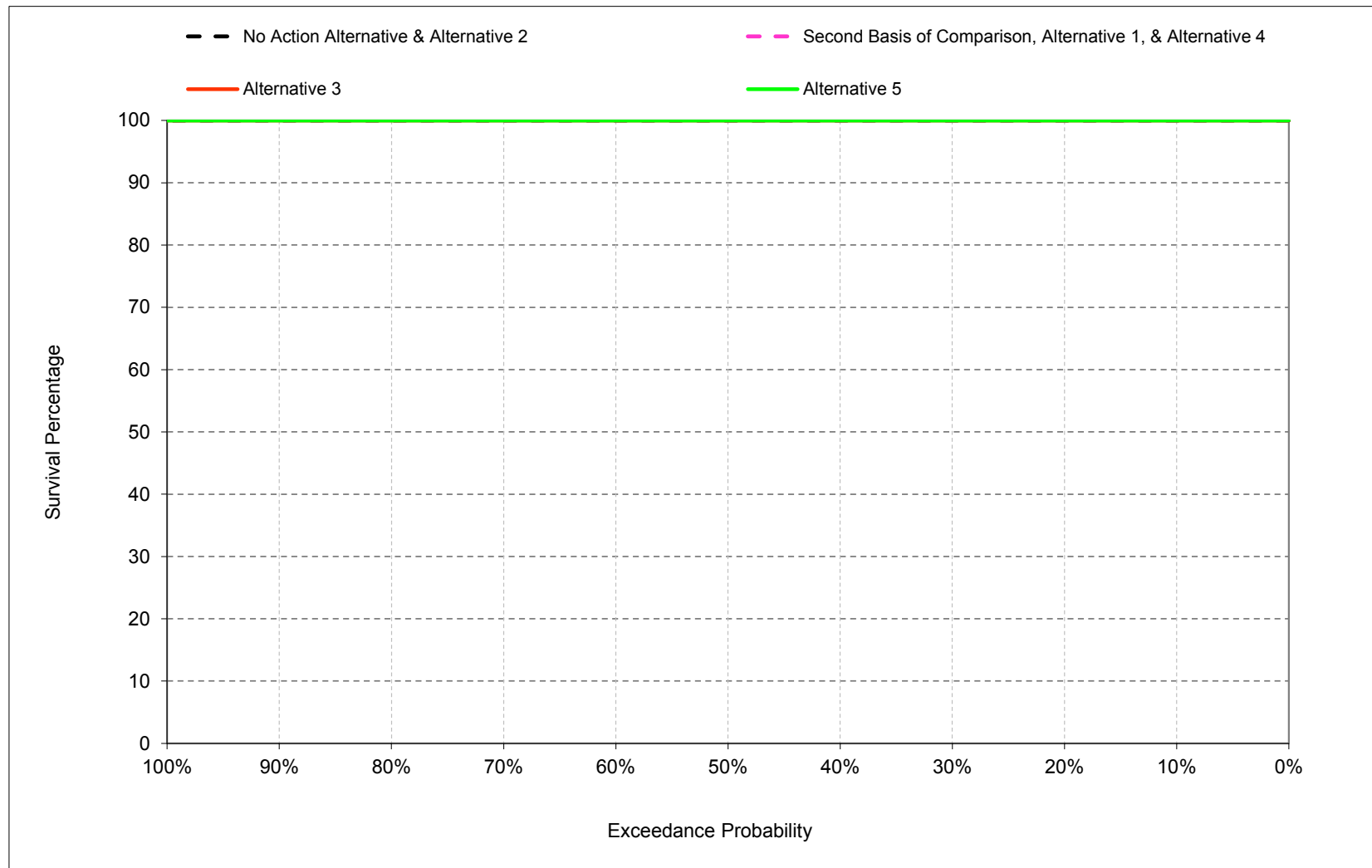
- 2 Forbes, A. 1981. *Review of Smallmouth Bass (Micropterus dolomieu) Spawning*  
3 *Requirements and First Year Survival in Lakes*. Wisconsin Department of  
4 Natural Resources Research Report 111.
- 5 Hunt, J. and C.A. Annett. 2002. *Effects of habitat manipulation on reproductive*  
6 *success of individual largemouth bass in an Ozark Reservoir*. North  
7 American Journal of Fisheries Management 22:1201-1208.
- 8 Lee, D.P. 1999. *Water Level Fluctuation Criteria for Black Bass in California*  
9 *Reservoirs*. California Department of Fish and Game. Reservoir Research  
10 and Management Project—Informational Leaflet No. 12. 12 pp.
- 11 Scott, W.B. and E.J. Crossman, 1973. *Freshwater fishes of Canada*. Bull. Fish.  
12 Res. Board Can. 184:1-966.
- 13 Steinhart, G.B. 2004. *Exploring factors affecting smallmouth bass nest success*  
14 *and reproductive behavior*. Ph. D. Dissertation. Department of  
15 Evolution, Ecology, and Organismal Biology. The Ohio State University.

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## **B.1. Trinity Large Mouth Bass Survival Percentage**

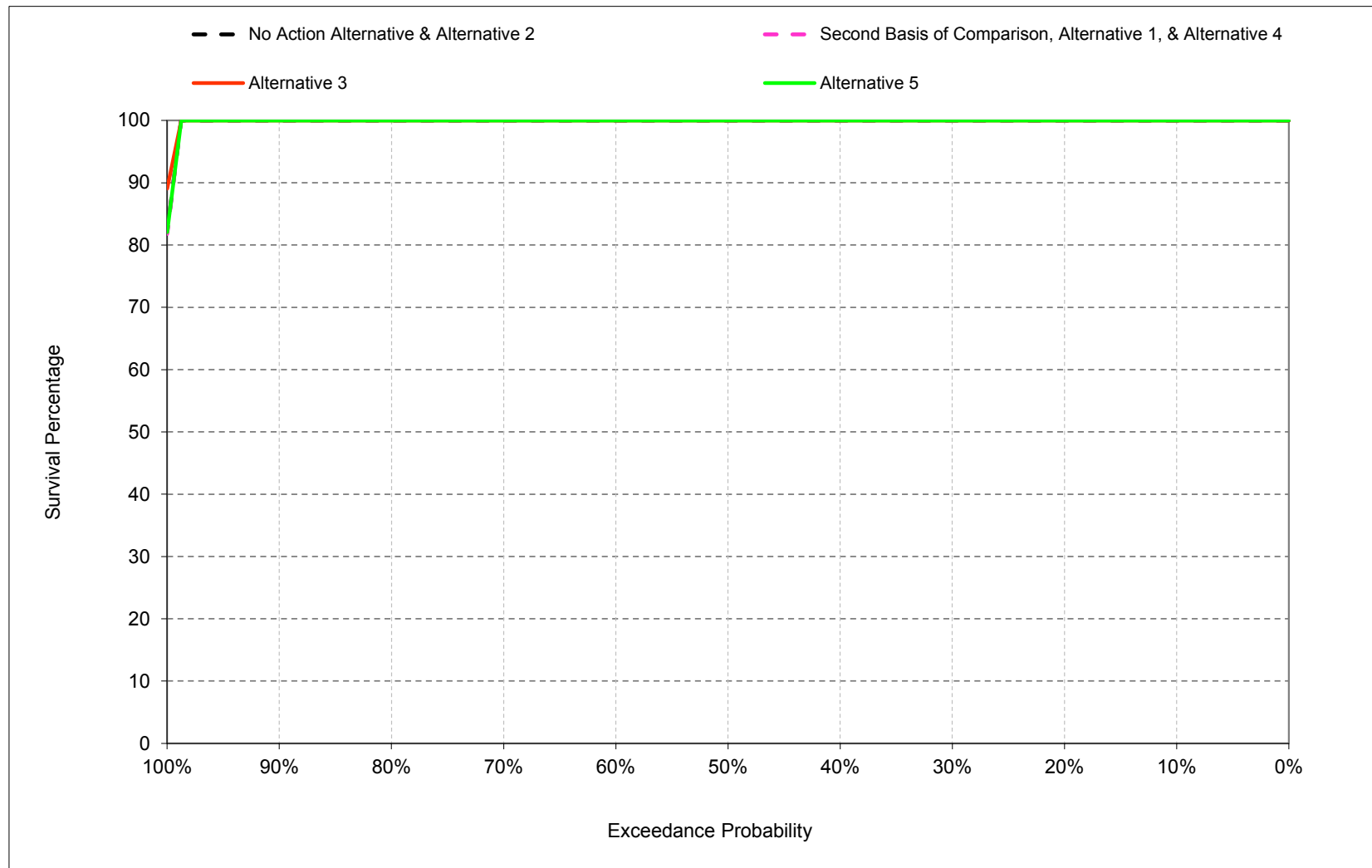
Figure B-1-1. Trinity Large Mouth Bass Nest Survival Percentage, March



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

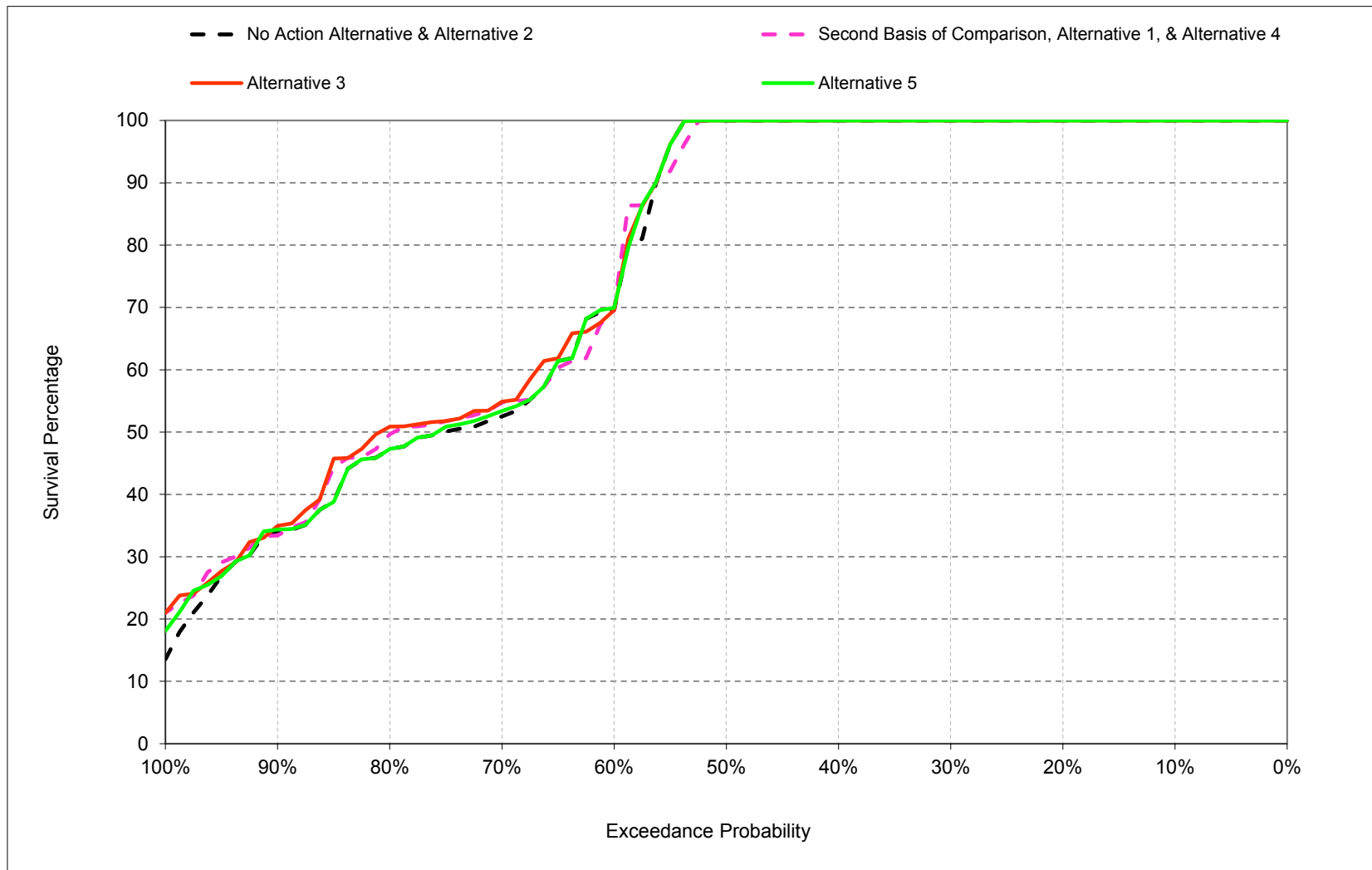


Figure B-1-2. Trinity Large Mouth Bass Nest Survival Percentage, April



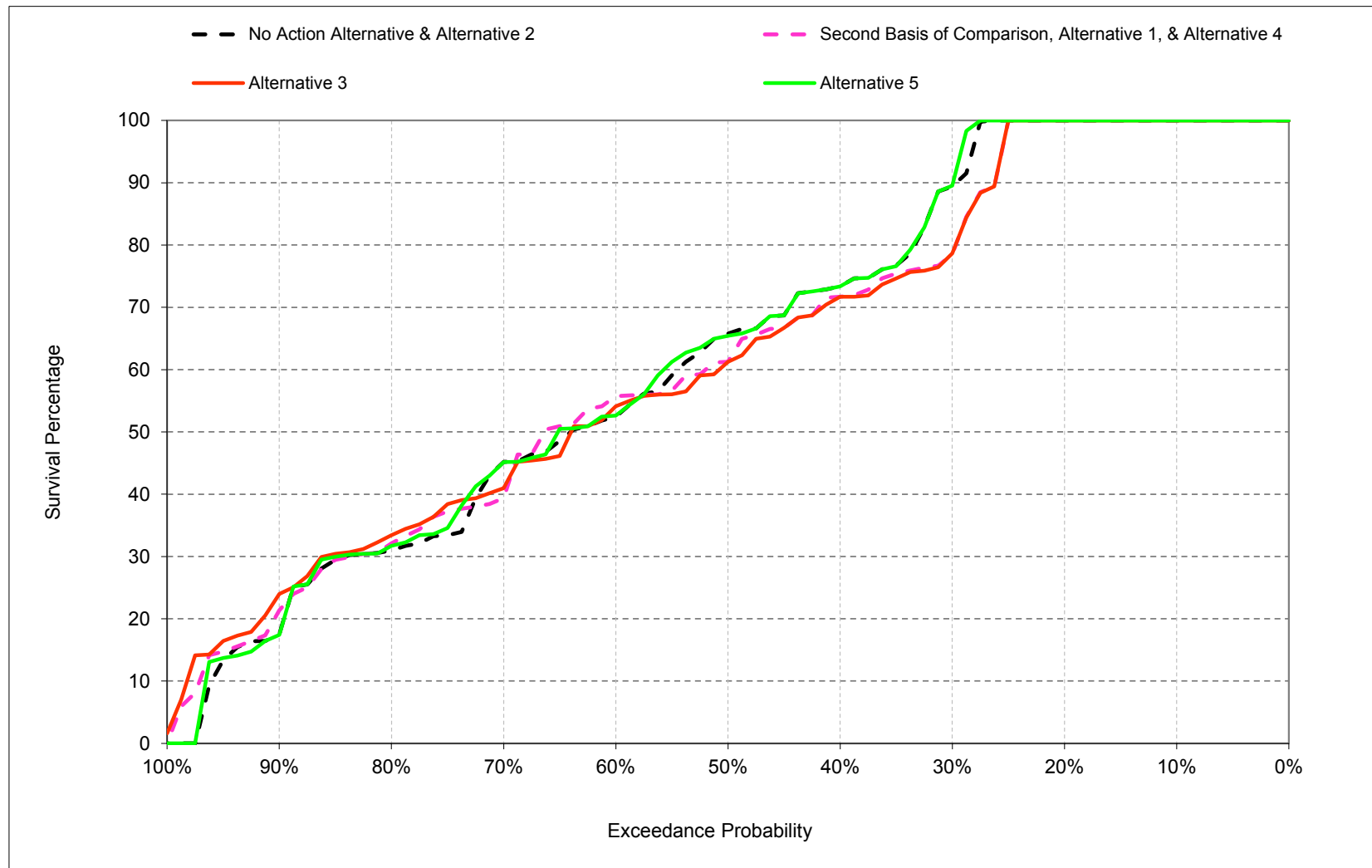
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-1-3. Trinity Large Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-1-4. Trinity Large Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-1-1. Trinity Large Mouth Bass Nest Survival  
Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	89
40%	100	100	100	73
50%	100	100	100	65
60%	100	100	69	52
70%	100	100	52	44
80%	100	100	46	31
90%	100	100	33	17
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	76	62
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	87	72
Above Normal (16%)	100	100	84	52
Below Normal (13%)	100	100	64	42
Dry (24%)	100	100	67	58
Critical (15%)	100	97	67	75

<b>Alternative 1</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	78
40%	100	100	100	72
50%	100	100	100	61
60%	100	100	68	55
70%	100	100	54	39
80%	100	100	48	31
90%	100	100	33	18
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	76	61
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	87	71
Above Normal (16%)	100	100	85	51
Below Normal (13%)	100	100	66	46
Dry (24%)	100	100	68	59
Critical (15%)	100	95	69	69

<b>Alternative 1 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-11
40%	0	0	0	-2
50%	0	0	0	-4
60%	0	0	-1	3
70%	0	0	2	-5
80%	0	0	2	0
90%	0	0	0	1
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	1	-1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-1
Above Normal (16%)	0	0	1	-1
Below Normal (13%)	0	0	1	4
Dry (24%)	0	0	0	0
Critical (15%)	0	-2	1	-6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-1-2. Trinity Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	89
40%	100	100	100	73
50%	100	100	100	65
60%	100	100	69	52
70%	100	100	52	44
80%	100	100	46	31
90%	100	100	33	17
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	76	62
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	87	72
Above Normal (16%)	100	100	84	52
Below Normal (13%)	100	100	64	42
Dry (24%)	100	100	67	58
Critical (15%)	100	97	67	75

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	78
40%	100	100	100	71
50%	100	100	100	60
60%	100	100	68	53
70%	100	100	54	40
80%	100	100	50	32
90%	100	100	33	21
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	77	61
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	87	71
Above Normal (16%)	100	100	86	52
Below Normal (13%)	100	100	65	42
Dry (24%)	100	100	68	60
Critical (15%)	100	98	70	70

**Alternative 3 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-11
40%	0	0	0	-2
50%	0	0	0	-5
60%	0	0	-1	1
70%	0	0	2	-3
80%	0	0	4	2
90%	0	0	0	4
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	1	-1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-1
Above Normal (16%)	0	0	2	0
Below Normal (13%)	0	0	1	0
Dry (24%)	0	0	1	2
Critical (15%)	0	1	2	-5

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-1-3. Trinity Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

No Action Alternative				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	89
40%	100	100	100	73
50%	100	100	100	65
60%	100	100	69	52
70%	100	100	52	44
80%	100	100	46	31
90%	100	100	33	17
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	76	62
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	87	72
Above Normal (16%)	100	100	84	52
Below Normal (13%)	100	100	64	42
Dry (24%)	100	100	67	58
Critical (15%)	100	97	67	75

Alternative 5				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	89
40%	100	100	100	73
50%	100	100	100	65
60%	100	100	70	53
70%	100	100	53	44
80%	100	100	46	31
90%	100	100	34	17
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	76	62
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	87	72
Above Normal (16%)	100	100	84	53
Below Normal (13%)	100	100	65	42
Dry (24%)	100	100	68	58
Critical (15%)	100	97	67	78

Alternative 5 minus No Action Alternative				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	1	0
80%	0	0	0	0
90%	0	0	1	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	0
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	1	0
Dry (24%)	0	0	0	-1
Critical (15%)	0	0	0	3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-1-4. Trinity Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

<b>Second Basis of Comparison</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	78
40%	100	100	100	72
50%	100	100	100	61
60%	100	100	68	55
70%	100	100	54	39
80%	100	100	48	31
90%	100	100	33	18
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	76	61
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	87	71
Above Normal (16%)	100	100	85	51
Below Normal (13%)	100	100	66	46
Dry (24%)	100	100	68	59
Critical (15%)	100	95	69	69

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	89
40%	100	100	100	73
50%	100	100	100	65
60%	100	100	69	52
70%	100	100	52	44
80%	100	100	46	31
90%	100	100	33	17
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	76	62
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	87	72
Above Normal (16%)	100	100	84	52
Below Normal (13%)	100	100	64	42
Dry (24%)	100	100	67	58
Critical (15%)	100	97	67	75

<b>No Action Alternative minus Second Basis of Comparison</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	11
40%	0	0	0	2
50%	0	0	0	4
60%	0	0	1	-3
70%	0	0	-2	5
80%	0	0	-2	0
90%	0	0	0	-1
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	-1	1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	1
Above Normal (16%)	0	0	-1	1
Below Normal (13%)	0	0	-1	-4
Dry (24%)	0	0	0	0
Critical (15%)	0	2	-1	6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-1-5. Trinity Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	78
40%	100	100	100	72
50%	100	100	100	61
60%	100	100	68	55
70%	100	100	54	39
80%	100	100	48	31
90%	100	100	33	18
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	76	61
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	87	71
Above Normal (16%)	100	100	85	51
Below Normal (13%)	100	100	66	46
Dry (24%)	100	100	68	59
Critical (15%)	100	95	69	69

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	78
40%	100	100	100	71
50%	100	100	100	60
60%	100	100	68	53
70%	100	100	54	40
80%	100	100	50	32
90%	100	100	33	21
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	77	61
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	87	71
Above Normal (16%)	100	100	86	52
Below Normal (13%)	100	100	65	42
Dry (24%)	100	100	68	60
Critical (15%)	100	98	70	70

**Alternative 3 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	-1
60%	0	0	0	-2
70%	0	0	0	2
80%	0	0	2	2
90%	0	0	0	3
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	0
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	1	1
Below Normal (13%)	0	0	0	-4
Dry (24%)	0	0	0	1
Critical (15%)	0	3	1	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.



**Table B-1-6. Trinity Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	78
40%	100	100	100	72
50%	100	100	100	61
60%	100	100	68	55
70%	100	100	54	39
80%	100	100	48	31
90%	100	100	33	18
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	76	61
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	87	71
Above Normal (16%)	100	100	85	51
Below Normal (13%)	100	100	66	46
Dry (24%)	100	100	68	59
Critical (15%)	100	95	69	69

**Alternative 5**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	89
40%	100	100	100	73
50%	100	100	100	65
60%	100	100	70	53
70%	100	100	53	44
80%	100	100	46	31
90%	100	100	34	17
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	76	62
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	87	72
Above Normal (16%)	100	100	84	53
Below Normal (13%)	100	100	65	42
Dry (24%)	100	100	68	58
Critical (15%)	100	97	67	78

**Alternative 5 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	11
40%	0	0	0	2
50%	0	0	0	4
60%	0	0	2	-2
70%	0	0	-1	5
80%	0	0	-2	0
90%	0	0	1	-1
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	1
Above Normal (16%)	0	0	0	2
Below Normal (13%)	0	0	0	-4
Dry (24%)	0	0	0	-1
Critical (15%)	0	2	-1	9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

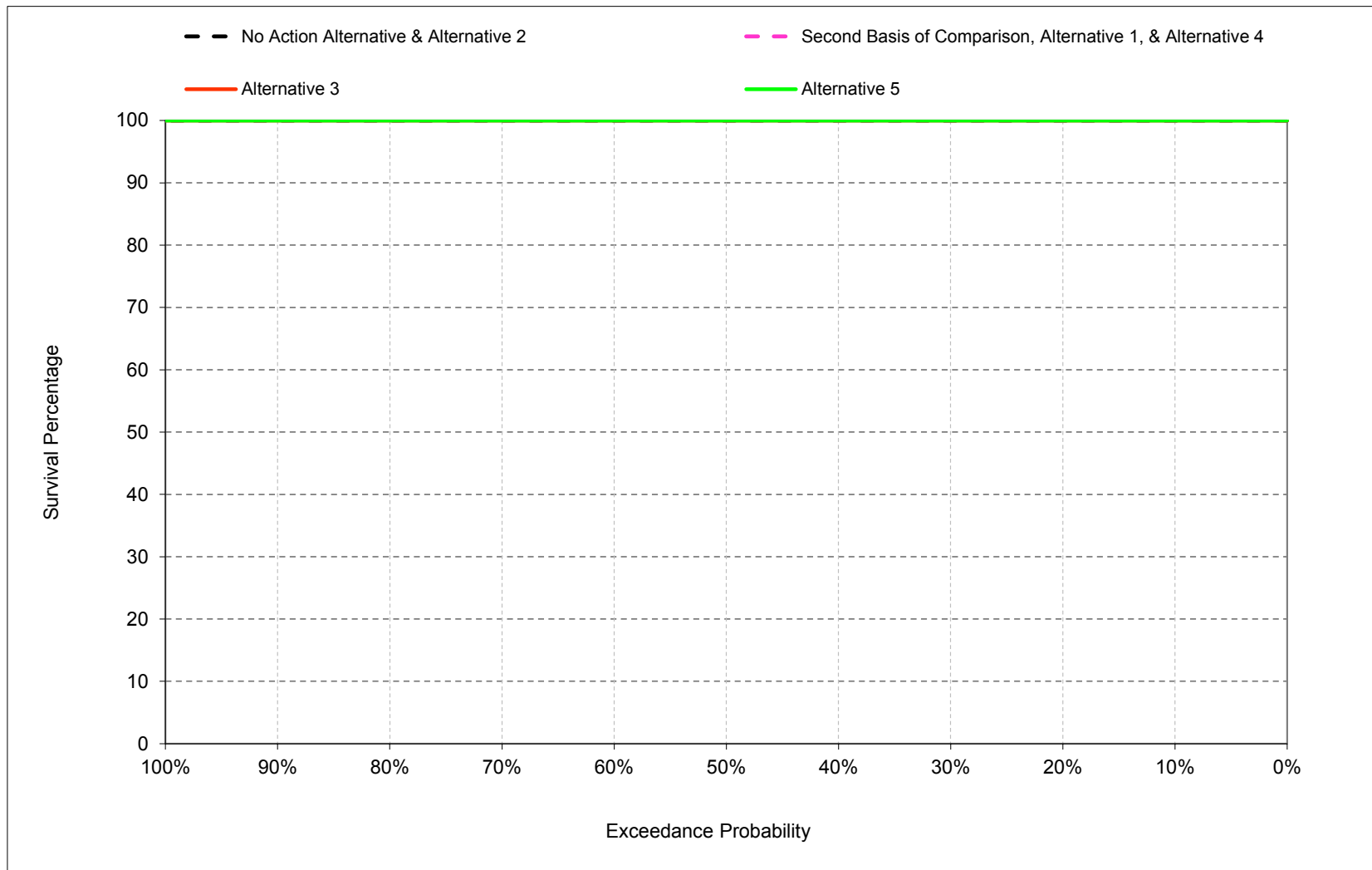
c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

1  
2

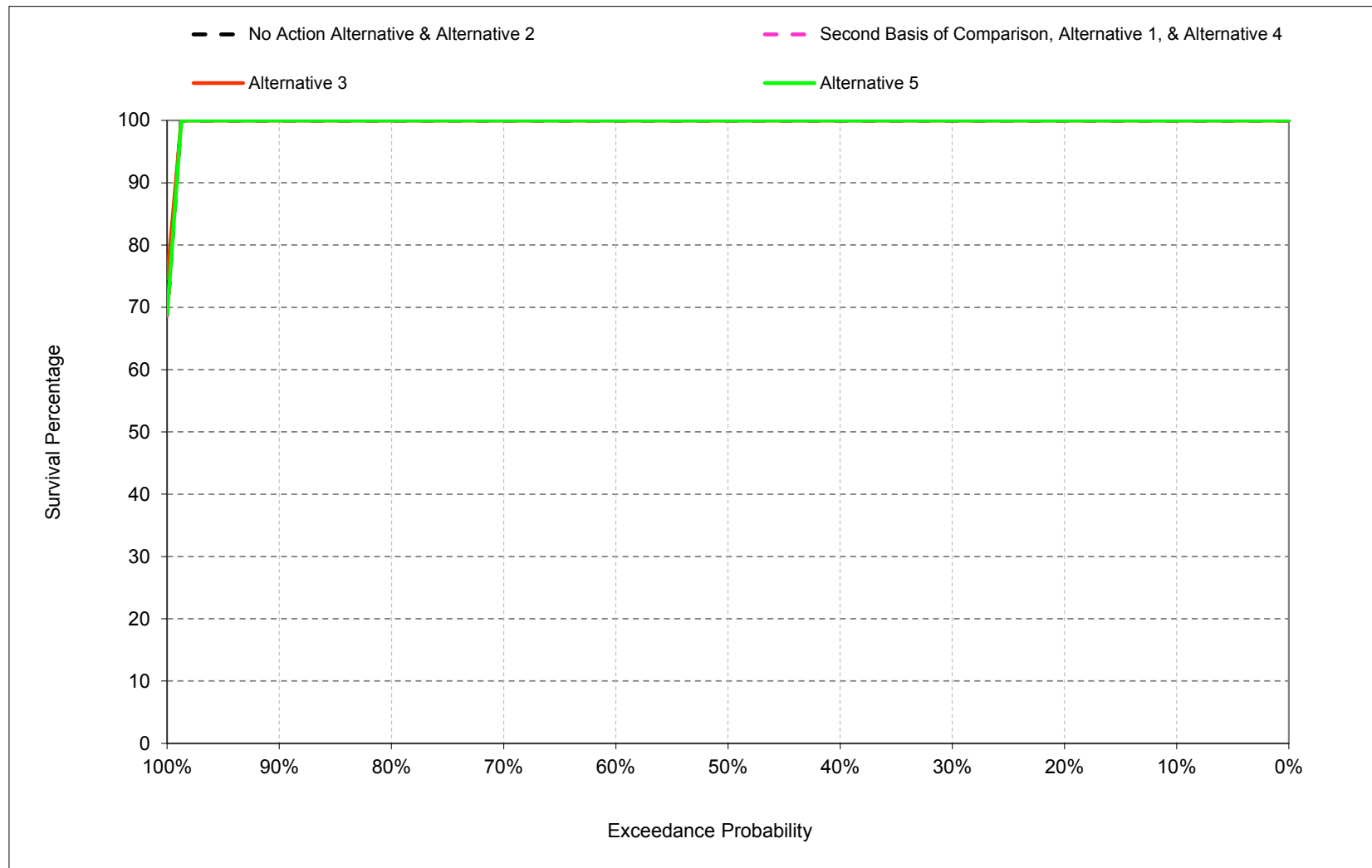
## **B.2. Trinity Small Mouth Bass Survival Percentage**

Figure B-2-1. Trinity Small Mouth Bass Nest Survival Percentage, March



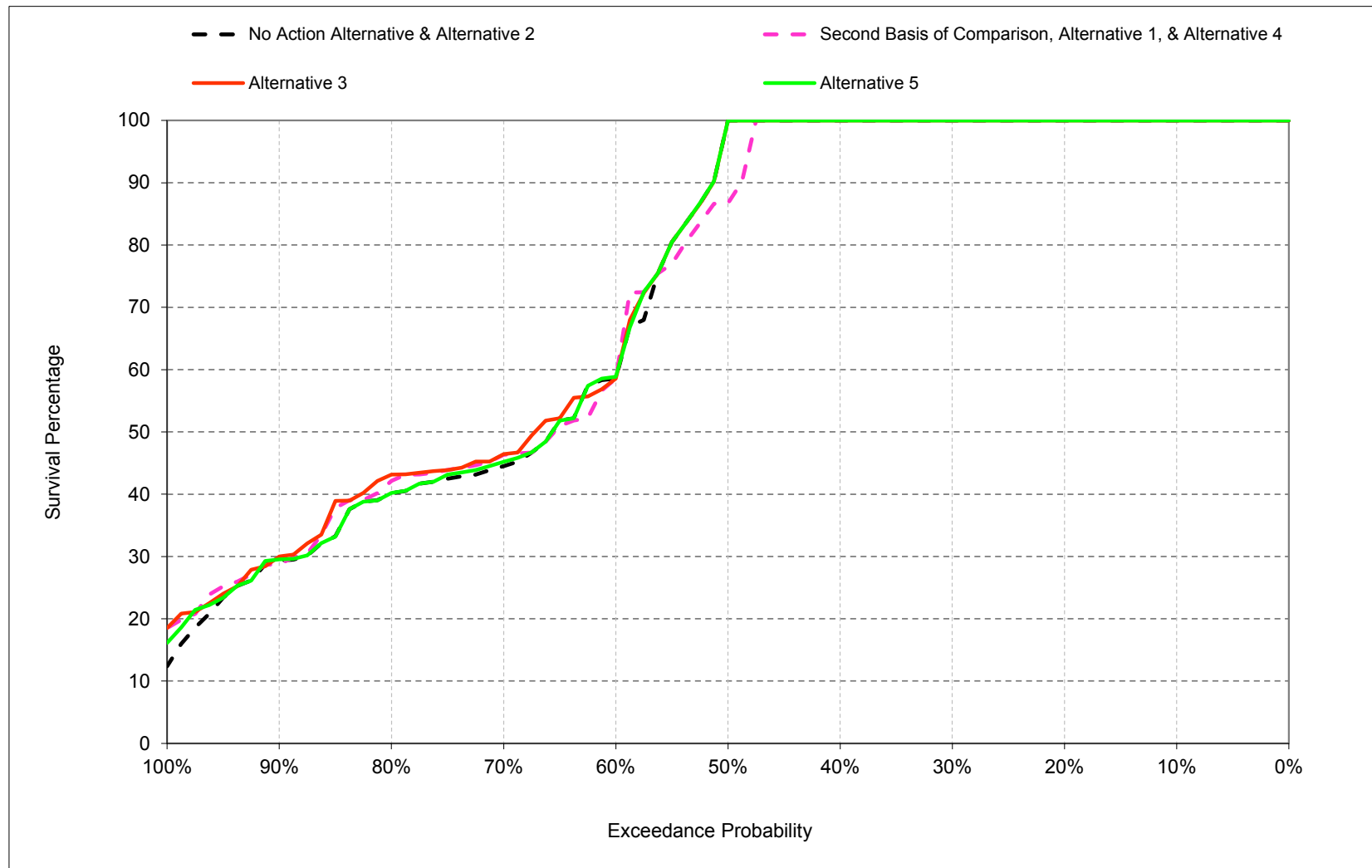
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-2-2. Trinity Small Mouth Bass Nest Survival Percentage, April



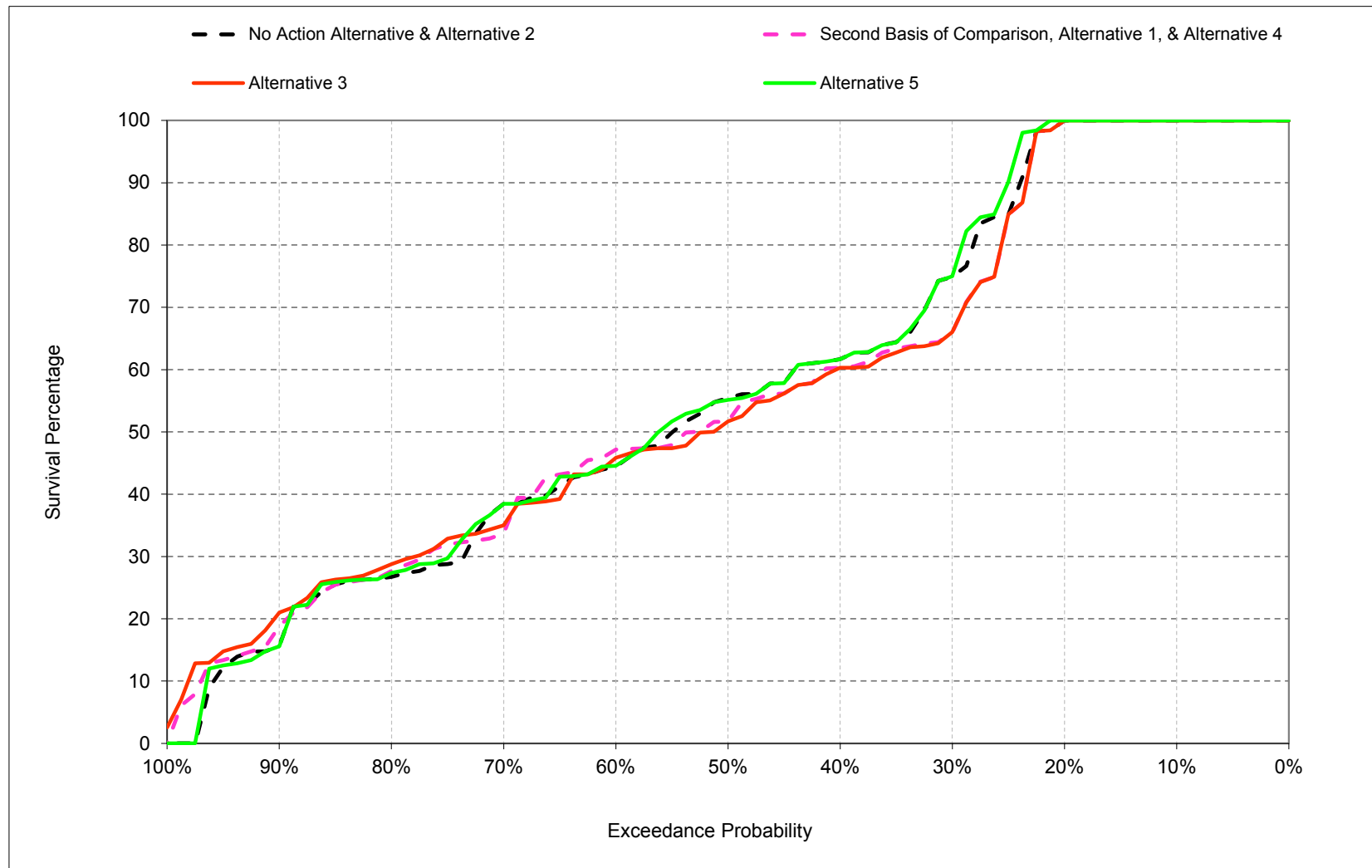
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-2-3. Trinity Small Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-2-4. Trinity Small Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-2-1. Trinity Small Mouth Bass Nest Survival  
Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	75
40%	100	100	100	62
50%	100	100	95	55
60%	100	100	58	44
70%	100	100	44	37
80%	100	100	39	26
90%	100	100	29	15
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	72	56
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	80	47
Below Normal (13%)	100	100	59	37
Dry (24%)	100	100	63	51
Critical (15%)	100	95	62	70

<b>Alternative 1</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	65
40%	100	100	100	60
50%	100	100	87	52
60%	100	100	57	46
70%	100	100	46	33
80%	100	100	41	27
90%	100	100	29	16
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	72	55
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	81	46
Below Normal (13%)	100	100	60	41
Dry (24%)	100	100	63	52
Critical (15%)	100	93	62	63

<b>Alternative 1 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-9
40%	0	0	0	-1
50%	0	0	-8	-3
60%	0	0	-1	2
70%	0	0	1	-4
80%	0	0	1	0
90%	0	0	0	1
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	-1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	1	-1
Below Normal (13%)	0	0	1	3
Dry (24%)	0	0	0	1
Critical (15%)	0	-2	0	-6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-2-2. Trinity Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	75
40%	100	100	100	62
50%	100	100	95	55
60%	100	100	58	44
70%	100	100	44	37
80%	100	100	39	26
90%	100	100	29	15
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	72	56
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	80	47
Below Normal (13%)	100	100	59	37
Dry (24%)	100	100	63	51
Critical (15%)	100	95	62	70

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	65
40%	100	100	100	60
50%	100	100	95	51
60%	100	100	58	45
70%	100	100	46	35
80%	100	100	42	28
90%	100	100	29	18
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	73	56
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	82	47
Below Normal (13%)	100	100	60	37
Dry (24%)	100	100	64	53
Critical (15%)	100	95	64	64

**Alternative 3 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-9
40%	0	0	0	-2
50%	0	0	0	-4
60%	0	0	-1	1
70%	0	0	2	-3
80%	0	0	3	2
90%	0	0	0	4
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	1	-1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-1
Above Normal (16%)	0	0	1	0
Below Normal (13%)	0	0	1	0
Dry (24%)	0	0	1	2
Critical (15%)	0	0	2	-5

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.



**Table B-2-3. Trinity Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	75
40%	100	100	100	62
50%	100	100	95	55
60%	100	100	58	44
70%	100	100	44	37
80%	100	100	39	26
90%	100	100	29	15
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	72	56
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	80	47
Below Normal (13%)	100	100	59	37
Dry (24%)	100	100	63	51
Critical (15%)	100	95	62	70

<b>Alternative 5</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	75
40%	100	100	100	62
50%	100	100	95	55
60%	100	100	59	44
70%	100	100	45	37
80%	100	100	39	27
90%	100	100	29	15
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	72	57
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	81	47
Below Normal (13%)	100	100	60	38
Dry (24%)	100	100	64	51
Critical (15%)	100	95	62	72

<b>Alternative 5 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	1	0
80%	0	0	0	0
90%	0	0	1	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	0
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	1	0
Dry (24%)	0	0	0	0
Critical (15%)	0	0	0	2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-2-4. Trinity Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

Second Basis of Comparison				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	65
40%	100	100	100	60
50%	100	100	87	52
60%	100	100	57	46
70%	100	100	46	33
80%	100	100	41	27
90%	100	100	29	16
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	72	55
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	81	46
Below Normal (13%)	100	100	60	41
Dry (24%)	100	100	63	52
Critical (15%)	100	93	62	63

No Action Alternative				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	75
40%	100	100	100	62
50%	100	100	95	55
60%	100	100	58	44
70%	100	100	44	37
80%	100	100	39	26
90%	100	100	29	15
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	72	56
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	80	47
Below Normal (13%)	100	100	59	37
Dry (24%)	100	100	63	51
Critical (15%)	100	95	62	70

No Action Alternative minus Second Basis of Comparison				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	9
40%	0	0	0	1
50%	0	0	8	3
60%	0	0	1	-2
70%	0	0	-1	4
80%	0	0	-1	0
90%	0	0	0	-1
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	-1	1
Below Normal (13%)	0	0	-1	-3
Dry (24%)	0	0	0	-1
Critical (15%)	0	2	0	6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-2-5. Trinity Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	65
40%	100	100	100	60
50%	100	100	87	52
60%	100	100	57	46
70%	100	100	46	33
80%	100	100	41	27
90%	100	100	29	16
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	72	55
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	81	46
Below Normal (13%)	100	100	60	41
Dry (24%)	100	100	63	52
Critical (15%)	100	93	62	63

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	65
40%	100	100	100	60
50%	100	100	95	51
60%	100	100	58	45
70%	100	100	46	35
80%	100	100	42	28
90%	100	100	29	18
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	73	56
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	82	47
Below Normal (13%)	100	100	60	37
Dry (24%)	100	100	64	53
Critical (15%)	100	95	64	64

**Alternative 3 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	8	-1
60%	0	0	0	-2
70%	0	0	0	1
80%	0	0	2	1
90%	0	0	0	3
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	1	0
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	1	1
Below Normal (13%)	0	0	0	-3
Dry (24%)	0	0	1	1
Critical (15%)	0	2	2	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-2-6. Trinity Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

Second Basis of Comparison				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	65
40%	100	100	100	60
50%	100	100	87	52
60%	100	100	57	46
70%	100	100	46	33
80%	100	100	41	27
90%	100	100	29	16
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	72	55
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	81	46
Below Normal (13%)	100	100	60	41
Dry (24%)	100	100	63	52
Critical (15%)	100	93	62	63

Alternative 5				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	75
40%	100	100	100	62
50%	100	100	95	55
60%	100	100	59	44
70%	100	100	45	37
80%	100	100	39	27
90%	100	100	29	15
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	72	57
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	100	84	66
Above Normal (16%)	100	100	81	47
Below Normal (13%)	100	100	60	38
Dry (24%)	100	100	64	51
Critical (15%)	100	95	62	72

Alternative 5 minus Second Basis of Comparison				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	9
40%	0	0	0	1
50%	0	0	8	3
60%	0	0	1	-2
70%	0	0	-1	4
80%	0	0	-1	0
90%	0	0	1	-1
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	1
Below Normal (13%)	0	0	0	-3
Dry (24%)	0	0	1	-1
Critical (15%)	0	2	0	9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

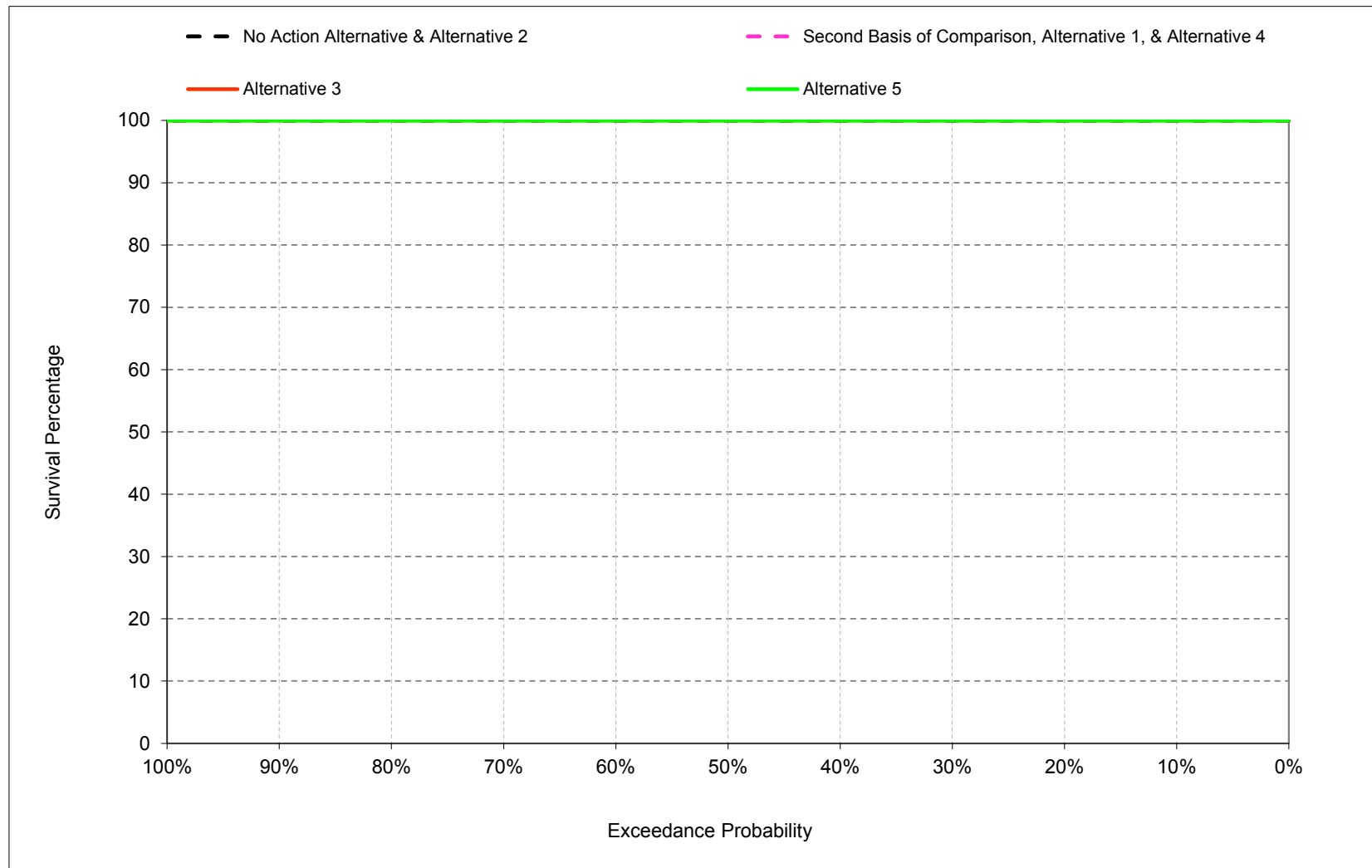
c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

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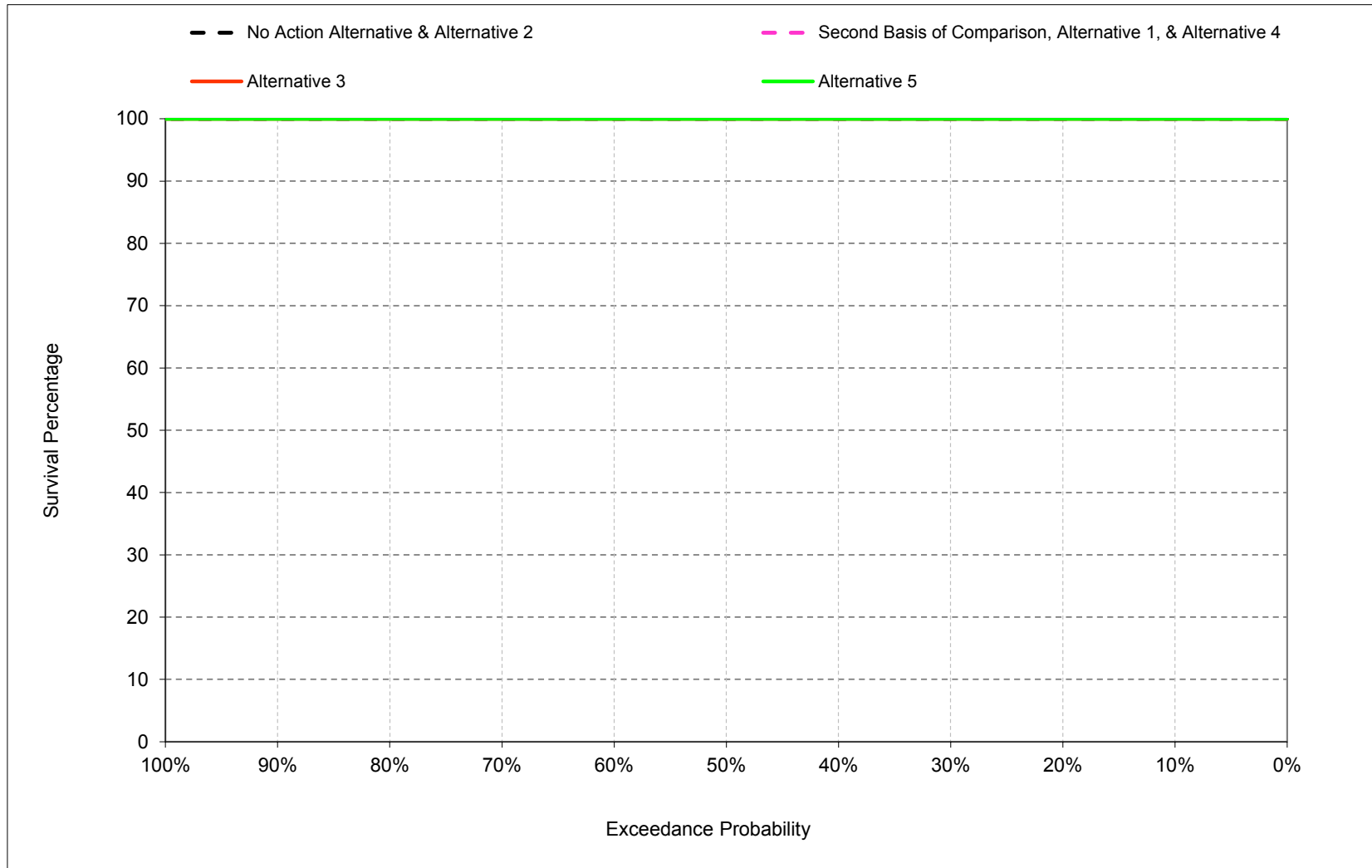
### **B.3. Trinity Spotted Bass Survival Percentage**

Figure B-3-1. Trinity Spotted Bass Nest Survival Percentage, March



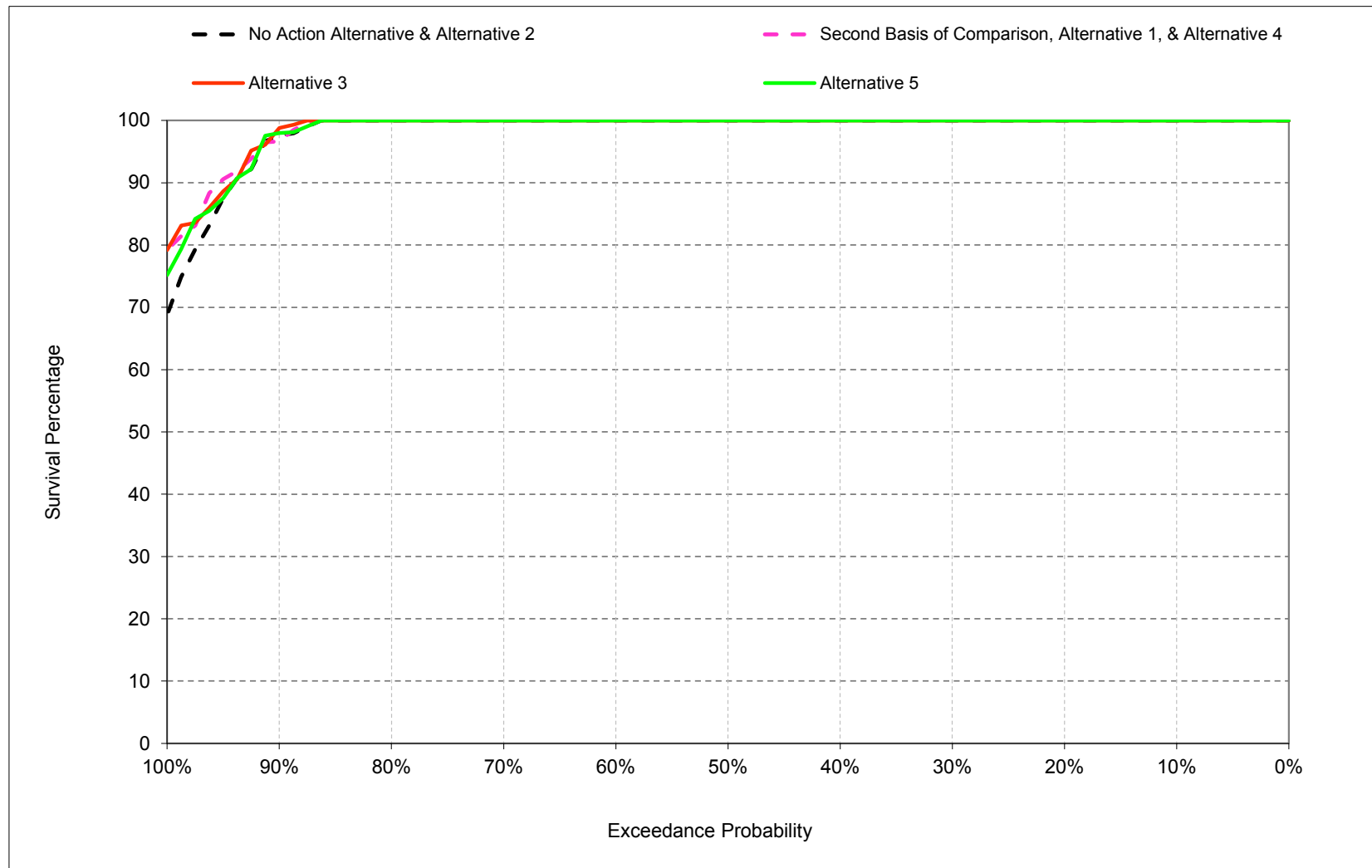
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-3-2. Trinity Spotted Bass Nest Survival Percentage, April



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

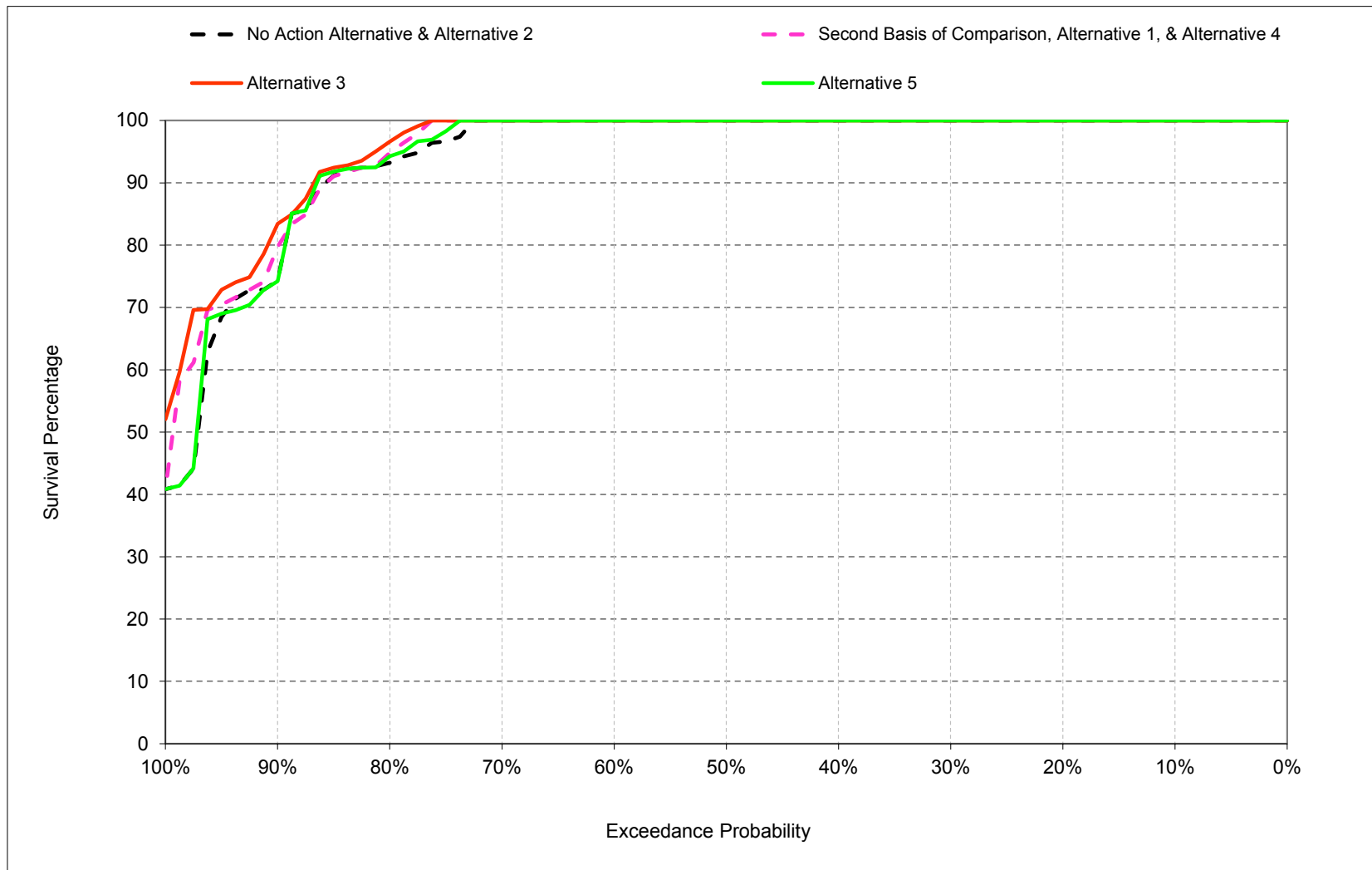
Figure B-3-3. Trinity Spotted Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.



Figure B-3-4. Trinity Spotted Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-3-1. Trinity Spotted Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	97	73
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	98	94
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	93
Below Normal (13%)	100	100	96	89
Dry (24%)	100	100	96	90
Critical (15%)	100	100	99	99

**Alternative 1**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	97	75
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	98	95
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	91
Below Normal (13%)	100	100	98	89
Dry (24%)	100	100	97	96
Critical (15%)	100	100	99	99

**Alternative 1 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	0
90%	0	0	0	2
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	-2
Below Normal (13%)	0	0	2	-1
Dry (24%)	0	0	1	5
Critical (15%)	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-3-2. Trinity Spotted Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	97	73
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	98	94
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	93
Below Normal (13%)	100	100	96	89
Dry (24%)	100	100	96	90
Critical (15%)	100	100	99	99

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	95
90%	100	100	96	79
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	98	95
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	93
Below Normal (13%)	100	100	97	90
Dry (24%)	100	100	97	96
Critical (15%)	100	100	100	100

**Alternative 3 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	3
90%	0	0	0	6
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	2	1
Dry (24%)	0	0	1	6
Critical (15%)	0	0	0	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-3-3. Trinity Spotted Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	97	73
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	98	94
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	93
Below Normal (13%)	100	100	96	89
Dry (24%)	100	100	96	90
Critical (15%)	100	100	99	99

**Alternative 5**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	98	73
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	98	94
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	94
Below Normal (13%)	100	100	97	89
Dry (24%)	100	100	96	90
Critical (15%)	100	100	99	99

**Alternative 5 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	0
90%	0	0	1	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	0
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	2	0
Dry (24%)	0	0	0	0
Critical (15%)	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-3-4. Trinity Spotted Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	97	75
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	98	95
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	91
Below Normal (13%)	100	100	98	89
Dry (24%)	100	100	97	96
Critical (15%)	100	100	99	99

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	97	73
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	98	94
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	93
Below Normal (13%)	100	100	96	89
Dry (24%)	100	100	96	90
Critical (15%)	100	100	99	99

**No Action Alternative minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	0
90%	0	0	0	-2
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	-1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	2
Below Normal (13%)	0	0	-2	1
Dry (24%)	0	0	-1	-5
Critical (15%)	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-3-5. Trinity Spotted Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	97	75
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	98	95
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	91
Below Normal (13%)	100	100	98	89
Dry (24%)	100	100	97	96
Critical (15%)	100	100	99	99

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	95
90%	100	100	96	79
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	98	95
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	93
Below Normal (13%)	100	100	97	90
Dry (24%)	100	100	97	96
Critical (15%)	100	100	100	100

**Alternative 3 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	2
90%	0	0	0	4
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	2
Below Normal (13%)	0	0	-1	1
Dry (24%)	0	0	0	0
Critical (15%)	0	0	0	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-3-6. Trinity Spotted Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	97	75
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	98	95
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	91
Below Normal (13%)	100	100	98	89
Dry (24%)	100	100	97	96
Critical (15%)	100	100	99	99

**Alternative 5**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	93
90%	100	100	98	73
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	98	94
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	98	96
Above Normal (16%)	100	100	100	94
Below Normal (13%)	100	100	97	89
Dry (24%)	100	100	96	90
Critical (15%)	100	100	99	99

**Alternative 5 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	0
90%	0	0	1	-2
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	-1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	3
Below Normal (13%)	0	0	-1	1
Dry (24%)	0	0	-1	-5
Critical (15%)	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

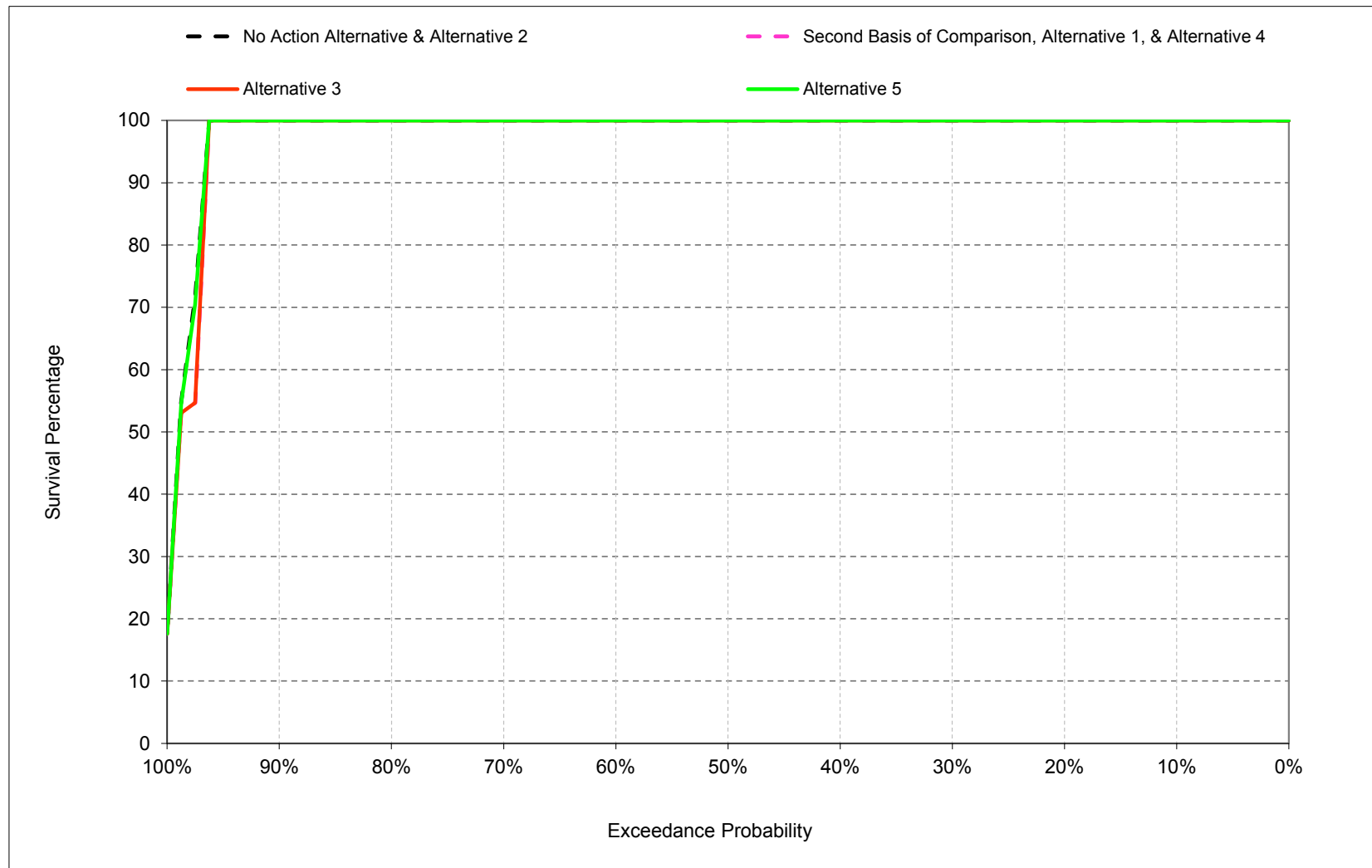
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

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## **B.4. Shasta Large Mouth Bass Survival Percentage**

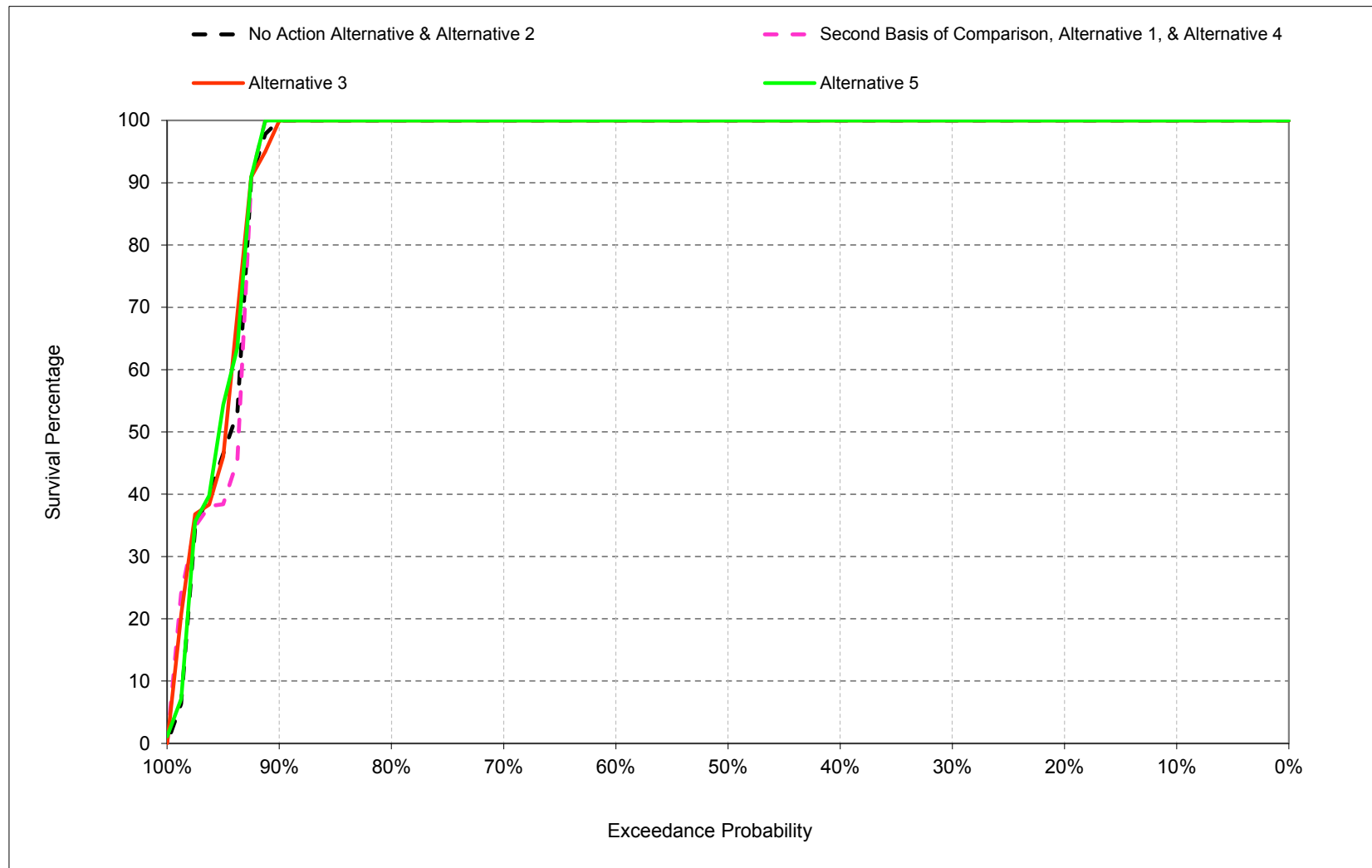


Figure B-4-1. Shasta Large Mouth Bass Nest Survival Percentage, March



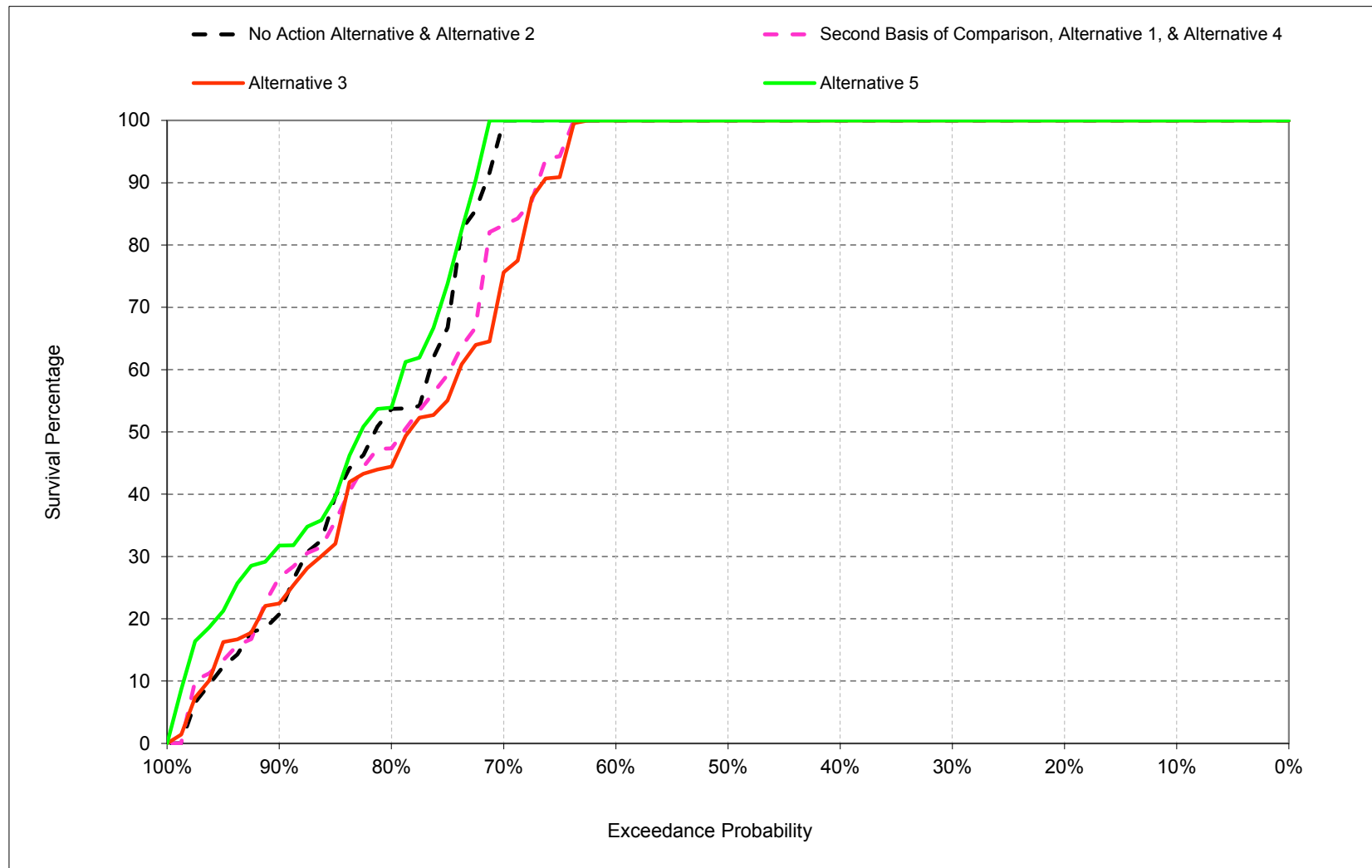
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-4-2. Shasta Large Mouth Bass Nest Survival Percentage, April



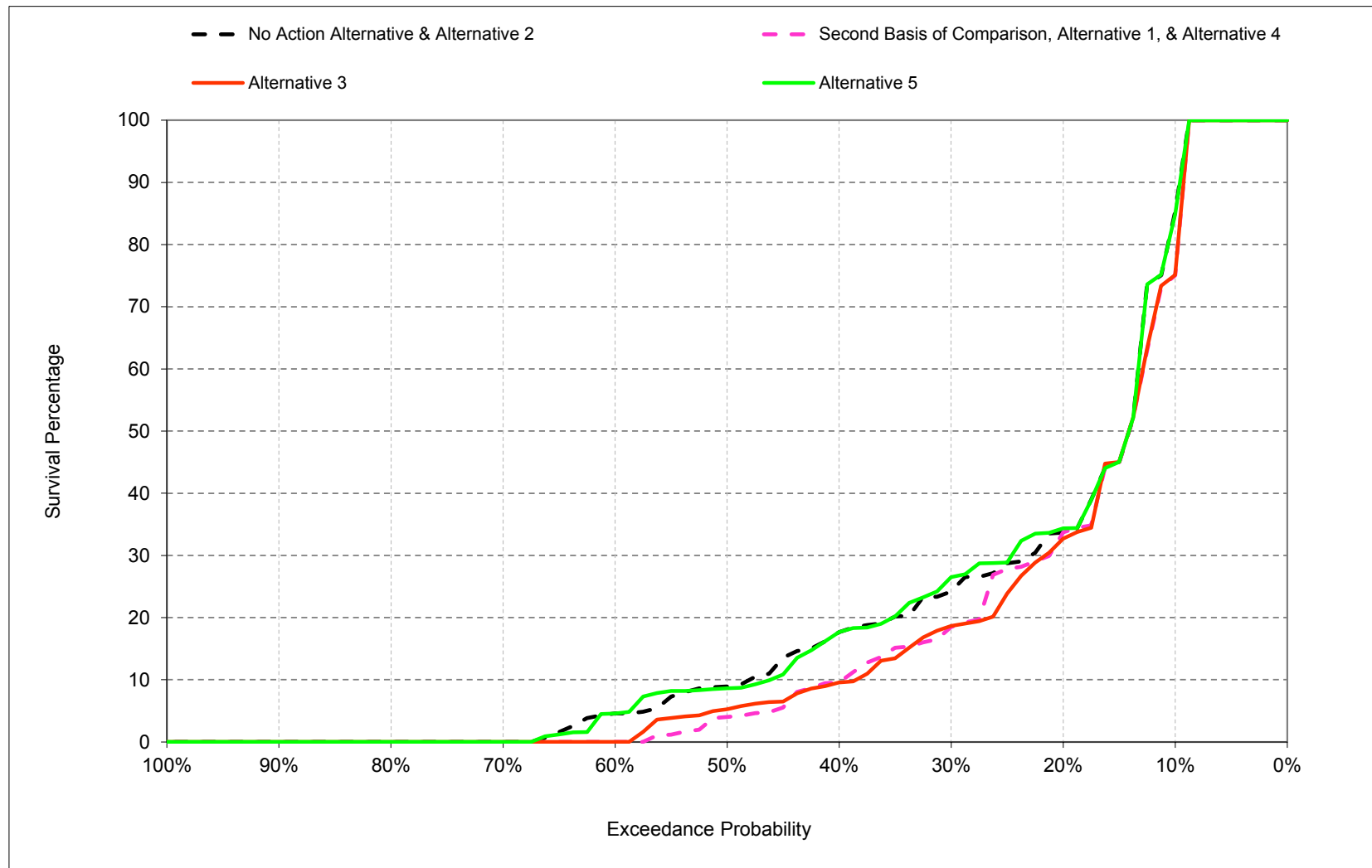
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-4-3. Shasta Large Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-4-4. Shasta Large Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-4-1. Shasta Large Mouth Bass Nest Survival Percentage, Monthly Percentage****No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	84
20%	100	100	100	34
30%	100	100	100	24
40%	100	100	100	17
50%	100	100	100	9
60%	100	100	100	4
70%	100	100	94	0
80%	100	100	51	0
90%	100	98	19	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	94	81	22
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	91	100	98	48
Above Normal (16%)	100	100	99	14
Below Normal (13%)	100	95	71	17
Dry (24%)	100	98	68	9
Critical (15%)	100	65	55	3

**Alternative 1**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	75
20%	100	100	100	33
30%	100	100	100	18
40%	100	100	100	10
50%	100	100	100	4
60%	100	100	100	0
70%	100	100	82	0
80%	100	100	47	0
90%	100	100	23	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	94	79	20
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	100	97	46
Above Normal (16%)	100	100	97	11
Below Normal (13%)	100	94	64	13
Dry (24%)	100	97	68	5
Critical (15%)	100	66	54	3

**Alternative 1 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	-9
20%	0	0	0	-1
30%	0	0	0	-6
40%	0	0	0	-8
50%	0	0	0	-5
60%	0	0	0	-4
70%	0	0	-12	0
80%	0	0	-4	0
90%	0	2	4	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	-2	-3
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	-1	0	-1	-2
Above Normal (16%)	0	0	-2	-3
Below Normal (13%)	0	-1	-7	-3
Dry (24%)	0	0	1	-4
Critical (15%)	0	1	-1	-1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-4-2. Shasta Large Mouth Bass Nest Survival Percentage, Monthly Percentage****No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	84
20%	100	100	100	34
30%	100	100	100	24
40%	100	100	100	17
50%	100	100	100	9
60%	100	100	100	4
70%	100	100	94	0
80%	100	100	51	0
90%	100	98	19	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	94	81	22
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	91	100	98	48
Above Normal (16%)	100	100	99	14
Below Normal (13%)	100	95	71	17
Dry (24%)	100	98	68	9
Critical (15%)	100	65	55	3

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	75
20%	100	100	100	32
30%	100	100	100	18
40%	100	100	100	9
50%	100	100	100	5
60%	100	100	100	0
70%	100	100	68	0
80%	100	100	44	0
90%	100	95	22	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	94	78	20
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	100	96	45
Above Normal (16%)	100	100	94	12
Below Normal (13%)	100	97	64	14
Dry (24%)	100	97	68	5
Critical (15%)	100	66	54	3

**Alternative 3 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	-9
20%	0	0	0	-1
30%	0	0	0	-5
40%	0	0	0	-8
50%	0	0	0	-4
60%	0	0	0	-4
70%	0	0	-26	0
80%	0	0	-7	0
90%	0	-3	3	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	-2	-3
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	-1	0	-1	-3
Above Normal (16%)	0	0	-5	-3
Below Normal (13%)	0	2	-8	-3
Dry (24%)	0	0	0	-3
Critical (15%)	0	1	-1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-4-3. Shasta Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	84
20%	100	100	100	34
30%	100	100	100	24
40%	100	100	100	17
50%	100	100	100	9
60%	100	100	100	4
70%	100	100	94	0
80%	100	100	51	0
90%	100	98	19	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	94	81	22
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	91	100	98	48
Above Normal (16%)	100	100	99	14
Below Normal (13%)	100	95	71	17
Dry (24%)	100	98	68	9
Critical (15%)	100	65	55	3

**Alternative 5**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	84
20%	100	100	100	34
30%	100	100	100	26
40%	100	100	100	17
50%	100	100	100	9
60%	100	100	100	4
70%	100	100	100	0
80%	100	100	54	0
90%	100	100	29	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	94	82	22
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	100	98	48
Above Normal (16%)	100	100	100	14
Below Normal (13%)	100	97	71	16
Dry (24%)	100	98	72	10
Critical (15%)	100	65	58	3

**Alternative 5 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	1
30%	0	0	0	2
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	6	0
80%	0	0	2	0
90%	0	2	11	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	2	0
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	1	0
Below Normal (13%)	0	2	0	-1
Dry (24%)	0	0	4	1
Critical (15%)	0	0	4	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-4-4. Shasta Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

<b>Second Basis of Comparison</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	75
20%	100	100	100	33
30%	100	100	100	18
40%	100	100	100	10
50%	100	100	100	4
60%	100	100	100	0
70%	100	100	82	0
80%	100	100	47	0
90%	100	100	23	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	94	79	20
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	100	97	46
Above Normal (16%)	100	100	97	11
Below Normal (13%)	100	94	64	13
Dry (24%)	100	97	68	5
Critical (15%)	100	66	54	3

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	84
20%	100	100	100	34
30%	100	100	100	24
40%	100	100	100	17
50%	100	100	100	9
60%	100	100	100	4
70%	100	100	94	0
80%	100	100	51	0
90%	100	98	19	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	94	81	22
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	91	100	98	48
Above Normal (16%)	100	100	99	14
Below Normal (13%)	100	95	71	17
Dry (24%)	100	98	68	9
Critical (15%)	100	65	55	3

<b>No Action Alternative minus Second Basis of Comparison</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	9
20%	0	0	0	1
30%	0	0	0	6
40%	0	0	0	8
50%	0	0	0	5
60%	0	0	0	4
70%	0	0	12	0
80%	0	0	4	0
90%	0	-2	-4	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	2	3
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	1	0	1	2
Above Normal (16%)	0	0	2	3
Below Normal (13%)	0	1	7	3
Dry (24%)	0	0	-1	4
Critical (15%)	0	-1	1	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.



**Table B-4-5. Shasta Large Mouth Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	75
20%	100	100	100	33
30%	100	100	100	18
40%	100	100	100	10
50%	100	100	100	4
60%	100	100	100	0
70%	100	100	82	0
80%	100	100	47	0
90%	100	100	23	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	94	79	20
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	100	97	46
Above Normal (16%)	100	100	97	11
Below Normal (13%)	100	94	64	13
Dry (24%)	100	97	68	5
Critical (15%)	100	66	54	3

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	75
20%	100	100	100	32
30%	100	100	100	18
40%	100	100	100	9
50%	100	100	100	5
60%	100	100	100	0
70%	100	100	68	0
80%	100	100	44	0
90%	100	95	22	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	94	78	20
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	100	96	45
Above Normal (16%)	100	100	94	12
Below Normal (13%)	100	97	64	14
Dry (24%)	100	97	68	5
Critical (15%)	100	66	54	3

**Alternative 3 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	-1
30%	0	0	0	1
40%	0	0	0	0
50%	0	0	0	1
60%	0	0	0	0
70%	0	0	-15	0
80%	0	0	-3	0
90%	0	-5	-1	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	-1	0
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-1
Above Normal (16%)	0	0	-3	1
Below Normal (13%)	0	3	-1	0
Dry (24%)	0	0	-1	1
Critical (15%)	0	0	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-4-6. Shasta Large Mouth Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	75
20%	100	100	100	33
30%	100	100	100	18
40%	100	100	100	10
50%	100	100	100	4
60%	100	100	100	0
70%	100	100	82	0
80%	100	100	47	0
90%	100	100	23	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	94	79	20
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	100	97	46
Above Normal (16%)	100	100	97	11
Below Normal (13%)	100	94	64	13
Dry (24%)	100	97	68	5
Critical (15%)	100	66	54	3

**Alternative 5**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	84
20%	100	100	100	34
30%	100	100	100	26
40%	100	100	100	17
50%	100	100	100	9
60%	100	100	100	4
70%	100	100	100	0
80%	100	100	54	0
90%	100	100	29	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	94	82	22
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	100	98	48
Above Normal (16%)	100	100	100	14
Below Normal (13%)	100	97	71	16
Dry (24%)	100	98	72	10
Critical (15%)	100	65	58	3

**Alternative 5 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	9
20%	0	0	0	1
30%	0	0	0	8
40%	0	0	0	8
50%	0	0	0	5
60%	0	0	0	4
70%	0	0	18	0
80%	0	0	6	0
90%	0	0	6	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	3	3
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	1	0	1	2
Above Normal (16%)	0	0	3	3
Below Normal (13%)	0	2	7	3
Dry (24%)	0	0	4	5
Critical (15%)	0	-1	5	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

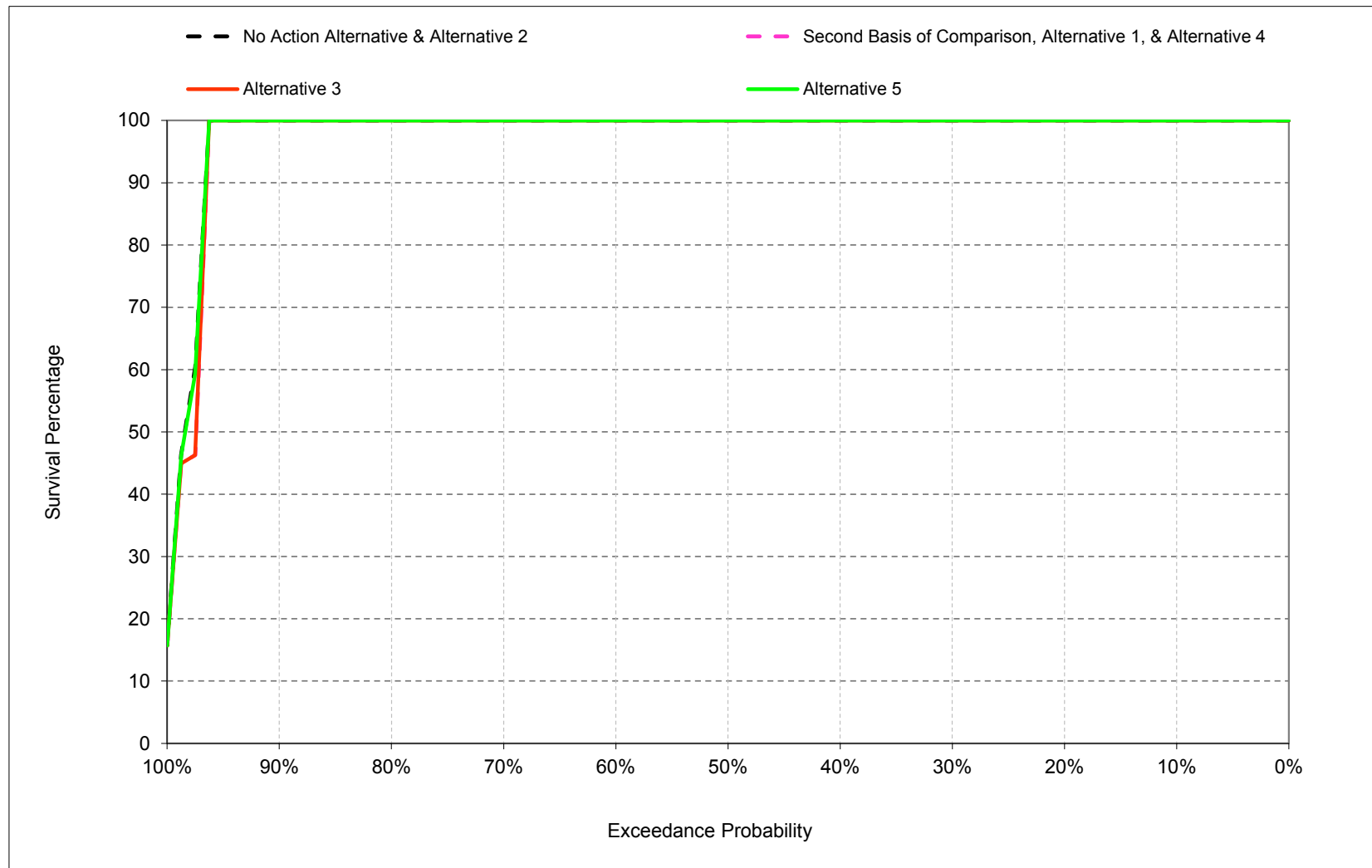
c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

1  
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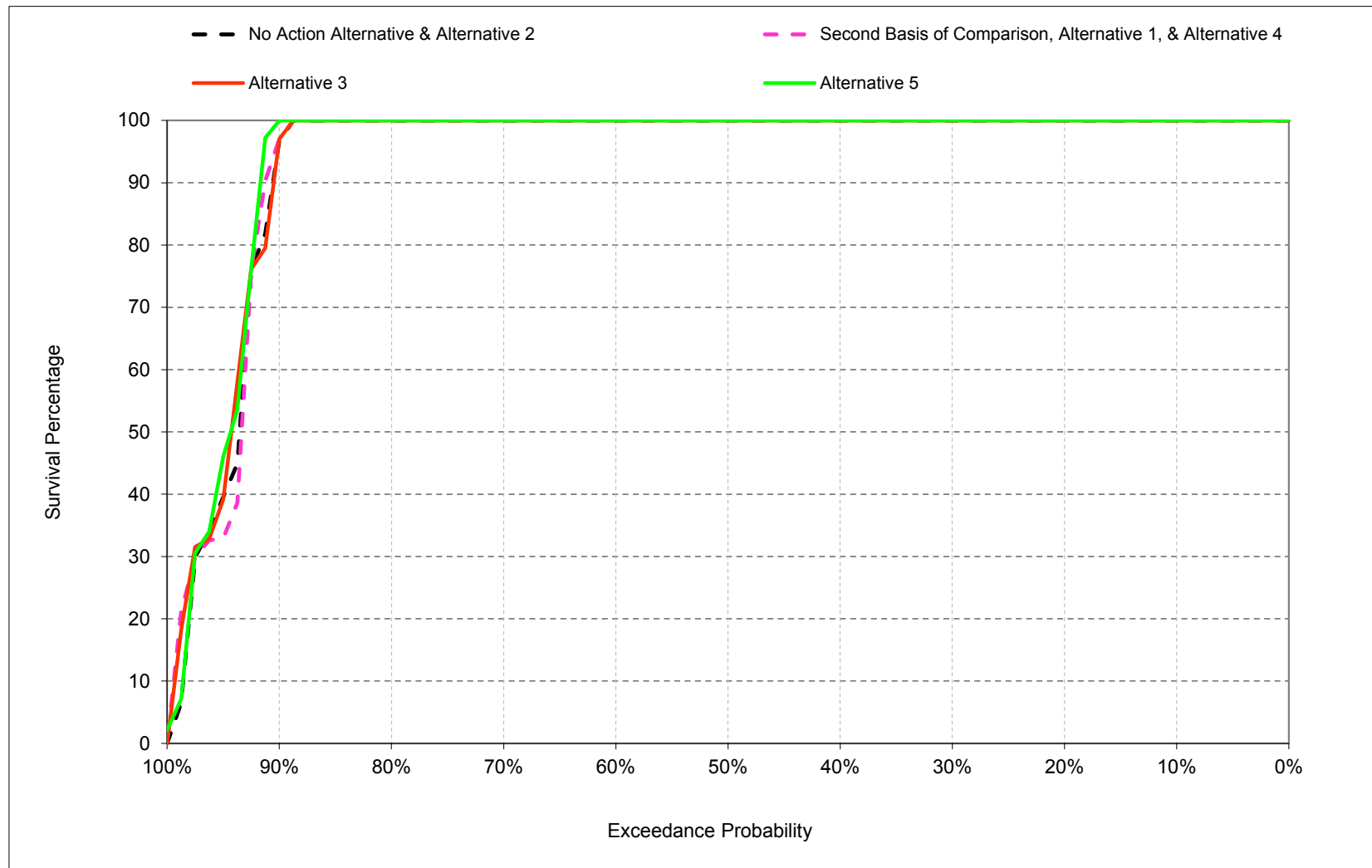
## **B.5. Shasta Small Mouth Bass Survival Percentage**

Figure B-5-1. Shasta Small Mouth Bass Nest Survival Percentage, March



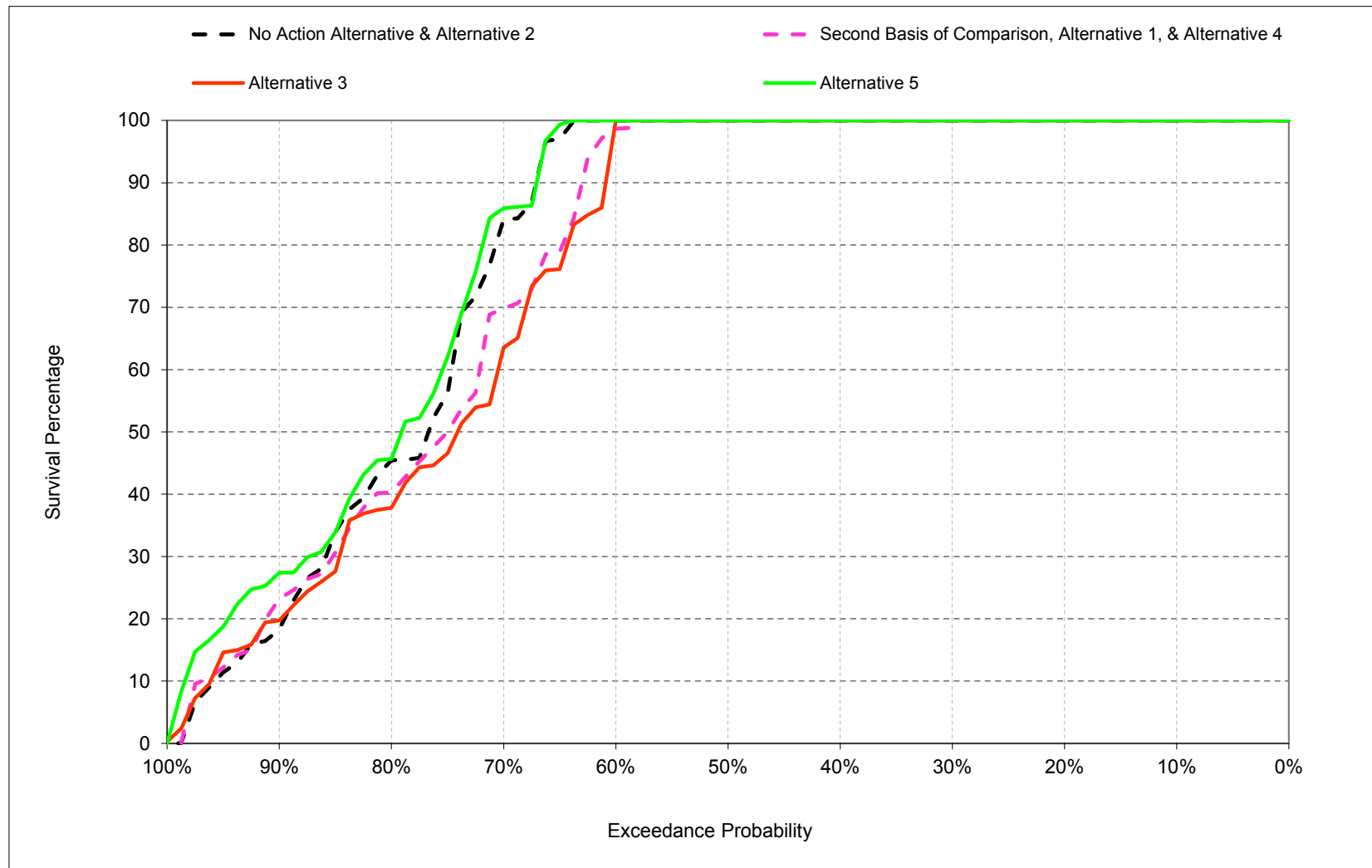
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-5-2. Shasta Small Mouth Bass Nest Survival Percentage, April



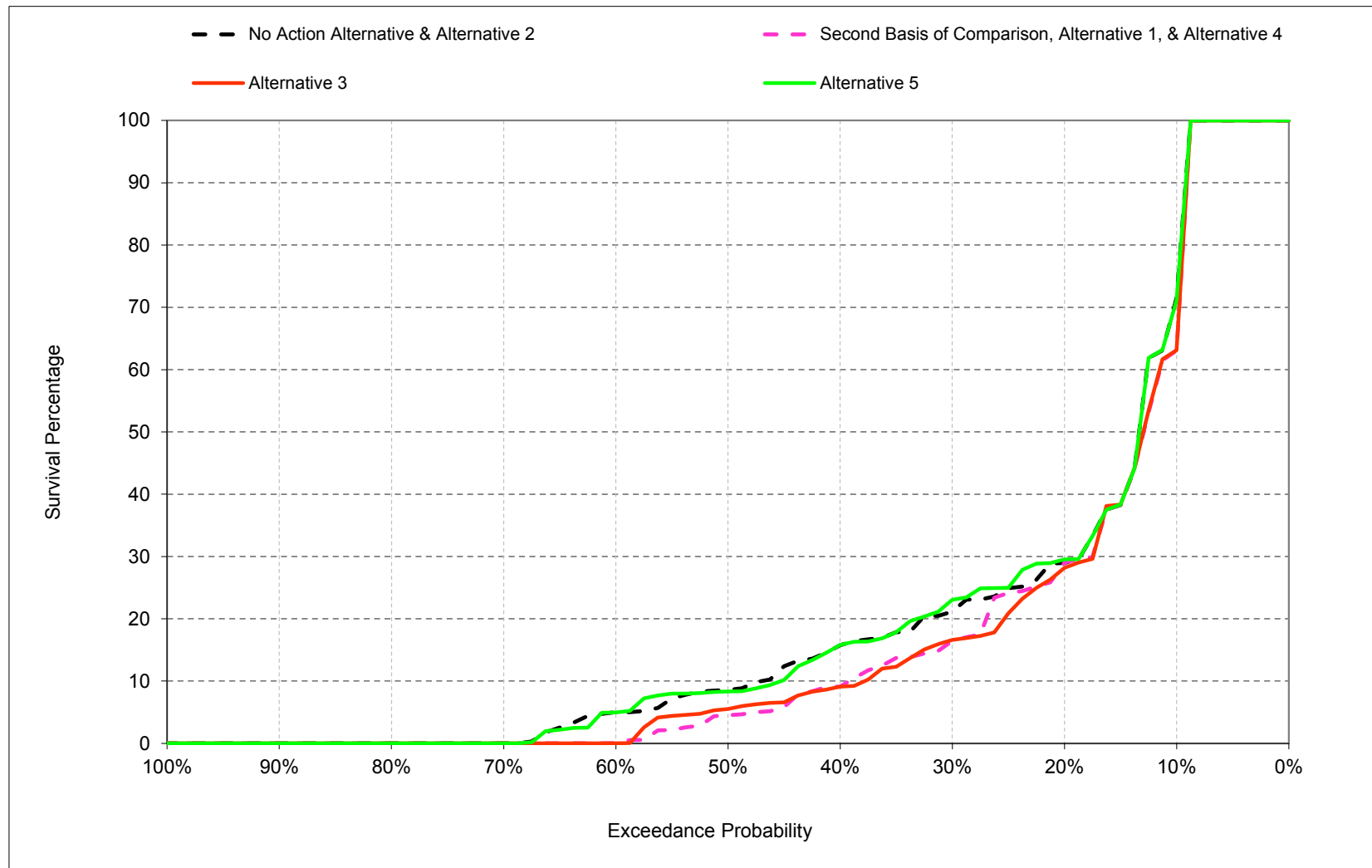
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-5-3. Shasta Small Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-5-4. Shasta Small Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-5-1. Shasta Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	71
20%	100	100	100	29
30%	100	100	100	21
40%	100	100	100	15
50%	100	100	100	9
60%	100	100	100	5
70%	100	100	79	0
80%	100	100	44	0
90%	100	83	17	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	93	78	21
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	99	97	44
Above Normal (16%)	100	100	97	14
Below Normal (13%)	100	95	66	16
Dry (24%)	100	96	66	8
Critical (15%)	100	64	50	3

<b>Alternative 1</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	63
20%	100	100	100	28
30%	100	100	100	16
40%	100	100	100	9
50%	100	100	100	4
60%	100	100	98	0
70%	100	100	69	0
80%	100	100	40	0
90%	100	91	20	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	93	77	19
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	89	99	96	43
Above Normal (16%)	100	100	95	11
Below Normal (13%)	100	94	57	13
Dry (24%)	100	97	66	5
Critical (15%)	100	64	49	2

<b>Alternative 1 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	-8
20%	0	0	0	-1
30%	0	0	0	-5
40%	0	0	0	-6
50%	0	0	0	-4
60%	0	0	-2	-5
70%	0	0	-10	0
80%	0	0	-3	0
90%	0	8	4	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	-2	-2
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	-1	0	-1	-2
Above Normal (16%)	0	0	-2	-3
Below Normal (13%)	0	-1	-8	-3
Dry (24%)	0	1	0	-3
Critical (15%)	0	0	-1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.



**Table B-5-2. Shasta Small Mouth Bass Nest Survival Percentage, Monthly Percentage****No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	71
20%	100	100	100	29
30%	100	100	100	21
40%	100	100	100	15
50%	100	100	100	9
60%	100	100	100	5
70%	100	100	79	0
80%	100	100	44	0
90%	100	83	17	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	93	78	21
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	99	97	44
Above Normal (16%)	100	100	97	14
Below Normal (13%)	100	95	66	16
Dry (24%)	100	96	66	8
Critical (15%)	100	64	50	3

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	63
20%	100	100	100	28
30%	100	100	100	16
40%	100	100	100	9
50%	100	100	100	5
60%	100	100	92	0
70%	100	100	57	0
80%	100	100	38	0
90%	100	81	19	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	93	76	19
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	89	99	96	42
Above Normal (16%)	100	100	91	12
Below Normal (13%)	100	96	57	13
Dry (24%)	100	96	65	5
Critical (15%)	100	65	50	3

**Alternative 3 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	-8
20%	0	0	0	-1
30%	0	0	0	-5
40%	0	0	0	-6
50%	0	0	0	-3
60%	0	0	-8	-5
70%	0	0	-22	0
80%	0	0	-6	0
90%	0	-2	3	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	-3	-2
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	-1	0	-2	-2
Above Normal (16%)	0	0	-6	-2
Below Normal (13%)	0	2	-9	-2
Dry (24%)	0	0	-1	-3
Critical (15%)	0	1	-1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-5-3. Shasta Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	71
20%	100	100	100	29
30%	100	100	100	21
40%	100	100	100	15
50%	100	100	100	9
60%	100	100	100	5
70%	100	100	79	0
80%	100	100	44	0
90%	100	83	17	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	93	78	21
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	99	97	44
Above Normal (16%)	100	100	97	14
Below Normal (13%)	100	95	66	16
Dry (24%)	100	96	66	8
Critical (15%)	100	64	50	3

<b>Alternative 5</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	70
20%	100	100	100	29
30%	100	100	100	22
40%	100	100	100	15
50%	100	100	100	8
60%	100	100	100	5
70%	100	100	85	0
80%	100	100	45	0
90%	100	97	25	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	93	80	21
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	99	97	45
Above Normal (16%)	100	100	98	14
Below Normal (13%)	100	96	65	15
Dry (24%)	100	97	70	9
Critical (15%)	100	64	55	3

<b>Alternative 5 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	2
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	6	0
80%	0	0	2	0
90%	0	14	9	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	2	0
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	1	0
Below Normal (13%)	0	1	-1	0
Dry (24%)	0	1	3	1
Critical (15%)	0	0	5	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-5-4. Shasta Small Mouth Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	63
20%	100	100	100	28
30%	100	100	100	16
40%	100	100	100	9
50%	100	100	100	4
60%	100	100	98	0
70%	100	100	69	0
80%	100	100	40	0
90%	100	91	20	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	93	77	19
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	89	99	96	43
Above Normal (16%)	100	100	95	11
Below Normal (13%)	100	94	57	13
Dry (24%)	100	97	66	5
Critical (15%)	100	64	49	2

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	71
20%	100	100	100	29
30%	100	100	100	21
40%	100	100	100	15
50%	100	100	100	9
60%	100	100	100	5
70%	100	100	79	0
80%	100	100	44	0
90%	100	83	17	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	93	78	21
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	99	97	44
Above Normal (16%)	100	100	97	14
Below Normal (13%)	100	95	66	16
Dry (24%)	100	96	66	8
Critical (15%)	100	64	50	3

**No Action Alternative minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	8
20%	0	0	0	1
30%	0	0	0	5
40%	0	0	0	6
50%	0	0	0	4
60%	0	0	2	5
70%	0	0	10	0
80%	0	0	3	0
90%	0	-8	-4	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	2	2
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	1	0	1	2
Above Normal (16%)	0	0	2	3
Below Normal (13%)	0	1	8	3
Dry (24%)	0	-1	0	3
Critical (15%)	0	0	1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-5-5. Shasta Small Mouth Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	63
20%	100	100	100	28
30%	100	100	100	16
40%	100	100	100	9
50%	100	100	100	4
60%	100	100	98	0
70%	100	100	69	0
80%	100	100	40	0
90%	100	91	20	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	93	77	19
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	89	99	96	43
Above Normal (16%)	100	100	95	11
Below Normal (13%)	100	94	57	13
Dry (24%)	100	97	66	5
Critical (15%)	100	64	49	2

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	63
20%	100	100	100	28
30%	100	100	100	16
40%	100	100	100	9
50%	100	100	100	5
60%	100	100	92	0
70%	100	100	57	0
80%	100	100	38	0
90%	100	81	19	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	93	76	19
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	89	99	96	42
Above Normal (16%)	100	100	91	12
Below Normal (13%)	100	96	57	13
Dry (24%)	100	96	65	5
Critical (15%)	100	65	50	3

**Alternative 3 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	-1
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	1
60%	0	0	-6	0
70%	0	0	-12	0
80%	0	0	-3	0
90%	0	-10	-1	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	-1	0
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-1
Above Normal (16%)	0	0	-4	1
Below Normal (13%)	0	2	0	0
Dry (24%)	0	-1	-1	0
Critical (15%)	0	1	0	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-5-6. Shasta Small Mouth Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	63
20%	100	100	100	28
30%	100	100	100	16
40%	100	100	100	9
50%	100	100	100	4
60%	100	100	98	0
70%	100	100	69	0
80%	100	100	40	0
90%	100	91	20	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	93	77	19
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	89	99	96	43
Above Normal (16%)	100	100	95	11
Below Normal (13%)	100	94	57	13
Dry (24%)	100	97	66	5
Critical (15%)	100	64	49	2

**Alternative 5**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	70
20%	100	100	100	29
30%	100	100	100	22
40%	100	100	100	15
50%	100	100	100	8
60%	100	100	100	5
70%	100	100	85	0
80%	100	100	45	0
90%	100	97	25	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	93	80	21
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	99	97	45
Above Normal (16%)	100	100	98	14
Below Normal (13%)	100	96	65	15
Dry (24%)	100	97	70	9
Critical (15%)	100	64	55	3

**Alternative 5 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	7
20%	0	0	0	1
30%	0	0	0	7
40%	0	0	0	6
50%	0	0	0	4
60%	0	0	2	5
70%	0	0	16	0
80%	0	0	5	0
90%	0	7	5	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	3	2
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	1	0	1	2
Above Normal (16%)	0	0	3	3
Below Normal (13%)	0	2	7	2
Dry (24%)	0	0	3	4
Critical (15%)	0	0	5	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

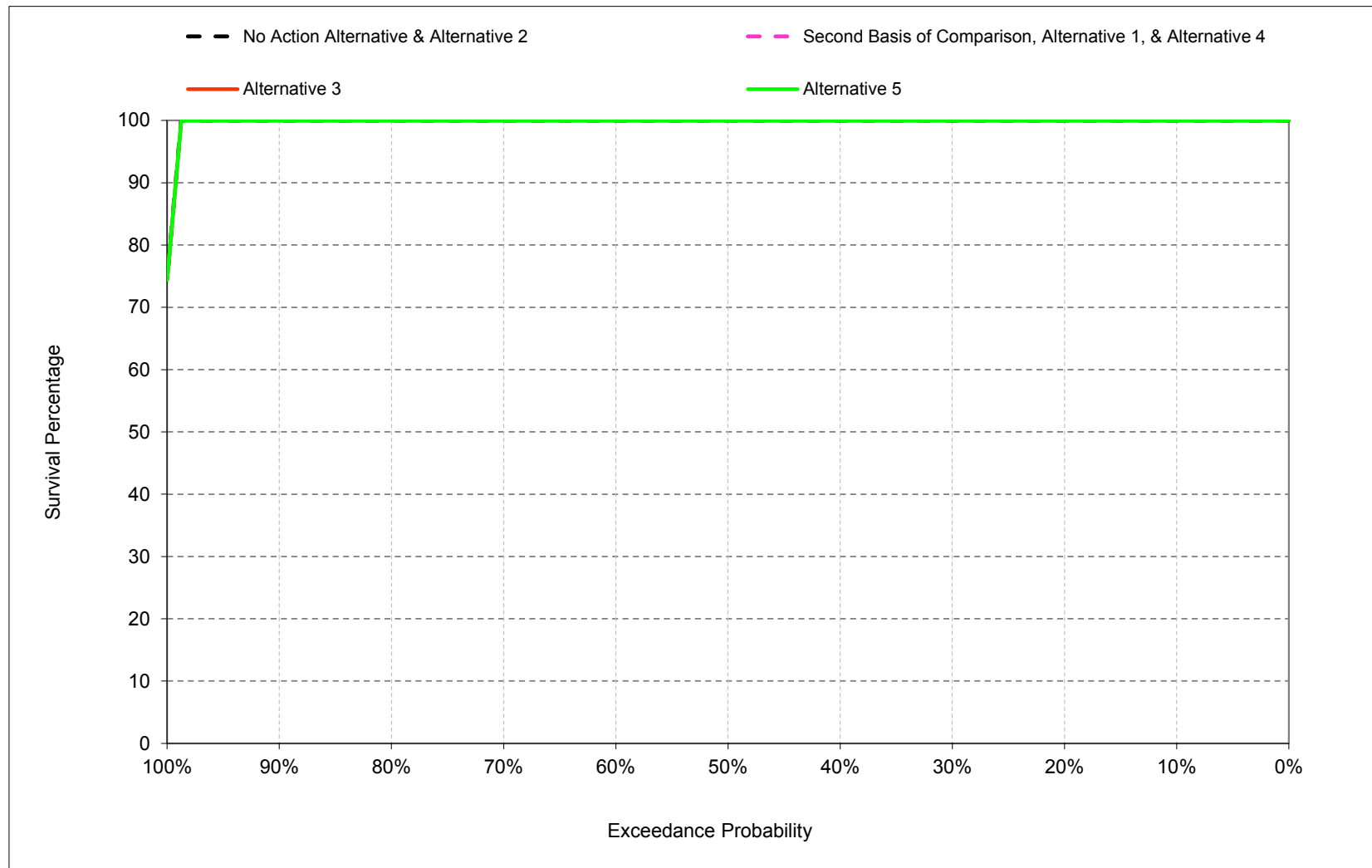
c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

1 **B.6. Shasta Spotted Bass Survival Percentage**

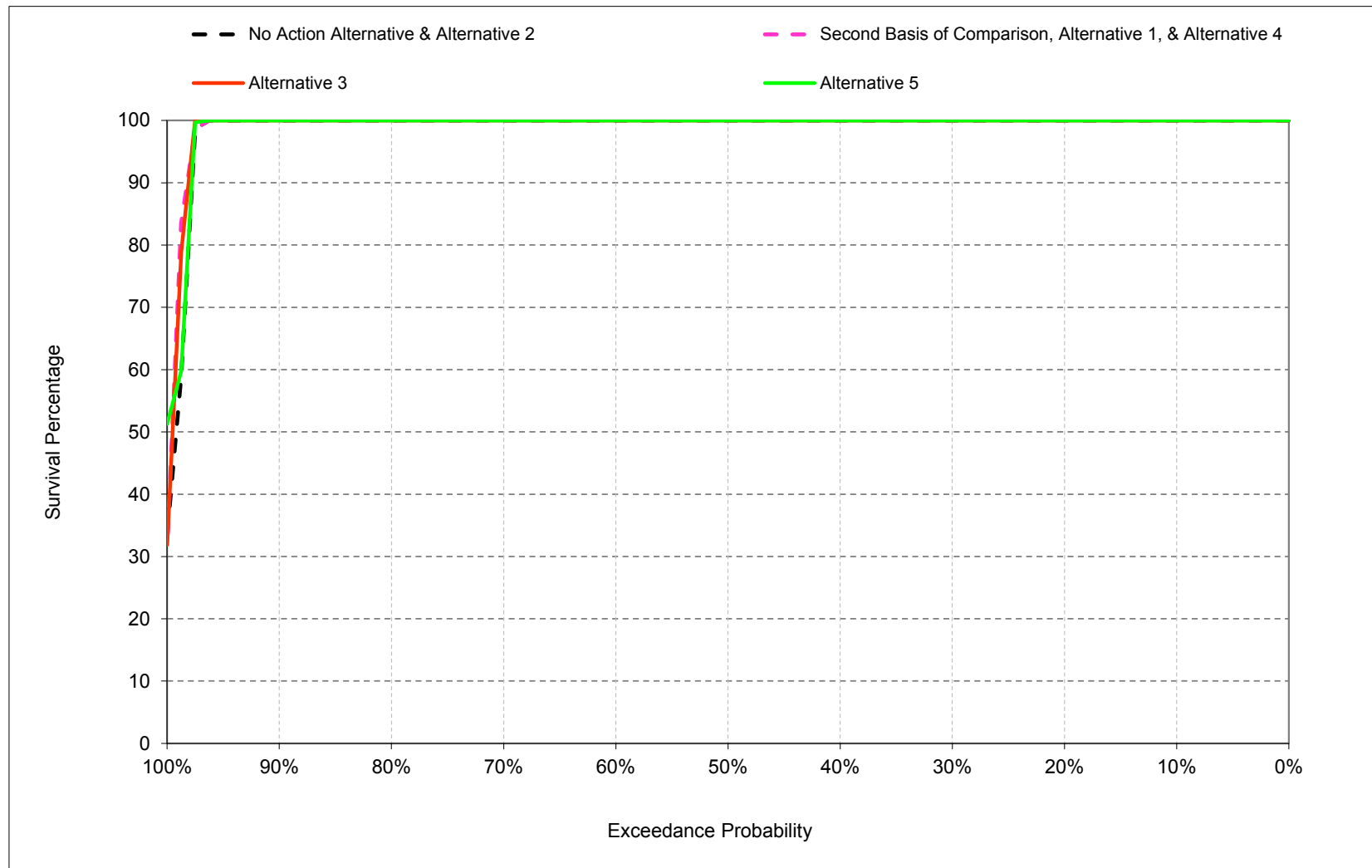
2

Figure B-6-1. Shasta Spotted Bass Nest Survival Percentage, March



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

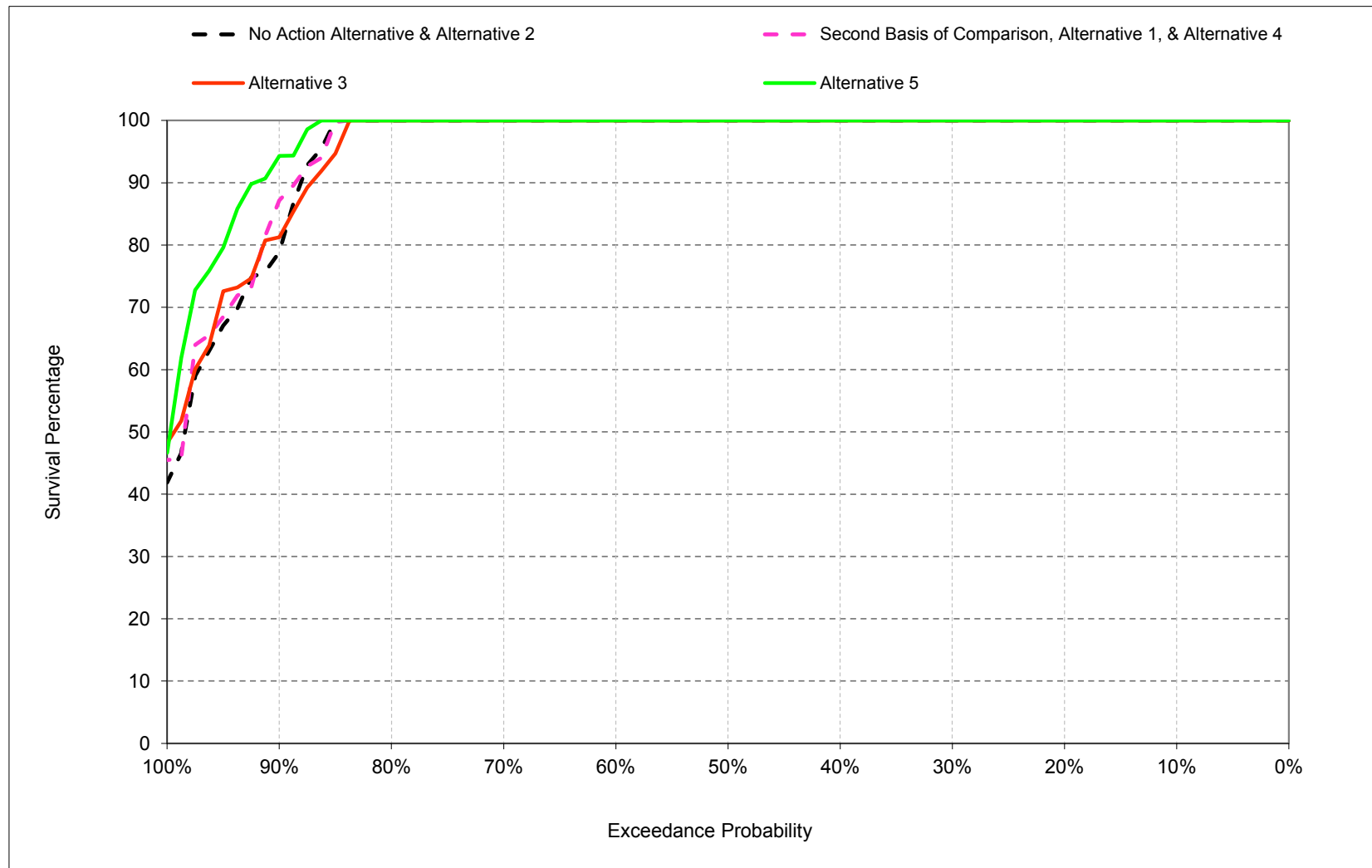
Figure B-6-2. Shasta Spotted Bass Nest Survival Percentage, April



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

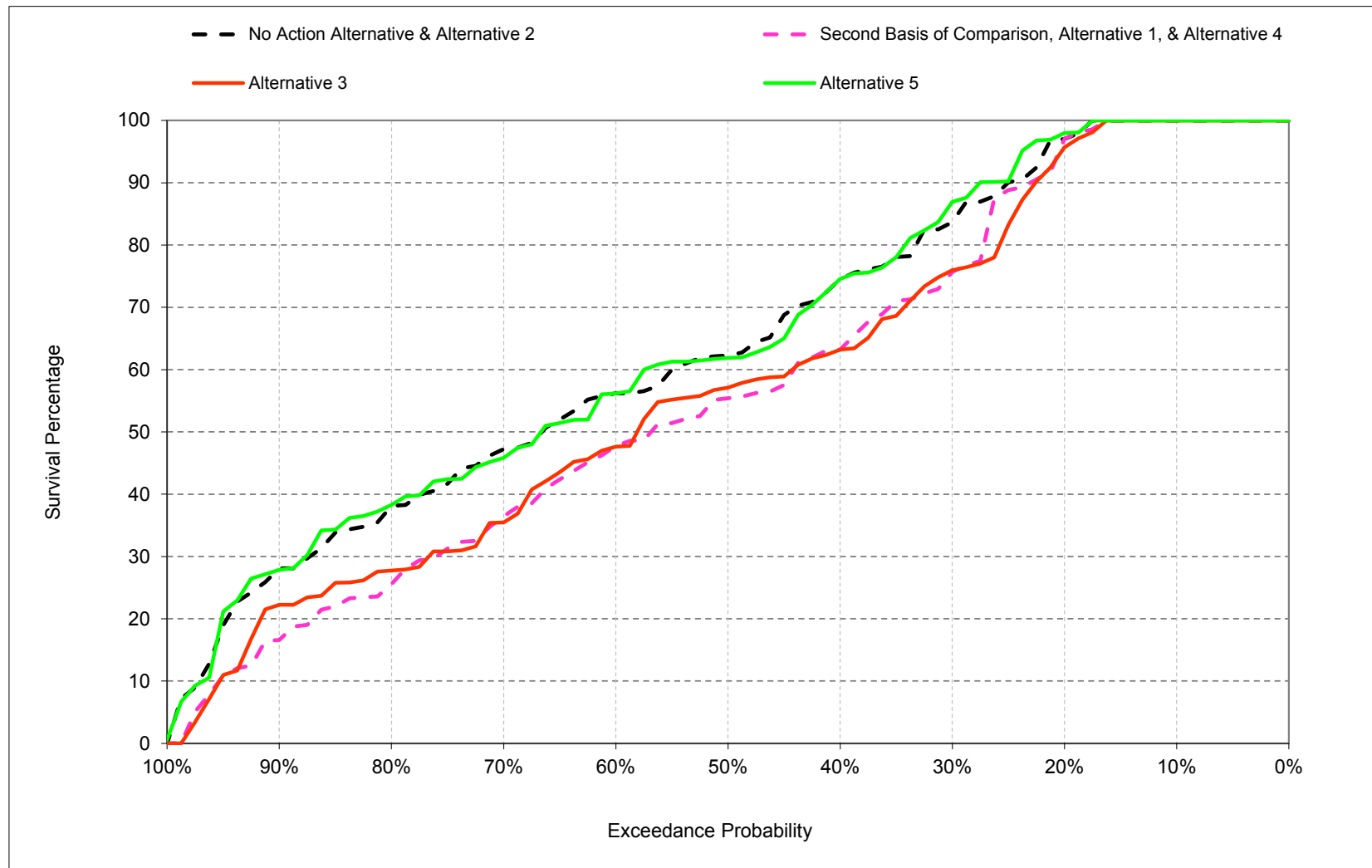


Figure B-6-3. Shasta Spotted Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-6-4. Shasta Spotted Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-6-1. Shasta Spotted Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	97
30%	100	100	100	83
40%	100	100	100	74
50%	100	100	100	62
60%	100	100	100	56
70%	100	100	100	46
80%	100	100	100	36
90%	100	100	76	26
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	98	95	63
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	87
Above Normal (16%)	100	100	100	60
Below Normal (13%)	100	100	96	58
Dry (24%)	100	100	91	55
Critical (15%)	100	84	84	31

**Alternative 1**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	96
30%	100	100	100	75
40%	100	100	100	63
50%	100	100	100	55
60%	100	100	100	47
70%	100	100	100	35
80%	100	100	100	24
90%	100	100	82	16
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	98	95	56
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	86
Above Normal (16%)	100	100	100	51
Below Normal (13%)	100	100	96	45
Dry (24%)	100	100	93	44
Critical (15%)	100	86	83	27

**Alternative 1 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	-1
30%	0	0	0	-8
40%	0	0	0	-11
50%	0	0	0	-7
60%	0	0	0	-9
70%	0	0	0	-11
80%	0	0	0	-12
90%	0	0	6	-10
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	-7
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-1
Above Normal (16%)	0	0	0	-9
Below Normal (13%)	0	0	-1	-13
Dry (24%)	0	0	2	-11
Critical (15%)	0	2	0	-4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-6-2. Shasta Spotted Bass Nest Survival Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	97
30%	100	100	100	83
40%	100	100	100	74
50%	100	100	100	62
60%	100	100	100	56
70%	100	100	100	46
80%	100	100	100	36
90%	100	100	76	26
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	98	95	63
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	87
Above Normal (16%)	100	100	100	60
Below Normal (13%)	100	100	96	58
Dry (24%)	100	100	91	55
Critical (15%)	100	84	84	31

<b>Alternative 3</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	95
30%	100	100	100	76
40%	100	100	100	63
50%	100	100	100	57
60%	100	100	100	47
70%	100	100	100	35
80%	100	100	100	28
90%	100	100	81	22
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	98	95	57
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	84
Above Normal (16%)	100	100	100	53
Below Normal (13%)	100	100	96	48
Dry (24%)	100	100	92	45
Critical (15%)	100	86	84	29

<b>Alternative 3 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	-2
30%	0	0	0	-8
40%	0	0	0	-11
50%	0	0	0	-5
60%	0	0	0	-9
70%	0	0	0	-11
80%	0	0	0	-8
90%	0	0	5	-5
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	-6
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-3
Above Normal (16%)	0	0	0	-7
Below Normal (13%)	0	0	-1	-11
Dry (24%)	0	0	1	-10
Critical (15%)	0	2	1	-2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-6-3. Shasta Spotted Bass Nest Survival Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	97
30%	100	100	100	83
40%	100	100	100	74
50%	100	100	100	62
60%	100	100	100	56
70%	100	100	100	46
80%	100	100	100	36
90%	100	100	76	26
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	98	95	63
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	87
Above Normal (16%)	100	100	100	60
Below Normal (13%)	100	100	96	58
Dry (24%)	100	100	91	55
Critical (15%)	100	84	84	31

<b>Alternative 5</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	98
30%	100	100	100	86
40%	100	100	100	74
50%	100	100	100	62
60%	100	100	100	56
70%	100	100	100	45
80%	100	100	100	37
90%	100	100	91	27
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	98	97	63
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	87
Above Normal (16%)	100	100	100	60
Below Normal (13%)	100	100	97	58
Dry (24%)	100	100	97	56
Critical (15%)	100	87	86	32

<b>Alternative 5 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	1
30%	0	0	0	3
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	-1
80%	0	0	0	1
90%	0	0	15	1
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	2	0
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	0	0
Dry (24%)	0	0	6	1
Critical (15%)	0	3	2	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-6-4. Shasta Spotted Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	96
30%	100	100	100	75
40%	100	100	100	63
50%	100	100	100	55
60%	100	100	100	47
70%	100	100	100	35
80%	100	100	100	24
90%	100	100	82	16
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	98	95	56
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	86
Above Normal (16%)	100	100	100	51
Below Normal (13%)	100	100	96	45
Dry (24%)	100	100	93	44
Critical (15%)	100	86	83	27

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	97
30%	100	100	100	83
40%	100	100	100	74
50%	100	100	100	62
60%	100	100	100	56
70%	100	100	100	46
80%	100	100	100	36
90%	100	100	76	26
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	98	95	63
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	87
Above Normal (16%)	100	100	100	60
Below Normal (13%)	100	100	96	58
Dry (24%)	100	100	91	55
Critical (15%)	100	84	84	31

**No Action Alternative minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	1
30%	0	0	0	8
40%	0	0	0	11
50%	0	0	0	7
60%	0	0	0	9
70%	0	0	0	11
80%	0	0	0	12
90%	0	0	-6	10
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	7
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	1
Above Normal (16%)	0	0	0	9
Below Normal (13%)	0	0	1	13
Dry (24%)	0	0	-2	11
Critical (15%)	0	-2	0	4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-6-5. Shasta Spotted Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	96
30%	100	100	100	75
40%	100	100	100	63
50%	100	100	100	55
60%	100	100	100	47
70%	100	100	100	35
80%	100	100	100	24
90%	100	100	82	16
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	98	95	56
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	86
Above Normal (16%)	100	100	100	51
Below Normal (13%)	100	100	96	45
Dry (24%)	100	100	93	44
Critical (15%)	100	86	83	27

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	95
30%	100	100	100	76
40%	100	100	100	63
50%	100	100	100	57
60%	100	100	100	47
70%	100	100	100	35
80%	100	100	100	28
90%	100	100	81	22
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	98	95	57
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	84
Above Normal (16%)	100	100	100	53
Below Normal (13%)	100	100	96	48
Dry (24%)	100	100	92	45
Critical (15%)	100	86	84	29

**Alternative 3 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	-1
30%	0	0	0	1
40%	0	0	0	0
50%	0	0	0	2
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	4
90%	0	0	-1	5
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-2
Above Normal (16%)	0	0	0	2
Below Normal (13%)	0	0	0	2
Dry (24%)	0	0	-1	1
Critical (15%)	0	0	1	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-6-6. Shasta Spotted Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	96
30%	100	100	100	75
40%	100	100	100	63
50%	100	100	100	55
60%	100	100	100	47
70%	100	100	100	35
80%	100	100	100	24
90%	100	100	82	16
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	98	95	56
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	86
Above Normal (16%)	100	100	100	51
Below Normal (13%)	100	100	96	45
Dry (24%)	100	100	93	44
Critical (15%)	100	86	83	27

**Alternative 5**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	98
30%	100	100	100	86
40%	100	100	100	74
50%	100	100	100	62
60%	100	100	100	56
70%	100	100	100	45
80%	100	100	100	37
90%	100	100	91	27
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	98	97	63
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	87
Above Normal (16%)	100	100	100	60
Below Normal (13%)	100	100	97	58
Dry (24%)	100	100	97	56
Critical (15%)	100	87	86	32

**Alternative 5 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	2
30%	0	0	0	11
40%	0	0	0	11
50%	0	0	0	7
60%	0	0	0	9
70%	0	0	0	10
80%	0	0	0	13
90%	0	0	9	11
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	1	7
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	2
Above Normal (16%)	0	0	0	9
Below Normal (13%)	0	0	1	13
Dry (24%)	0	0	4	12
Critical (15%)	0	1	2	4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

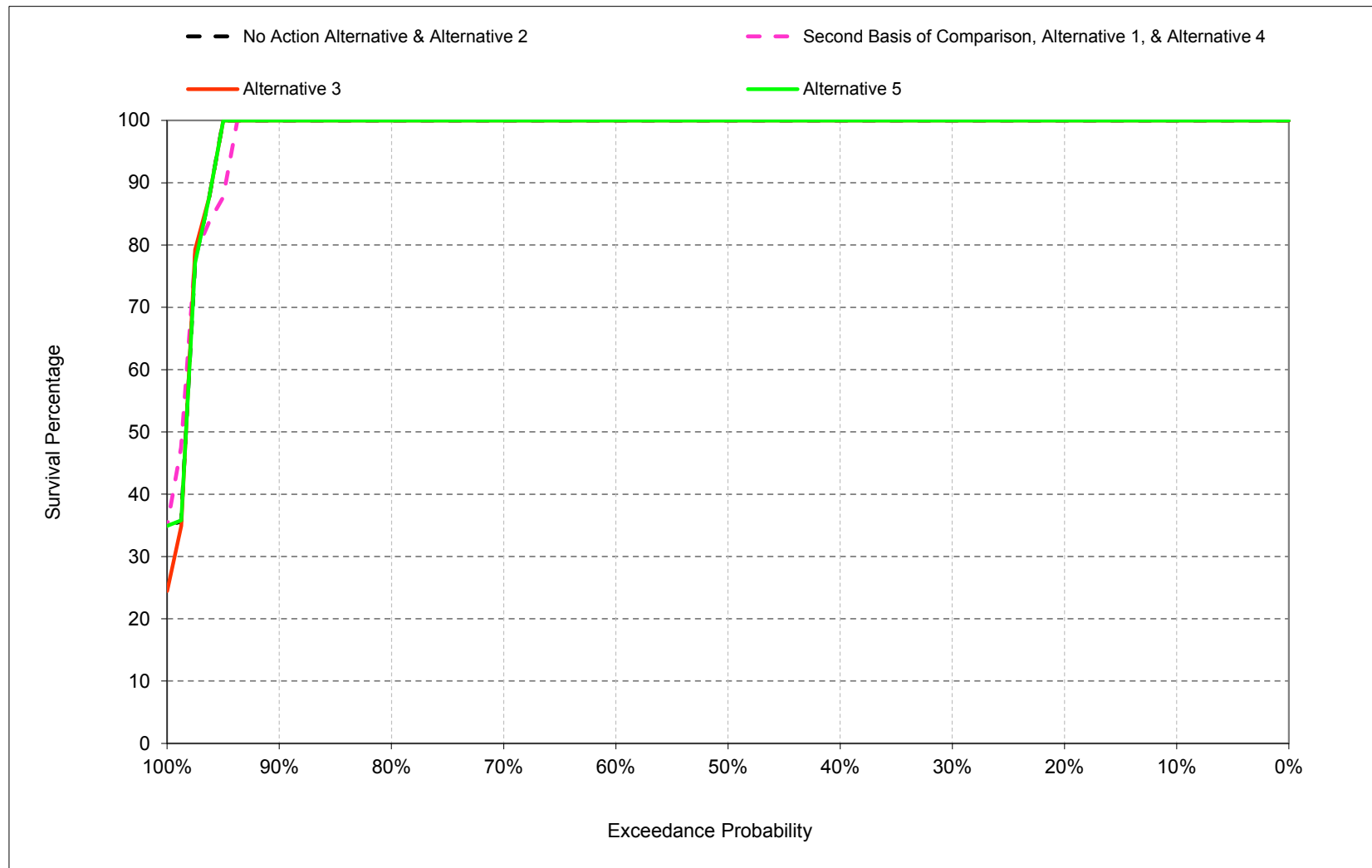
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.



1  
2

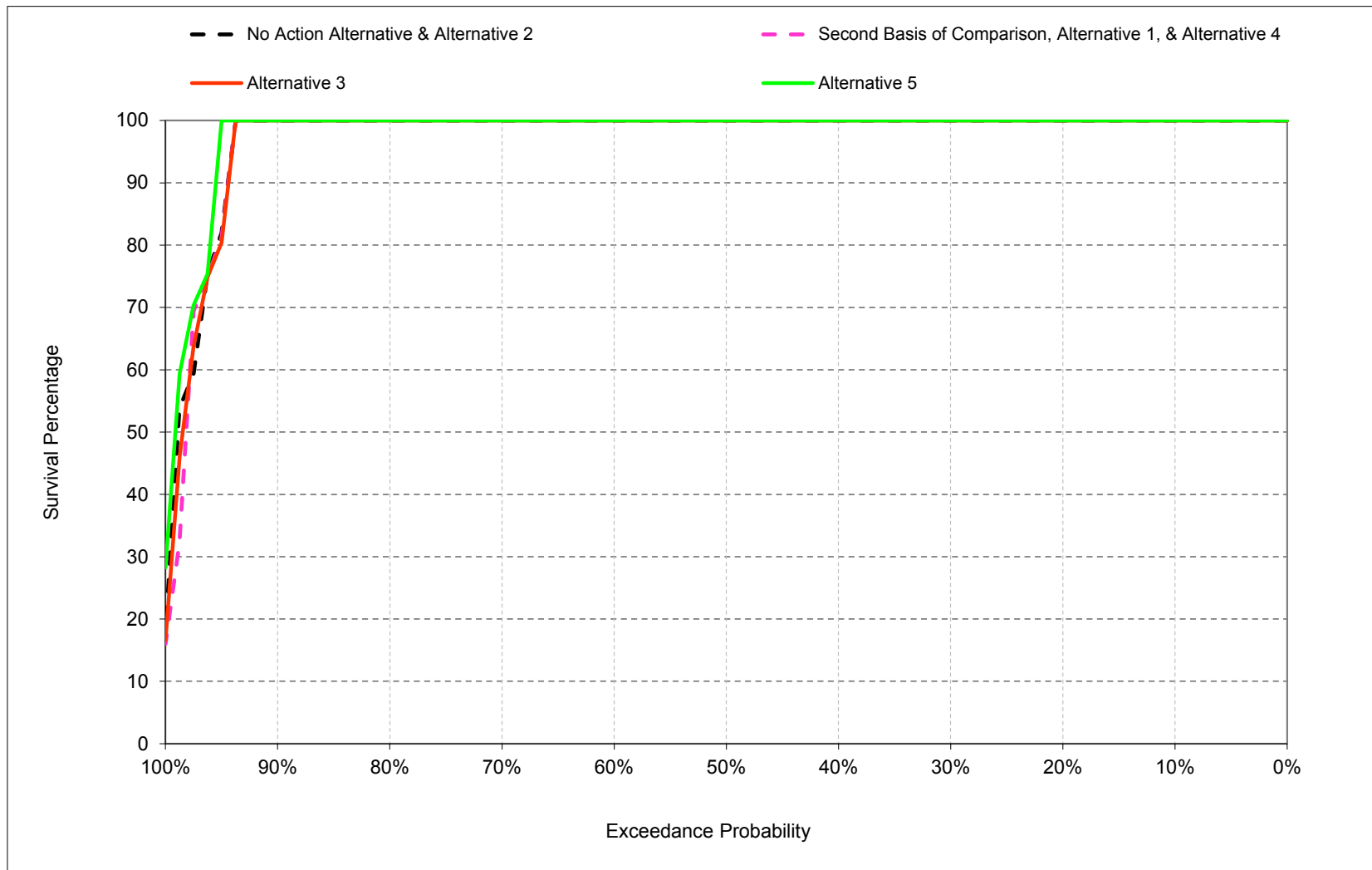
## **B.7. Oroville Large Mouth Bass Survival Percentage**

Figure B-7-1. Oroville Large Mouth Bass Nest Survival Percentage, March



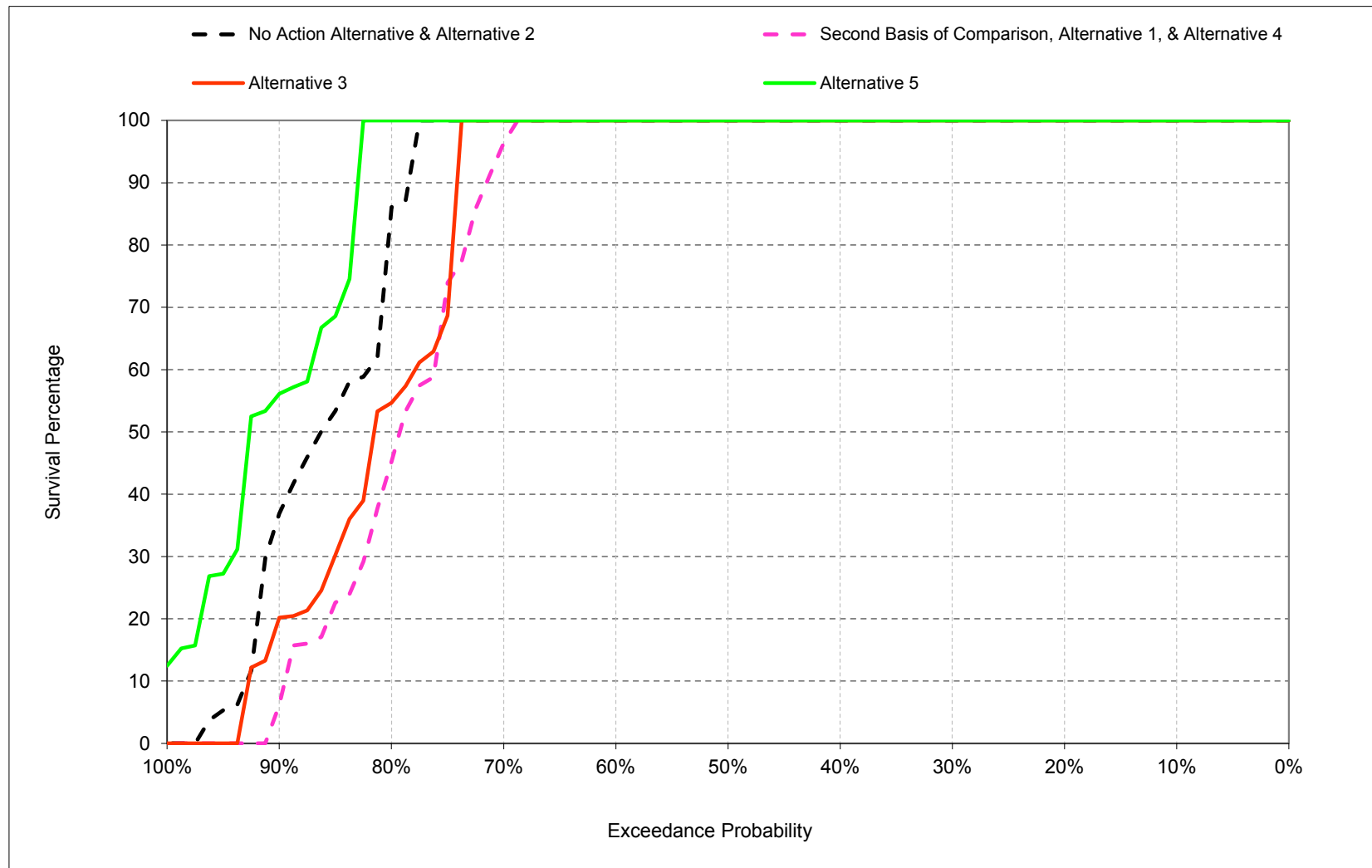
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-7-2. Oroville Large Mouth Bass Nest Survival Percentage, April



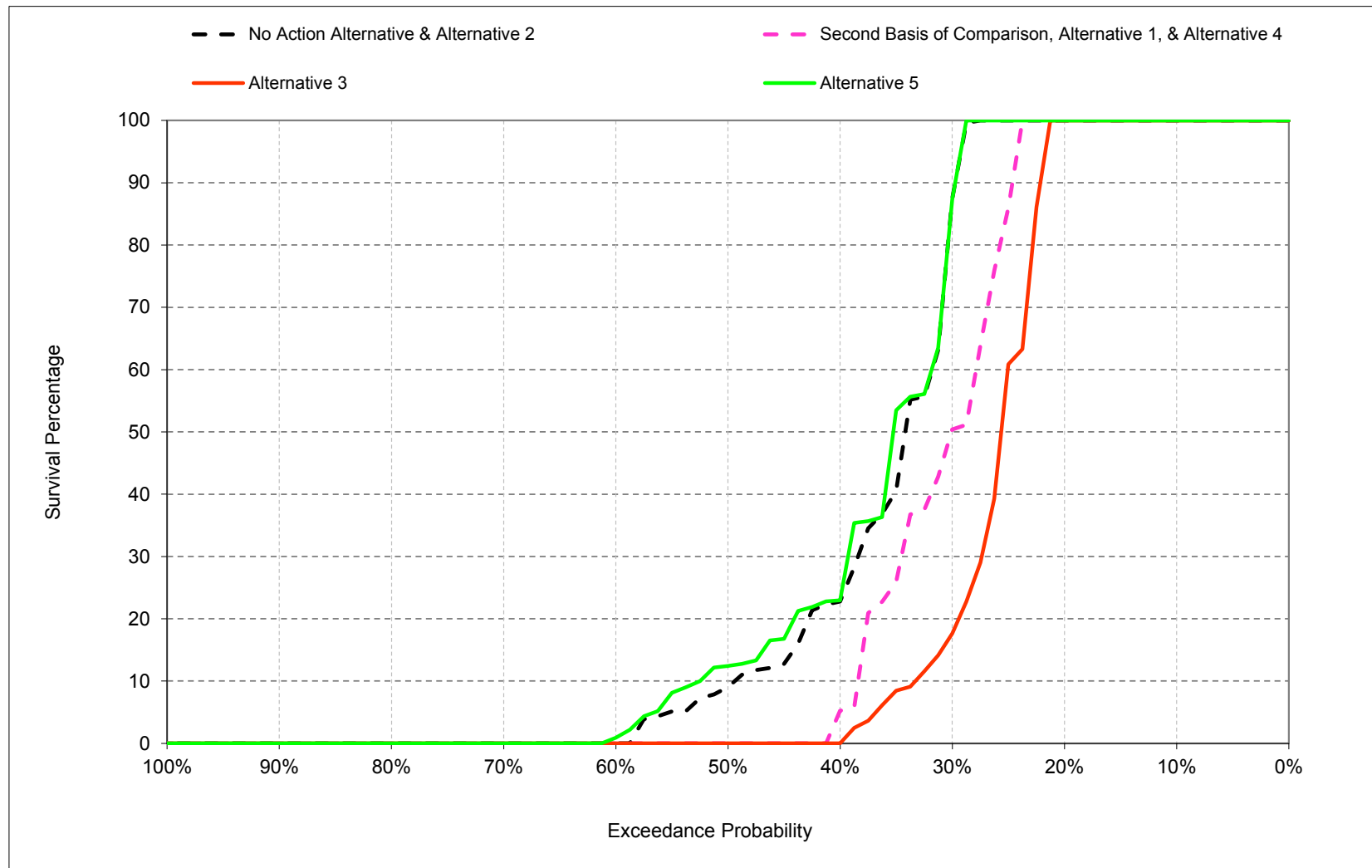
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-7-3. Oroville Large Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-7-4. Oroville Large Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-7-1. Oroville Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	80
40%	100	100	100	23
50%	100	100	100	8
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	67	0
90%	100	100	30	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	96	85	36
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	91	100	100	81
Above Normal (16%)	100	100	100	37
Below Normal (13%)	100	96	82	24
Dry (24%)	100	100	69	2
Critical (15%)	98	78	62	7

<b>Alternative 1</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	48
40%	100	100	100	3
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	93	0
80%	100	100	39	0
90%	100	100	1	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	96	78	31
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	91	100	97	73
Above Normal (16%)	100	100	85	31
Below Normal (13%)	100	98	63	12
Dry (24%)	100	100	67	0
Critical (15%)	98	74	63	7

<b>Alternative 1 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-32
40%	0	0	0	-19
50%	0	0	0	-8
60%	0	0	0	0
70%	0	0	-7	0
80%	0	0	-27	0
90%	0	0	-30	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	-6	-5
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	-3	-8
Above Normal (16%)	0	0	-15	-6
Below Normal (13%)	0	2	-20	-12
Dry (24%)	0	0	-3	-2
Critical (15%)	0	-3	1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-7-2. Oroville Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	80
40%	100	100	100	23
50%	100	100	100	8
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	67	0
90%	100	100	30	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	96	85	36
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	91	100	100	81
Above Normal (16%)	100	100	100	37
Below Normal (13%)	100	96	82	24
Dry (24%)	100	100	69	2
Critical (15%)	98	78	62	7

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	17
40%	100	100	100	0
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	54	0
90%	100	100	14	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	96	80	27
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	100	97	63
Above Normal (16%)	100	100	86	26
Below Normal (13%)	100	95	73	10
Dry (24%)	100	100	67	0
Critical (15%)	98	78	65	6

**Alternative 3 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-64
40%	0	0	0	-23
50%	0	0	0	-8
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	-13	0
90%	0	0	-16	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	-4	-10
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	-3	-17
Above Normal (16%)	0	0	-14	-11
Below Normal (13%)	0	-1	-9	-13
Dry (24%)	0	0	-2	-2
Critical (15%)	0	0	3	-2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-7-3. Oroville Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	80
40%	100	100	100	23
50%	100	100	100	8
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	67	0
90%	100	100	30	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	96	85	36
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	91	100	100	81
Above Normal (16%)	100	100	100	37
Below Normal (13%)	100	96	82	24
Dry (24%)	100	100	69	2
Critical (15%)	98	78	62	7

<b>Alternative 5</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	80
40%	100	100	100	23
50%	100	100	100	12
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	100	0
90%	100	100	54	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	97	89	37
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	91	100	100	82
Above Normal (16%)	100	100	100	37
Below Normal (13%)	100	96	90	26
Dry (24%)	100	100	81	3
Critical (15%)	98	82	68	8

<b>Alternative 5 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	4
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	33	0
90%	0	0	23	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	1	5	1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	1
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	8	2
Dry (24%)	0	0	12	1
Critical (15%)	0	4	6	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.



**Table B-7-4. Oroville Large Mouth Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	48
40%	100	100	100	3
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	93	0
80%	100	100	39	0
90%	100	100	1	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	96	78	31
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	91	100	97	73
Above Normal (16%)	100	100	85	31
Below Normal (13%)	100	98	63	12
Dry (24%)	100	100	67	0
Critical (15%)	98	74	63	7

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	80
40%	100	100	100	23
50%	100	100	100	8
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	67	0
90%	100	100	30	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	96	85	36
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	91	100	100	81
Above Normal (16%)	100	100	100	37
Below Normal (13%)	100	96	82	24
Dry (24%)	100	100	69	2
Critical (15%)	98	78	62	7

**No Action Alternative minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	32
40%	0	0	0	19
50%	0	0	0	8
60%	0	0	0	0
70%	0	0	7	0
80%	0	0	27	0
90%	0	0	30	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	6	5
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	3	8
Above Normal (16%)	0	0	15	6
Below Normal (13%)	0	-2	20	12
Dry (24%)	0	0	3	2
Critical (15%)	0	3	-1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-7-5. Oroville Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	48
40%	100	100	100	3
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	93	0
80%	100	100	39	0
90%	100	100	1	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	96	78	31
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	91	100	97	73
Above Normal (16%)	100	100	85	31
Below Normal (13%)	100	98	63	12
Dry (24%)	100	100	67	0
Critical (15%)	98	74	63	7

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	17
40%	100	100	100	0
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	54	0
90%	100	100	14	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	96	80	27
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	100	97	63
Above Normal (16%)	100	100	86	26
Below Normal (13%)	100	95	73	10
Dry (24%)	100	100	67	0
Critical (15%)	98	78	65	6

**Alternative 3 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-32
40%	0	0	0	-3
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	7	0
80%	0	0	14	0
90%	0	0	13	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	2	-4
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-10
Above Normal (16%)	0	0	0	-5
Below Normal (13%)	0	-3	10	-1
Dry (24%)	0	0	1	0
Critical (15%)	0	4	2	-1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-7-6. Oroville Large Mouth Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	48
40%	100	100	100	3
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	93	0
80%	100	100	39	0
90%	100	100	1	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	96	78	31
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	91	100	97	73
Above Normal (16%)	100	100	85	31
Below Normal (13%)	100	98	63	12
Dry (24%)	100	100	67	0
Critical (15%)	98	74	63	7

**Alternative 5**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	80
40%	100	100	100	23
50%	100	100	100	12
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	100	0
90%	100	100	54	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	97	89	37
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	91	100	100	82
Above Normal (16%)	100	100	100	37
Below Normal (13%)	100	96	90	26
Dry (24%)	100	100	81	3
Critical (15%)	98	82	68	8

**Alternative 5 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	32
40%	0	0	0	20
50%	0	0	0	12
60%	0	0	0	0
70%	0	0	7	0
80%	0	0	61	0
90%	0	0	53	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	1	11	6
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	3	8
Above Normal (16%)	0	0	15	6
Below Normal (13%)	0	-2	28	14
Dry (24%)	0	0	14	2
Critical (15%)	0	7	5	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

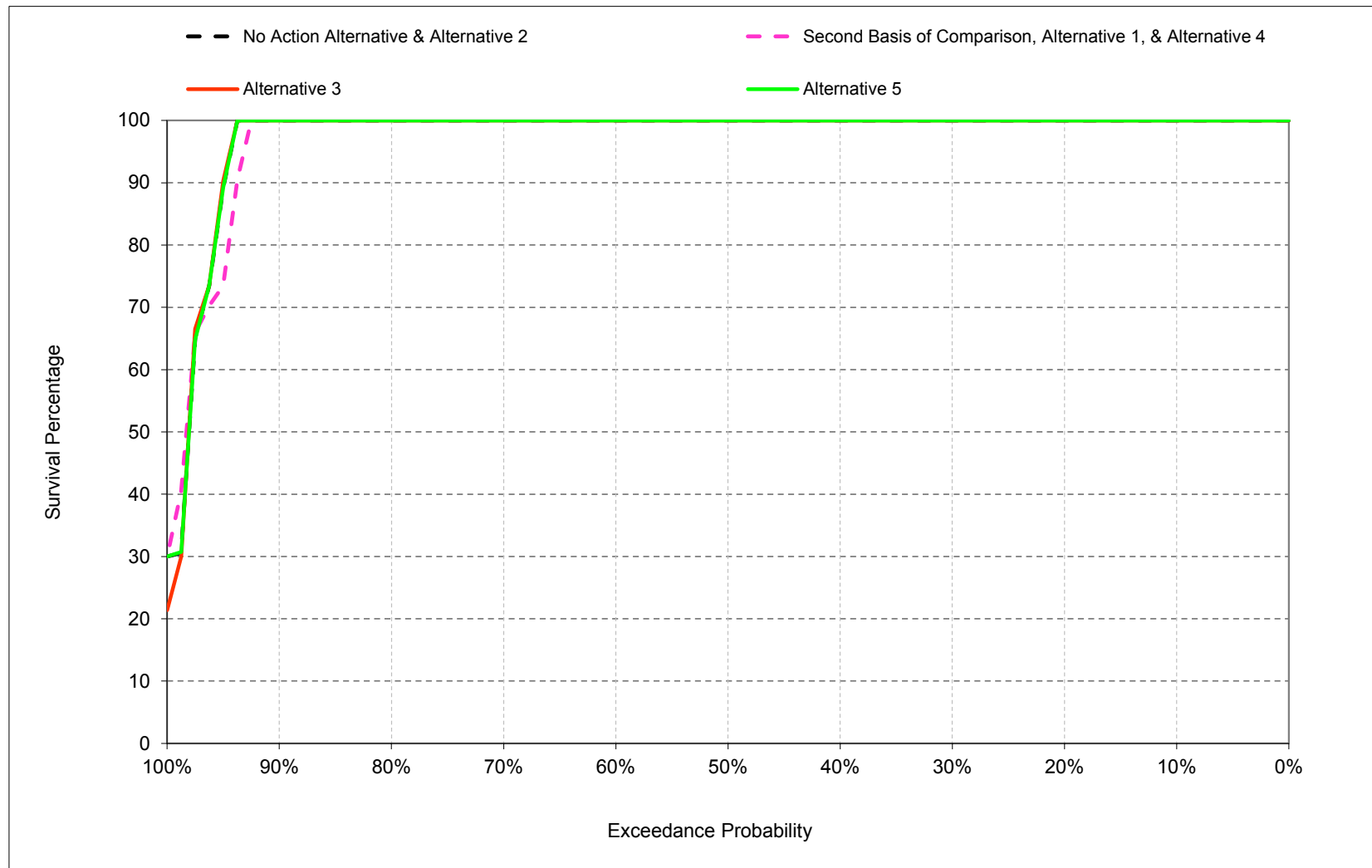
c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

1  
2

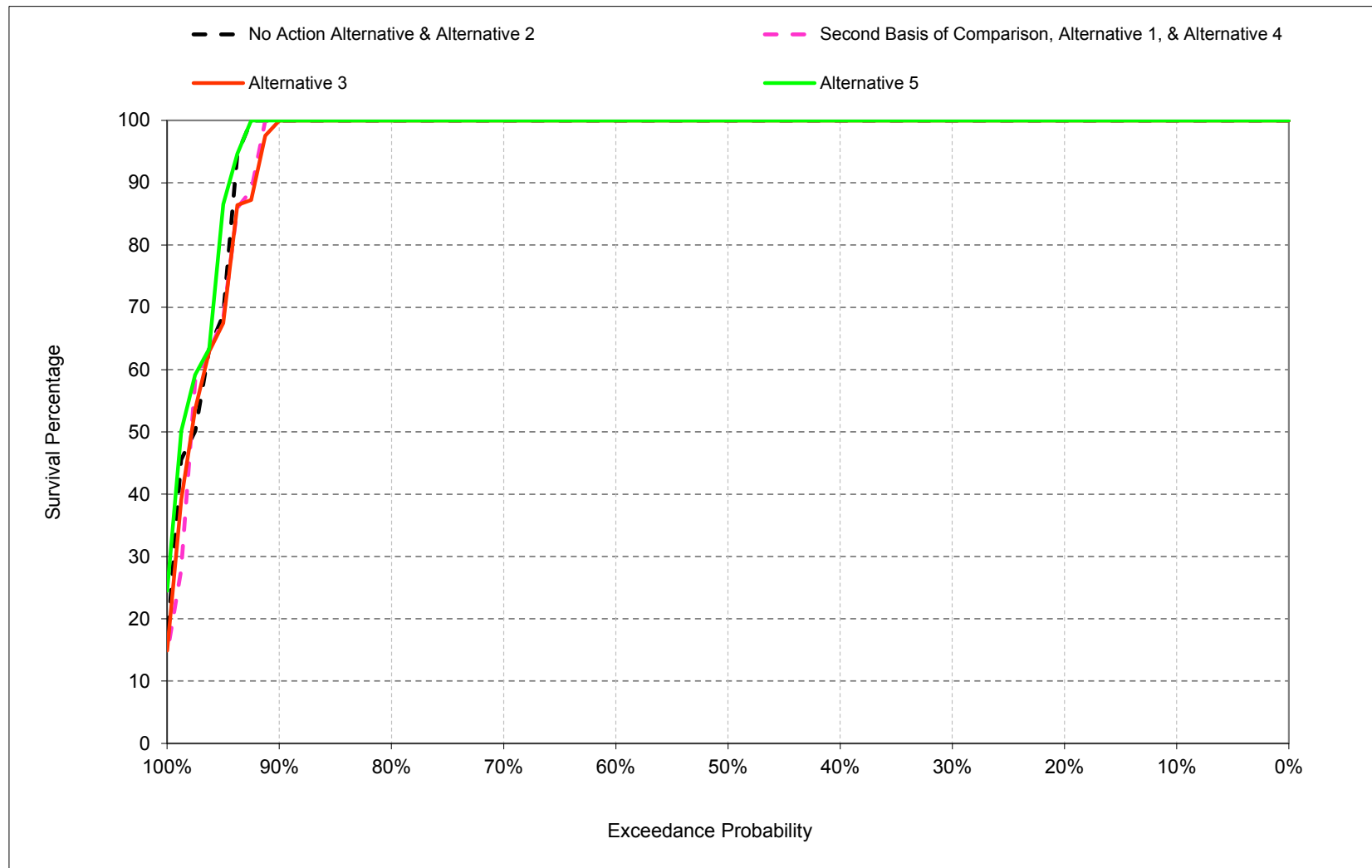
## **B.8. Oroville Small Mouth Bass Survival Percentage**

Figure B-8-1. Oroville Small Mouth Bass Nest Survival Percentage, March



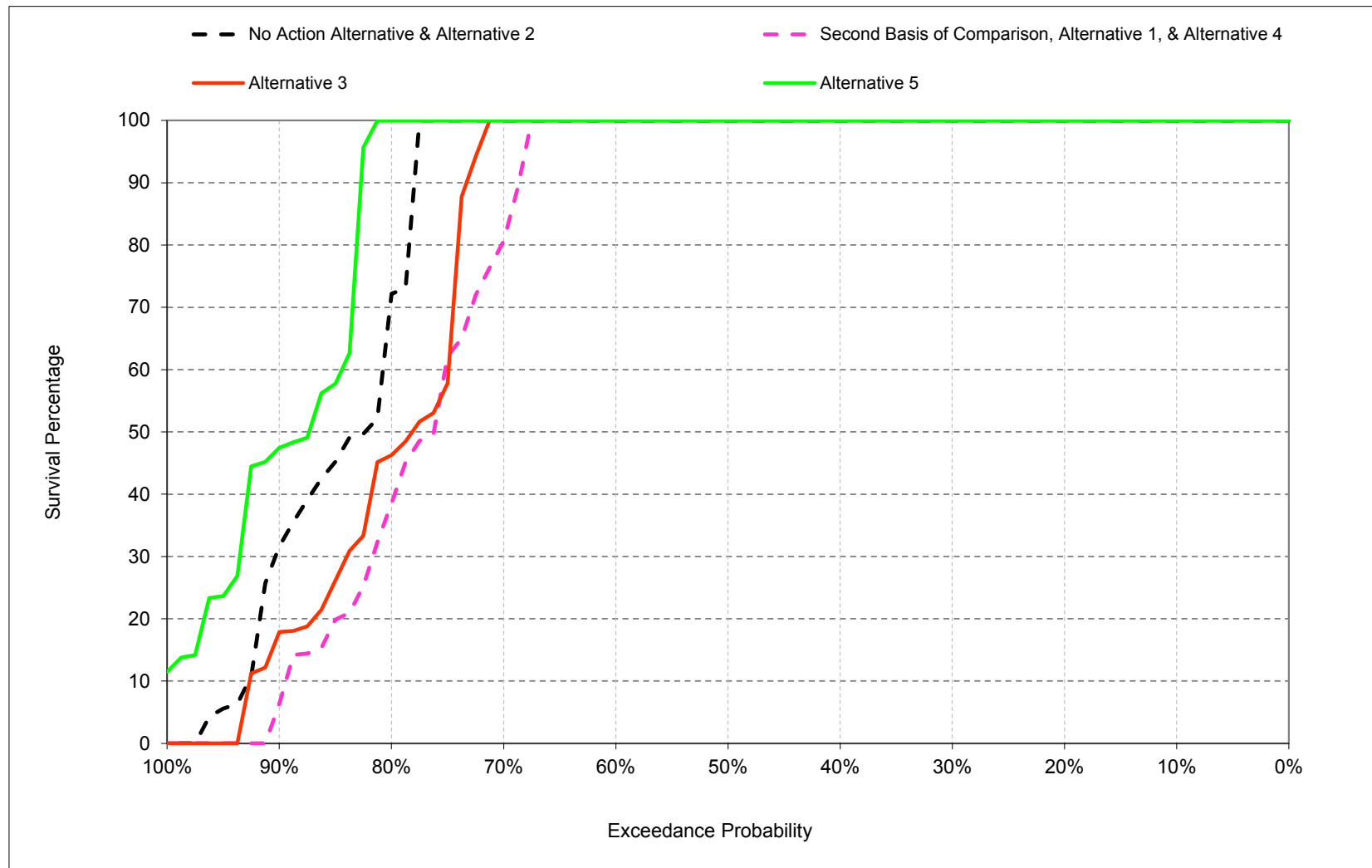
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-8-2. Oroville Small Mouth Bass Nest Survival Percentage, April



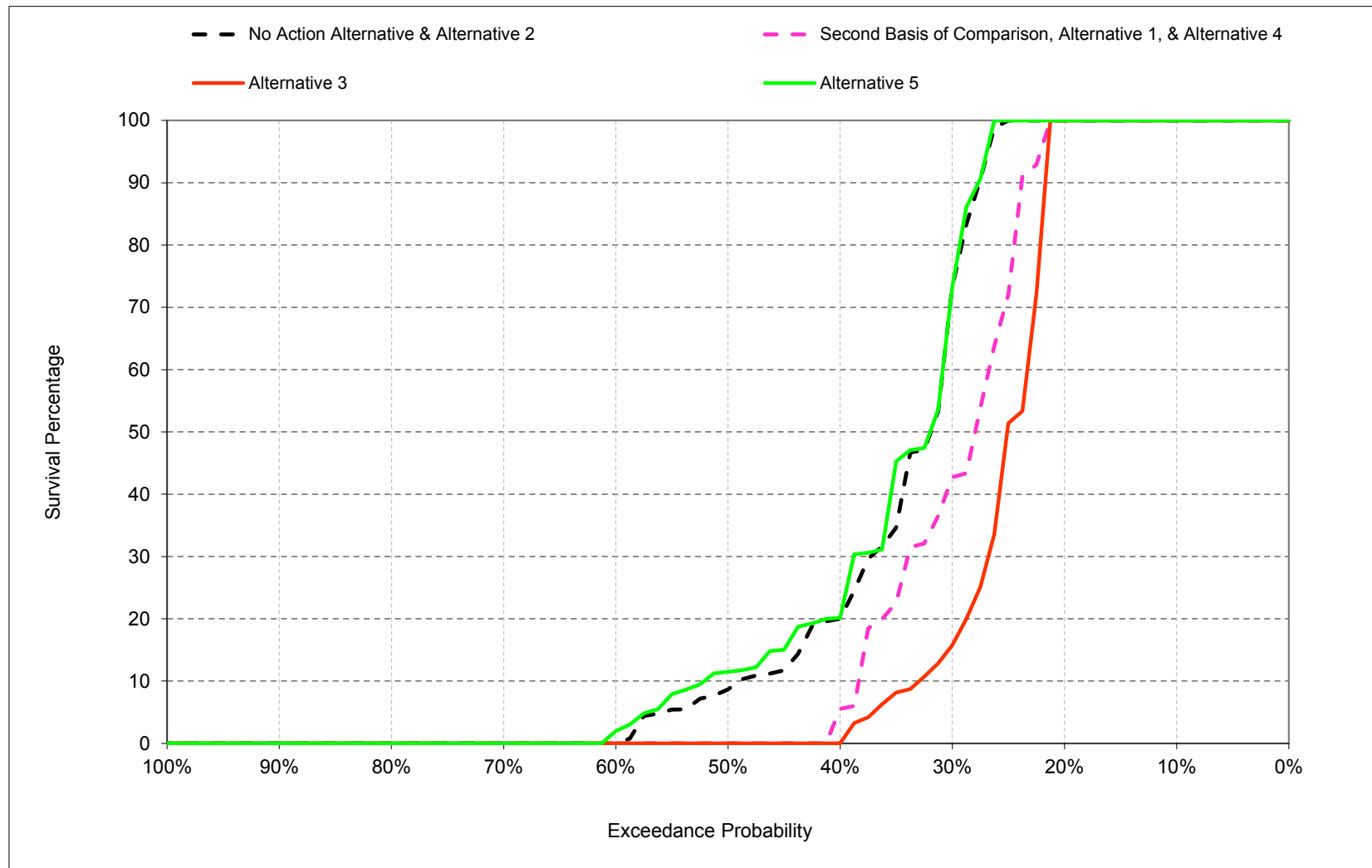
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-8-3. Oroville Small Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-8-4. Oroville Small Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.



**Table B-8-1. Oroville Small Mouth Bass Nest Survival Percentage, Monthly Percentage****No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	67
40%	100	100	100	20
50%	100	100	100	8
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	56	0
90%	100	100	26	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	96	83	35
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	100	100	79
Above Normal (16%)	100	100	100	35
Below Normal (13%)	100	95	81	22
Dry (24%)	100	100	68	2
Critical (15%)	97	75	58	7

**Alternative 1**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	41
40%	100	100	100	3
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	78	0
80%	100	100	34	0
90%	100	100	1	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	95	77	30
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	89	100	97	72
Above Normal (16%)	100	100	85	28
Below Normal (13%)	100	97	59	11
Dry (24%)	100	100	65	0
Critical (15%)	97	70	58	6

**Alternative 1 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-26
40%	0	0	0	-17
50%	0	0	0	-8
60%	0	0	0	0
70%	0	0	-22	0
80%	0	0	-23	0
90%	0	0	-26	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	-7	-5
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	-1	0	-3	-8
Above Normal (16%)	0	0	-15	-7
Below Normal (13%)	0	2	-22	-10
Dry (24%)	0	0	-3	-1
Critical (15%)	0	-5	1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-8-2. Oroville Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	67
40%	100	100	100	20
50%	100	100	100	8
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	56	0
90%	100	100	26	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	96	83	35
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	100	100	79
Above Normal (16%)	100	100	100	35
Below Normal (13%)	100	95	81	22
Dry (24%)	100	100	68	2
Critical (15%)	97	75	58	7

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	15
40%	100	100	100	0
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	45	0
90%	100	98	13	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	95	79	26
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	89	100	97	63
Above Normal (16%)	100	100	85	23
Below Normal (13%)	100	93	72	10
Dry (24%)	100	100	66	0
Critical (15%)	97	74	62	5

**Alternative 3 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-52
40%	0	0	0	-20
50%	0	0	0	-8
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	-11	0
90%	0	-2	-14	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	-4	-9
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	-3	-16
Above Normal (16%)	0	0	-15	-12
Below Normal (13%)	0	-2	-9	-11
Dry (24%)	0	0	-2	-2
Critical (15%)	0	-1	4	-1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-8-3. Oroville Small Mouth Bass Nest Survival Percentage, Monthly Percentage****No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	67
40%	100	100	100	20
50%	100	100	100	8
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	56	0
90%	100	100	26	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	96	83	35
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	100	100	79
Above Normal (16%)	100	100	100	35
Below Normal (13%)	100	95	81	22
Dry (24%)	100	100	68	2
Critical (15%)	97	75	58	7

**Alternative 5**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	67
40%	100	100	100	20
50%	100	100	100	11
60%	100	100	100	1
70%	100	100	100	0
80%	100	100	100	0
90%	100	100	45	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	96	88	36
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	100	100	80
Above Normal (16%)	100	100	100	35
Below Normal (13%)	100	95	89	23
Dry (24%)	100	100	79	2
Critical (15%)	97	78	65	7

**Alternative 5 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	3
60%	0	0	0	1
70%	0	0	0	0
80%	0	0	44	0
90%	0	0	19	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	1	5	1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	1
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	8	2
Dry (24%)	0	0	11	1
Critical (15%)	0	4	7	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-8-4. Oroville Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	41
40%	100	100	100	3
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	78	0
80%	100	100	34	0
90%	100	100	1	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	95	77	30
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	89	100	97	72
Above Normal (16%)	100	100	85	28
Below Normal (13%)	100	97	59	11
Dry (24%)	100	100	65	0
Critical (15%)	97	70	58	6

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	67
40%	100	100	100	20
50%	100	100	100	8
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	56	0
90%	100	100	26	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	96	83	35
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	100	100	79
Above Normal (16%)	100	100	100	35
Below Normal (13%)	100	95	81	22
Dry (24%)	100	100	68	2
Critical (15%)	97	75	58	7

**No Action Alternative minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	26
40%	0	0	0	17
50%	0	0	0	8
60%	0	0	0	0
70%	0	0	22	0
80%	0	0	23	0
90%	0	0	26	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	7	5
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	1	0	3	8
Above Normal (16%)	0	0	15	7
Below Normal (13%)	0	-2	22	10
Dry (24%)	0	0	3	1
Critical (15%)	0	5	-1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-8-5. Oroville Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	41
40%	100	100	100	3
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	78	0
80%	100	100	34	0
90%	100	100	1	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	95	77	30
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	89	100	97	72
Above Normal (16%)	100	100	85	28
Below Normal (13%)	100	97	59	11
Dry (24%)	100	100	65	0
Critical (15%)	97	70	58	6

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	15
40%	100	100	100	0
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	100	0
80%	100	100	45	0
90%	100	98	13	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	95	79	26
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	89	100	97	63
Above Normal (16%)	100	100	85	23
Below Normal (13%)	100	93	72	10
Dry (24%)	100	100	66	0
Critical (15%)	97	74	62	5

**Alternative 3 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-26
40%	0	0	0	-3
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	22	0
80%	0	0	12	0
90%	0	-2	12	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	2	-4
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-9
Above Normal (16%)	0	0	0	-5
Below Normal (13%)	0	-4	13	-1
Dry (24%)	0	0	1	0
Critical (15%)	0	4	3	-1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-8-6. Oroville Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

Second Basis of Comparison				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	41
40%	100	100	100	3
50%	100	100	100	0
60%	100	100	100	0
70%	100	100	78	0
80%	100	100	34	0
90%	100	100	1	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	95	77	30
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	89	100	97	72
Above Normal (16%)	100	100	85	28
Below Normal (13%)	100	97	59	11
Dry (24%)	100	100	65	0
Critical (15%)	97	70	58	6

Alternative 5				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	67
40%	100	100	100	20
50%	100	100	100	11
60%	100	100	100	1
70%	100	100	100	0
80%	100	100	100	0
90%	100	100	45	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	96	88	36
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	90	100	100	80
Above Normal (16%)	100	100	100	35
Below Normal (13%)	100	95	89	23
Dry (24%)	100	100	79	2
Critical (15%)	97	78	65	7

Alternative 5 minus Second Basis of Comparison				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	26
40%	0	0	0	17
50%	0	0	0	11
60%	0	0	0	1
70%	0	0	22	0
80%	0	0	66	0
90%	0	0	45	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	1	12	6
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	1	0	3	8
Above Normal (16%)	0	0	15	7
Below Normal (13%)	0	-2	30	12
Dry (24%)	0	0	14	2
Critical (15%)	0	8	7	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

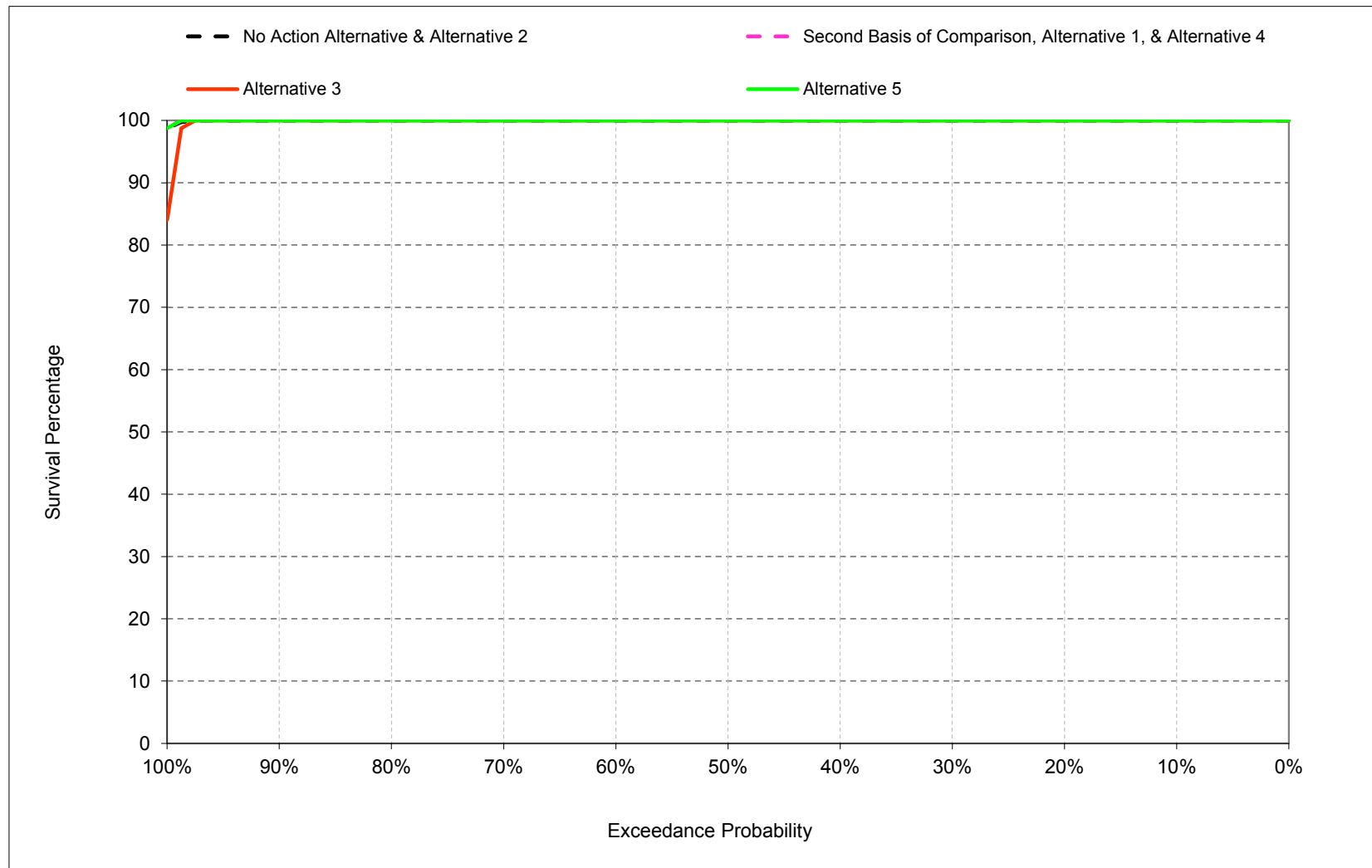
c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

1  
2

## **B.9. Oroville Spotted Bass Survival Percentage**

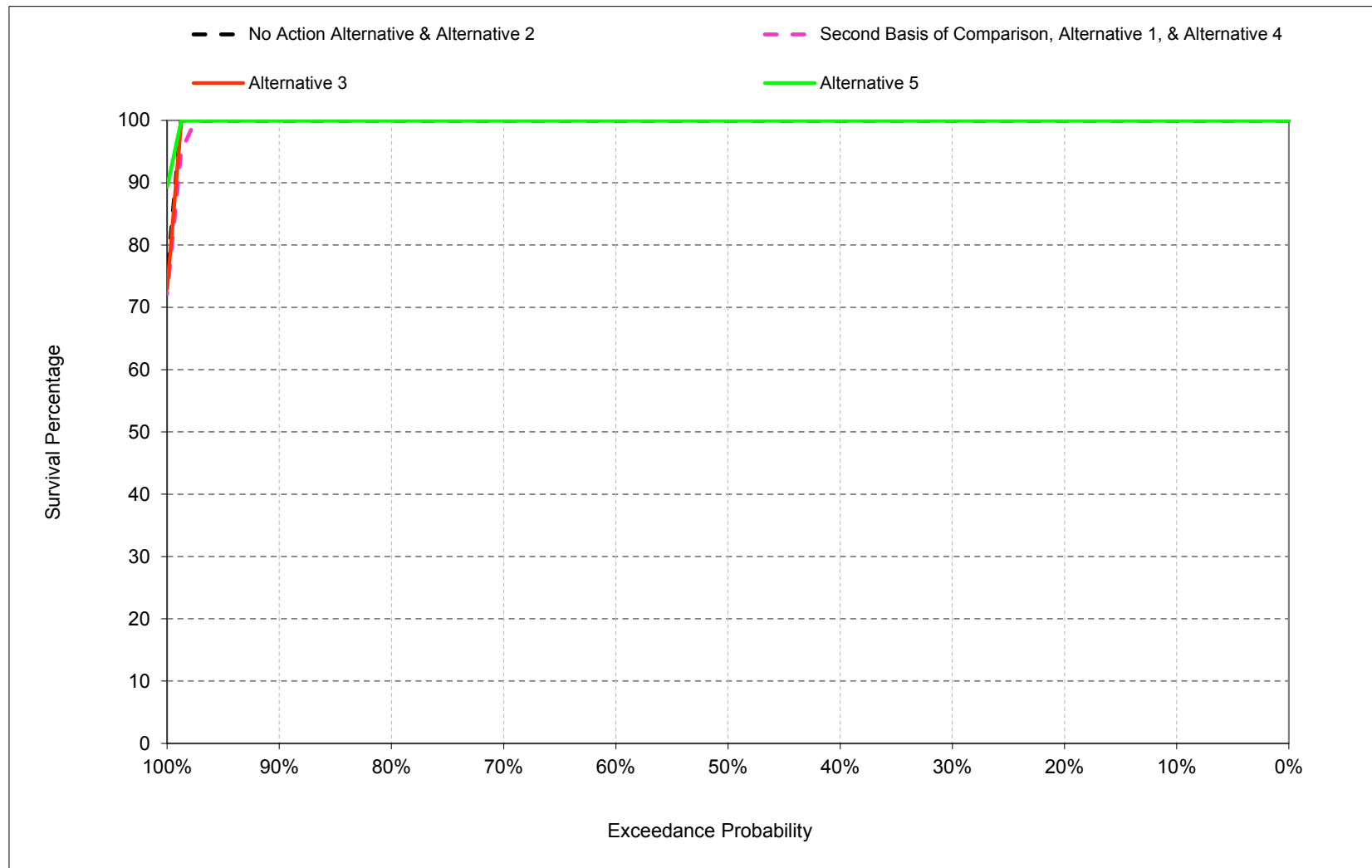
Figure B-9-1. Oroville Spotted Bass Nest Survival Percentage, March



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

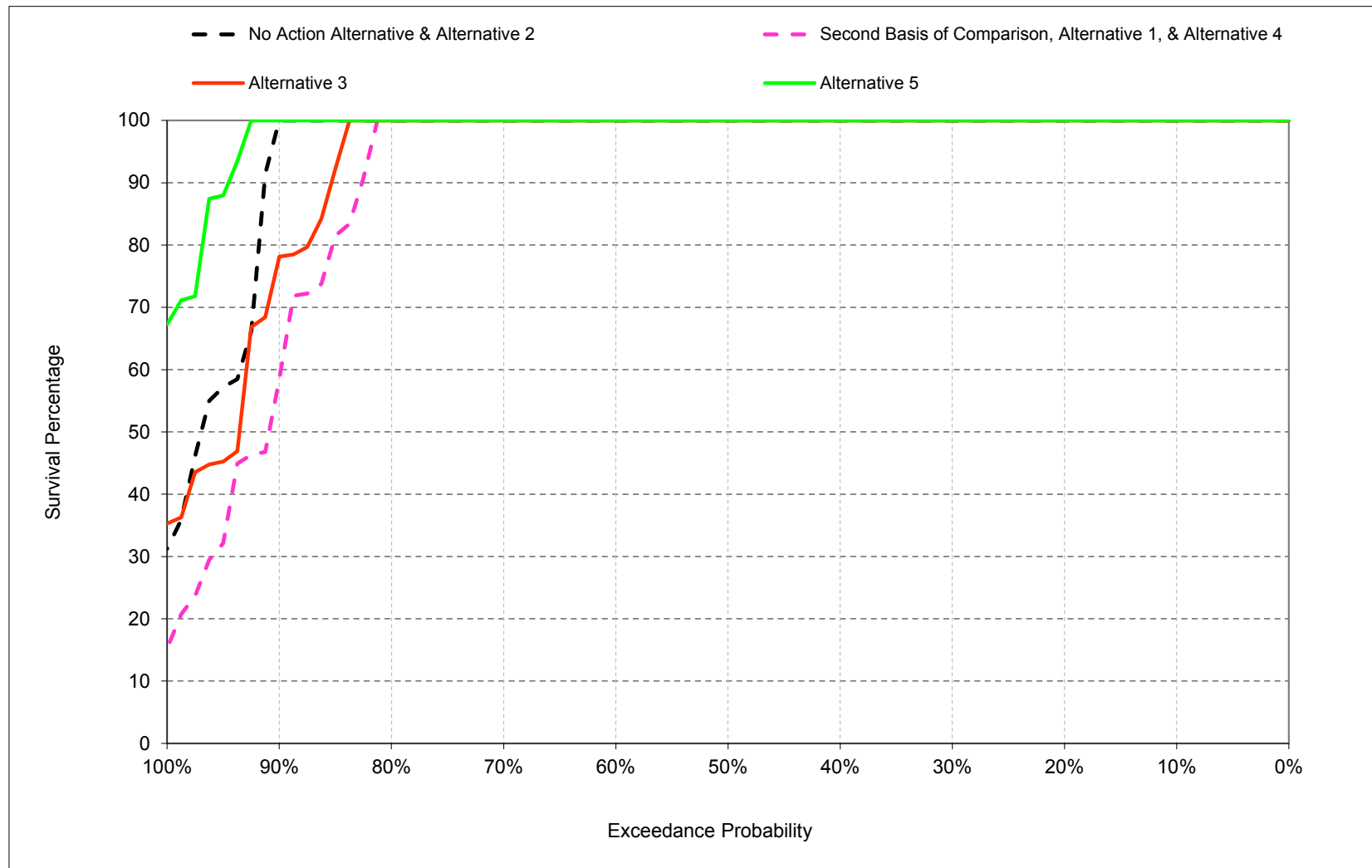


Figure B-9-2. Oroville Spotted Bass Nest Survival Percentage, April



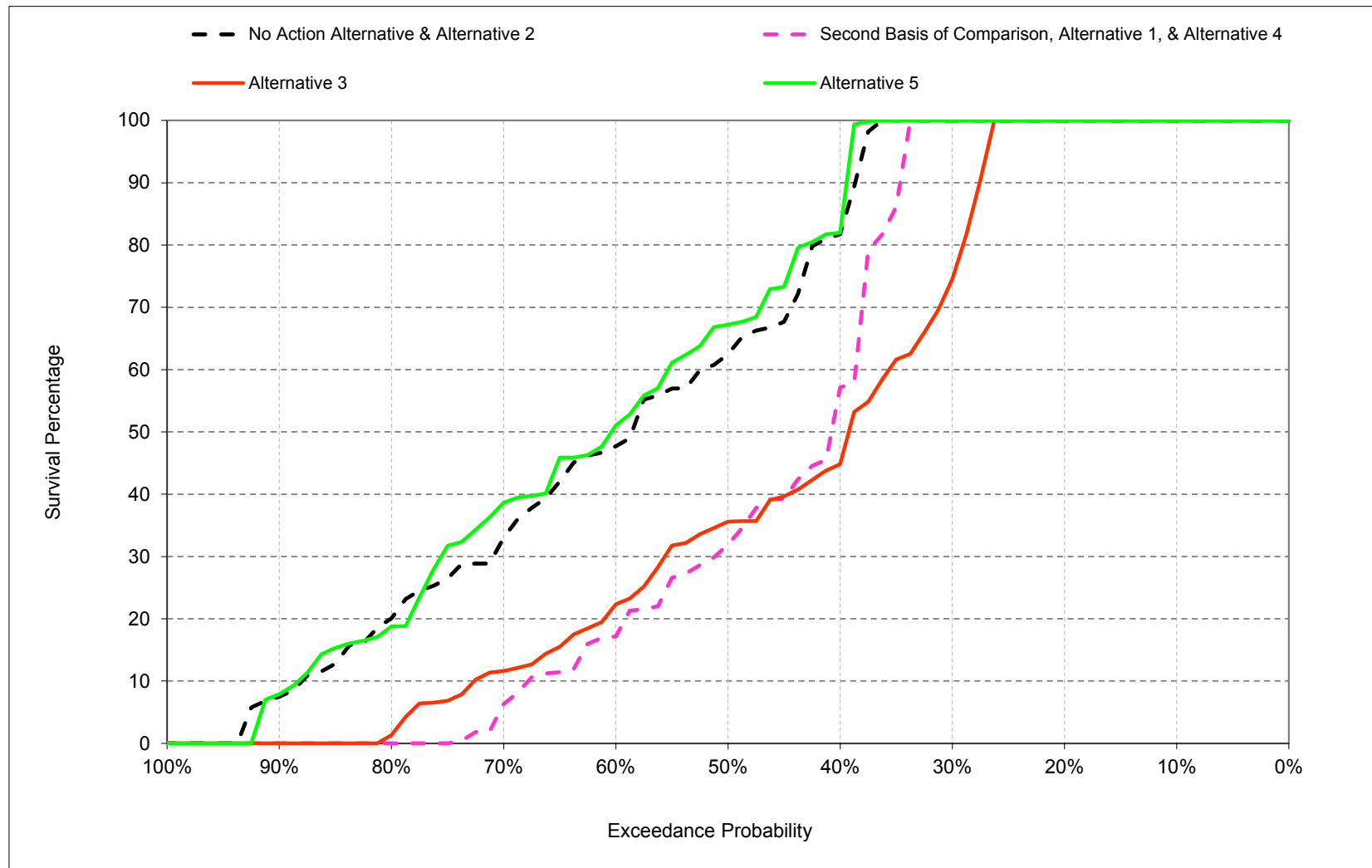
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-9-3. Oroville Spotted Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-9-4. Oroville Spotted Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-9-1. Oroville Spotted Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	81
50%	100	100	100	62
60%	100	100	100	47
70%	100	100	100	30
80%	100	100	100	19
90%	100	100	92	7
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	95	60
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	95
Above Normal (16%)	100	100	100	68
Below Normal (13%)	100	100	96	55
Dry (24%)	100	100	86	22
Critical (15%)	100	94	90	43

**Alternative 1**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	52
50%	100	100	100	31
60%	100	100	100	17
70%	100	100	100	3
80%	100	100	100	0
90%	100	100	48	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	90	46
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	99	86
Above Normal (16%)	100	100	93	44
Below Normal (13%)	100	100	78	26
Dry (24%)	100	100	83	14
Critical (15%)	100	90	90	32

**Alternative 1 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	-29
50%	0	0	0	-31
60%	0	0	0	-30
70%	0	0	0	-27
80%	0	0	0	-19
90%	0	0	-44	-7
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	-1	-4	-14
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	-1	-9
Above Normal (16%)	0	0	-7	-24
Below Normal (13%)	0	0	-18	-29
Dry (24%)	0	0	-3	-8
Critical (15%)	0	-4	0	-11

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-9-2. Oroville Spotted Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	81
50%	100	100	100	62
60%	100	100	100	47
70%	100	100	100	30
80%	100	100	100	19
90%	100	100	92	7
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	95	60
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	95
Above Normal (16%)	100	100	100	68
Below Normal (13%)	100	100	96	55
Dry (24%)	100	100	86	22
Critical (15%)	100	94	90	43

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	73
40%	100	100	100	44
50%	100	100	100	35
60%	100	100	100	21
70%	100	100	100	11
80%	100	100	100	0
90%	100	100	69	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	93	44
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	79
Above Normal (16%)	100	100	93	49
Below Normal (13%)	100	100	91	34
Dry (24%)	100	100	85	9
Critical (15%)	100	90	93	32

**Alternative 3 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-27
40%	0	0	0	-37
50%	0	0	0	-27
60%	0	0	0	-26
70%	0	0	0	-19
80%	0	0	0	-19
90%	0	0	-23	-7
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	-1	-2	-16
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	-1	0	0	-16
Above Normal (16%)	0	0	-7	-19
Below Normal (13%)	0	0	-5	-21
Dry (24%)	0	0	-2	-13
Critical (15%)	0	-4	4	-10

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-9-3. Oroville Spotted Bass Nest Survival Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	81
50%	100	100	100	62
60%	100	100	100	47
70%	100	100	100	30
80%	100	100	100	19
90%	100	100	92	7
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	95	60
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	95
Above Normal (16%)	100	100	100	68
Below Normal (13%)	100	100	96	55
Dry (24%)	100	100	86	22
Critical (15%)	100	94	90	43

<b>Alternative 5</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	82
50%	100	100	100	67
60%	100	100	100	49
70%	100	100	100	37
80%	100	100	100	17
90%	100	100	100	7
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	98	61
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	95
Above Normal (16%)	100	100	100	69
Below Normal (13%)	100	100	97	59
Dry (24%)	100	100	97	23
Critical (15%)	100	96	94	46

<b>Alternative 5 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	5
60%	0	0	0	2
70%	0	0	0	7
80%	0	0	0	-1
90%	0	0	8	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	3	1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	2	4
Dry (24%)	0	0	11	0
Critical (15%)	0	2	4	3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-9-4. Oroville Spotted Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	52
50%	100	100	100	31
60%	100	100	100	17
70%	100	100	100	3
80%	100	100	100	0
90%	100	100	48	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	90	46
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	99	86
Above Normal (16%)	100	100	93	44
Below Normal (13%)	100	100	78	26
Dry (24%)	100	100	83	14
Critical (15%)	100	90	90	32

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	81
50%	100	100	100	62
60%	100	100	100	47
70%	100	100	100	30
80%	100	100	100	19
90%	100	100	92	7
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	95	60
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	95
Above Normal (16%)	100	100	100	68
Below Normal (13%)	100	100	96	55
Dry (24%)	100	100	86	22
Critical (15%)	100	94	90	43

**No Action Alternative minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	29
50%	0	0	0	31
60%	0	0	0	30
70%	0	0	0	27
80%	0	0	0	19
90%	0	0	44	7
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	1	4	14
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	1	9
Above Normal (16%)	0	0	7	24
Below Normal (13%)	0	0	18	29
Dry (24%)	0	0	3	8
Critical (15%)	0	4	0	11

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-9-5. Oroville Spotted Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	52
50%	100	100	100	31
60%	100	100	100	17
70%	100	100	100	3
80%	100	100	100	0
90%	100	100	48	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	90	46
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	99	86
Above Normal (16%)	100	100	93	44
Below Normal (13%)	100	100	78	26
Dry (24%)	100	100	83	14
Critical (15%)	100	90	90	32

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	73
40%	100	100	100	44
50%	100	100	100	35
60%	100	100	100	21
70%	100	100	100	11
80%	100	100	100	0
90%	100	100	69	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	93	44
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	79
Above Normal (16%)	100	100	93	49
Below Normal (13%)	100	100	91	34
Dry (24%)	100	100	85	9
Critical (15%)	100	90	93	32

**Alternative 3 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	-27
40%	0	0	0	-8
50%	0	0	0	4
60%	0	0	0	4
70%	0	0	0	8
80%	0	0	0	0
90%	0	0	21	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	3	-2
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	-1	0	0	-7
Above Normal (16%)	0	0	1	5
Below Normal (13%)	0	0	13	8
Dry (24%)	0	0	1	-5
Critical (15%)	0	1	3	1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.



**Table B-9-6. Oroville Spotted Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	52
50%	100	100	100	31
60%	100	100	100	17
70%	100	100	100	3
80%	100	100	100	0
90%	100	100	48	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	90	46
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	99	86
Above Normal (16%)	100	100	93	44
Below Normal (13%)	100	100	78	26
Dry (24%)	100	100	83	14
Critical (15%)	100	90	90	32

**Alternative 5**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	82
50%	100	100	100	67
60%	100	100	100	49
70%	100	100	100	37
80%	100	100	100	17
90%	100	100	100	7
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	98	61
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	100	100	95
Above Normal (16%)	100	100	100	69
Below Normal (13%)	100	100	97	59
Dry (24%)	100	100	97	23
Critical (15%)	100	96	94	46

**Alternative 5 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	29
50%	0	0	0	36
60%	0	0	0	32
70%	0	0	0	34
80%	0	0	0	17
90%	0	0	52	7
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	1	8	15
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	1	9
Above Normal (16%)	0	0	7	24
Below Normal (13%)	0	0	19	34
Dry (24%)	0	0	14	8
Critical (15%)	0	6	3	14

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

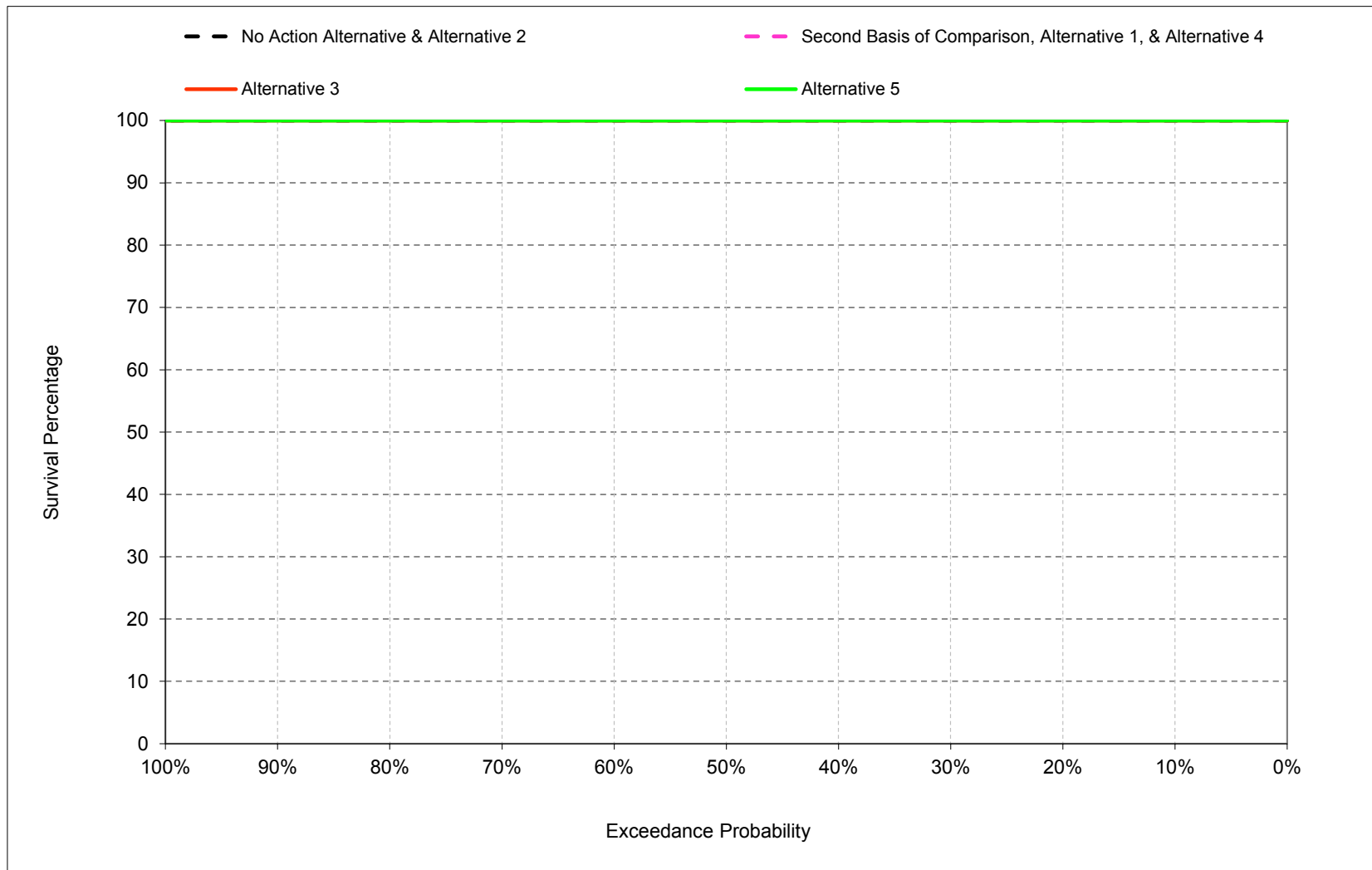
c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

1  
2

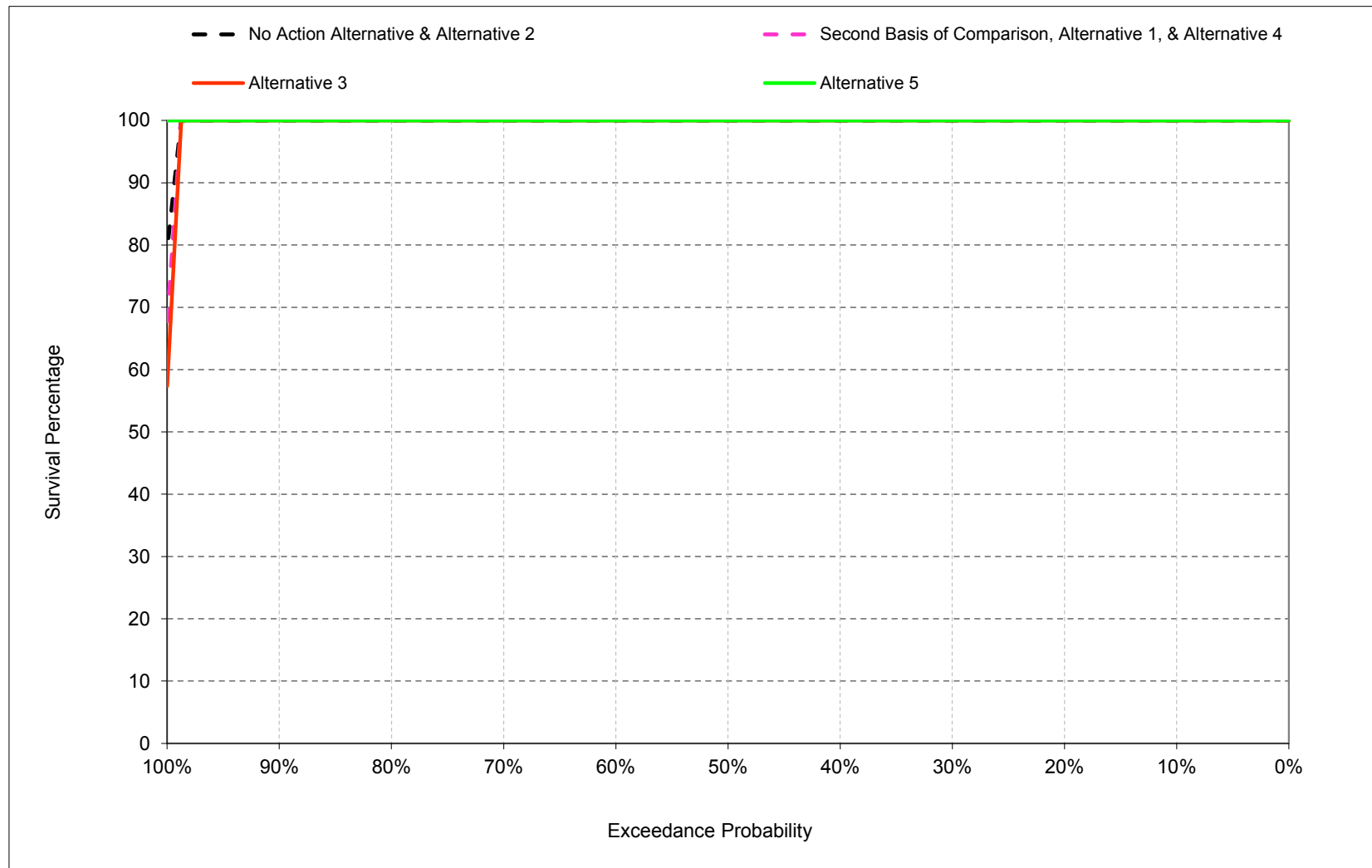
## **B.10. Folsom Large Mouth Bass Survival Percentage**

Figure B-10-1. Folsom Large Mouth Bass Nest Survival Percentage, March



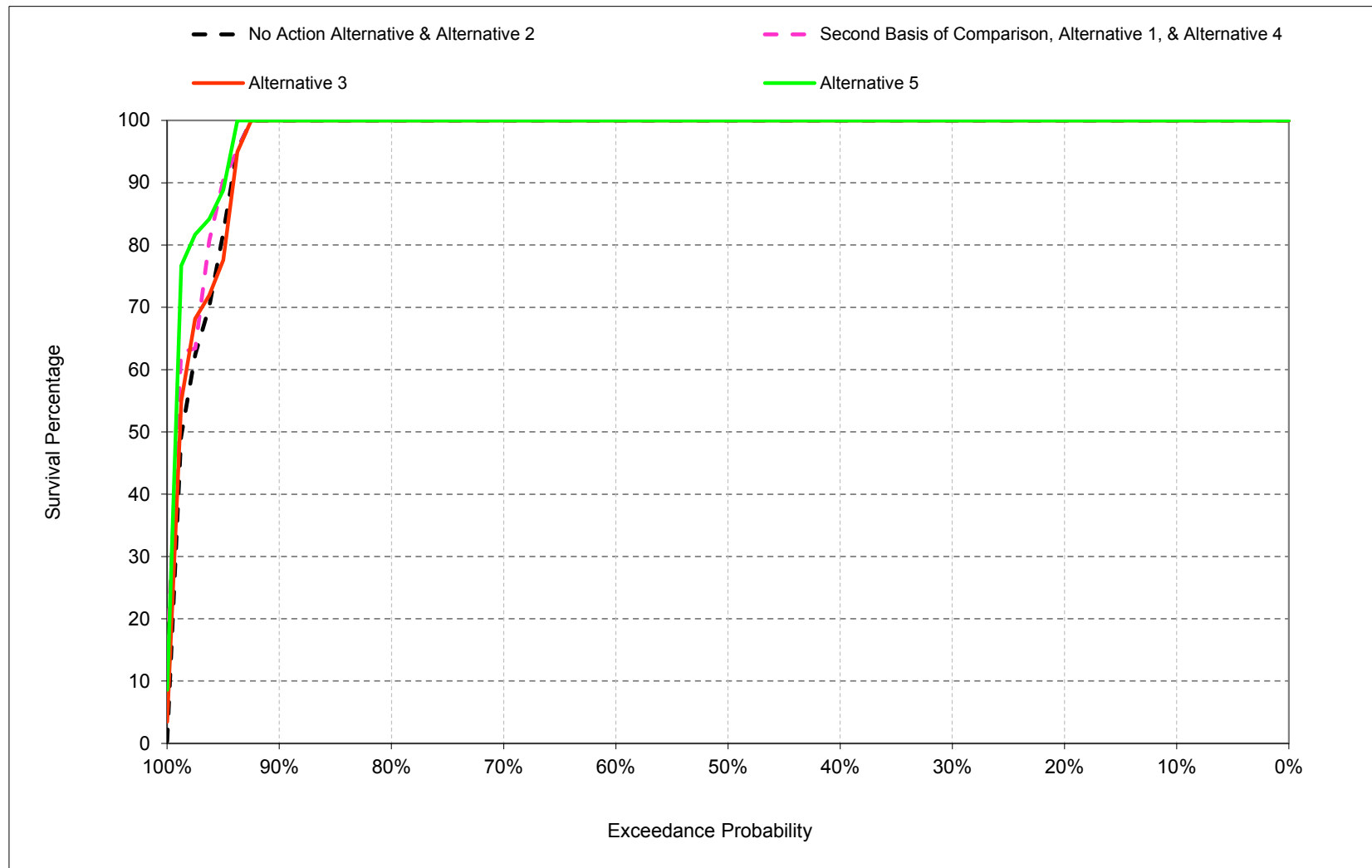
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-10-2. Folsom Large Mouth Bass Nest Survival Percentage, April



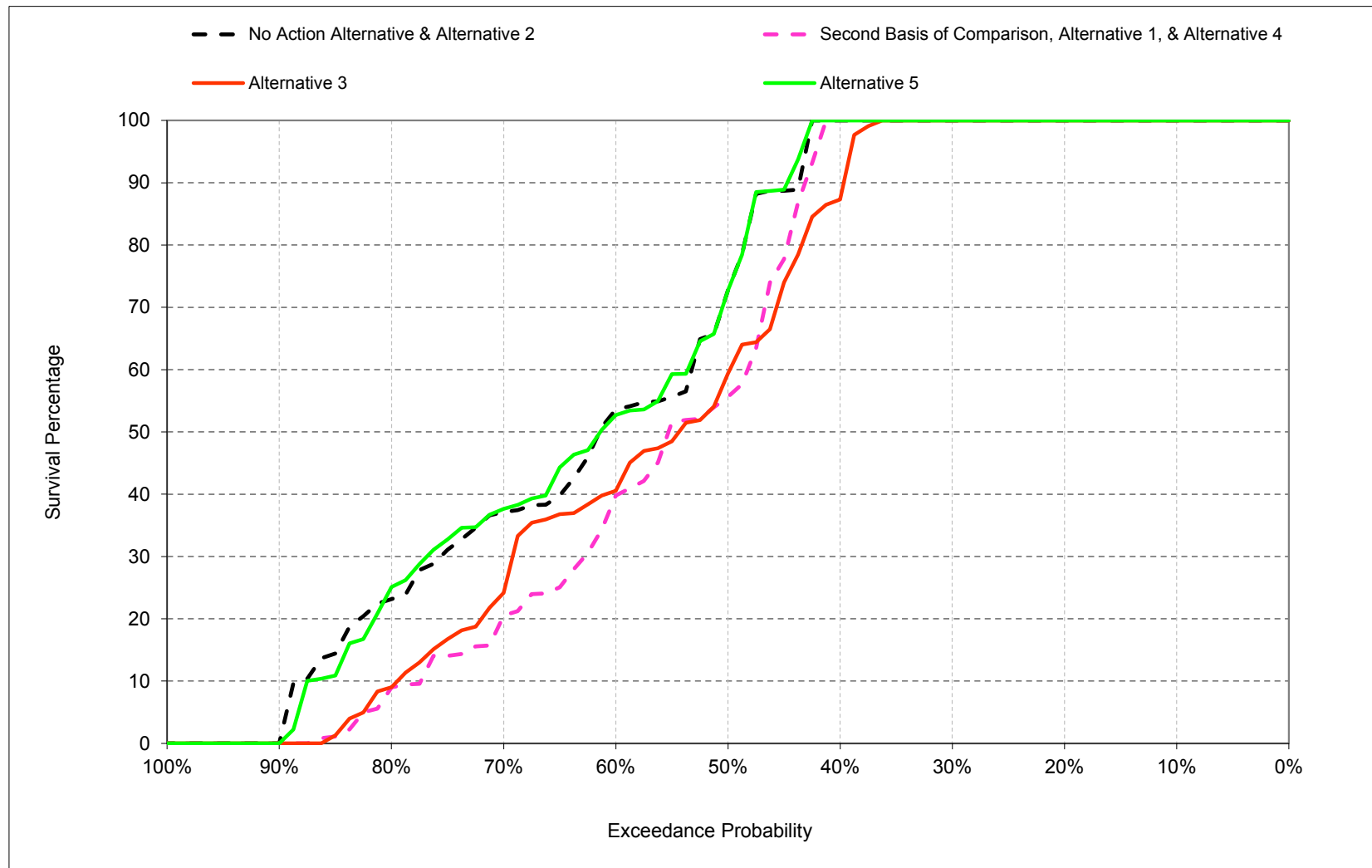
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-10-3. Folsom Large Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-10-4. Folsom Large Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-10-1. Folsom Large Mouth Bass Nest Survival Percentage, Monthly Percentage****No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	69
60%	100	100	100	52
70%	100	100	100	37
80%	100	100	100	23
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	96	63
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	93
Above Normal (16%)	100	100	100	61
Below Normal (13%)	100	100	100	61
Dry (24%)	100	100	94	35
Critical (15%)	97	93	82	46

**Alternative 1**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	55
60%	100	100	100	37
70%	100	100	100	17
80%	100	100	100	6
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	96	56
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	90
Above Normal (16%)	100	100	100	45
Below Normal (13%)	100	100	100	35
Dry (24%)	100	100	96	32
Critical (15%)	97	92	83	55

**Alternative 1 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	-14
60%	0	0	0	-15
70%	0	0	0	-20
80%	0	0	0	-16
90%	0	0	0	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	1	-7
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-3
Above Normal (16%)	0	0	0	-16
Below Normal (13%)	0	0	0	-26
Dry (24%)	0	0	2	-3
Critical (15%)	0	-1	1	9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-10-2. Folsom Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	69
60%	100	100	100	52
70%	100	100	100	37
80%	100	100	100	23
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	96	63
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	93
Above Normal (16%)	100	100	100	61
Below Normal (13%)	100	100	100	61
Dry (24%)	100	100	94	35
Critical (15%)	97	93	82	46

<b>Alternative 3</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	87
50%	100	100	100	57
60%	100	100	100	40
70%	100	100	100	22
80%	100	100	100	8
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	96	57
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	85
Above Normal (16%)	100	100	100	45
Below Normal (13%)	100	100	98	50
Dry (24%)	100	100	96	34
Critical (15%)	96	91	81	54

<b>Alternative 3 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	-13
50%	0	0	0	-13
60%	0	0	0	-12
70%	0	0	0	-14
80%	0	0	0	-14
90%	0	0	0	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	-6
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-8
Above Normal (16%)	0	0	0	-16
Below Normal (13%)	0	0	-2	-11
Dry (24%)	0	0	2	-1
Critical (15%)	-1	-2	-1	8

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.



**Table B-10-3. Folsom Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	69
60%	100	100	100	52
70%	100	100	100	37
80%	100	100	100	23
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	96	63
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	93
Above Normal (16%)	100	100	100	61
Below Normal (13%)	100	100	100	61
Dry (24%)	100	100	94	35
Critical (15%)	97	93	82	46

<b>Alternative 5</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	69
60%	100	100	100	51
70%	100	100	100	37
80%	100	100	100	22
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	97	63
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	93
Above Normal (16%)	100	100	100	61
Below Normal (13%)	100	100	100	62
Dry (24%)	100	100	97	37
Critical (15%)	97	95	83	43

<b>Alternative 5 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	-1
70%	0	0	0	0
80%	0	0	0	-1
90%	0	0	0	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	1	0
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	0	1
Dry (24%)	0	0	3	2
Critical (15%)	0	2	1	-3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-10-4. Folsom Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	55
60%	100	100	100	37
70%	100	100	100	17
80%	100	100	100	6
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	96	56
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	90
Above Normal (16%)	100	100	100	45
Below Normal (13%)	100	100	100	35
Dry (24%)	100	100	96	32
Critical (15%)	97	92	83	55

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	69
60%	100	100	100	52
70%	100	100	100	37
80%	100	100	100	23
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	96	63
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	93
Above Normal (16%)	100	100	100	61
Below Normal (13%)	100	100	100	61
Dry (24%)	100	100	94	35
Critical (15%)	97	93	82	46

**No Action Alternative minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	14
60%	0	0	0	15
70%	0	0	0	20
80%	0	0	0	16
90%	0	0	0	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	-1	7
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	3
Above Normal (16%)	0	0	0	16
Below Normal (13%)	0	0	0	26
Dry (24%)	0	0	-2	3
Critical (15%)	0	1	-1	-9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-10-5. Folsom Large Mouth Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	55
60%	100	100	100	37
70%	100	100	100	17
80%	100	100	100	6
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	96	56
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	90
Above Normal (16%)	100	100	100	45
Below Normal (13%)	100	100	100	35
Dry (24%)	100	100	96	32
Critical (15%)	97	92	83	55

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	87
50%	100	100	100	57
60%	100	100	100	40
70%	100	100	100	22
80%	100	100	100	8
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	96	57
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	85
Above Normal (16%)	100	100	100	45
Below Normal (13%)	100	100	98	50
Dry (24%)	100	100	96	34
Critical (15%)	96	91	81	54

**Alternative 3 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	-13
50%	0	0	0	2
60%	0	0	0	4
70%	0	0	0	5
80%	0	0	0	2
90%	0	0	0	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-5
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	-2	15
Dry (24%)	0	0	0	2
Critical (15%)	-1	-1	-2	-1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-10-6. Folsom Large Mouth Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	55
60%	100	100	100	37
70%	100	100	100	17
80%	100	100	100	6
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	96	56
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	90
Above Normal (16%)	100	100	100	45
Below Normal (13%)	100	100	100	35
Dry (24%)	100	100	96	32
Critical (15%)	97	92	83	55

**Alternative 5**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	69
60%	100	100	100	51
70%	100	100	100	37
80%	100	100	100	22
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	99	97	63
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	93
Above Normal (16%)	100	100	100	61
Below Normal (13%)	100	100	100	62
Dry (24%)	100	100	97	37
Critical (15%)	97	95	83	43

**Alternative 5 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	14
60%	0	0	0	15
70%	0	0	0	20
80%	0	0	0	15
90%	0	0	0	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	7
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	3
Above Normal (16%)	0	0	0	17
Below Normal (13%)	0	0	0	27
Dry (24%)	0	0	2	4
Critical (15%)	0	3	0	-12

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

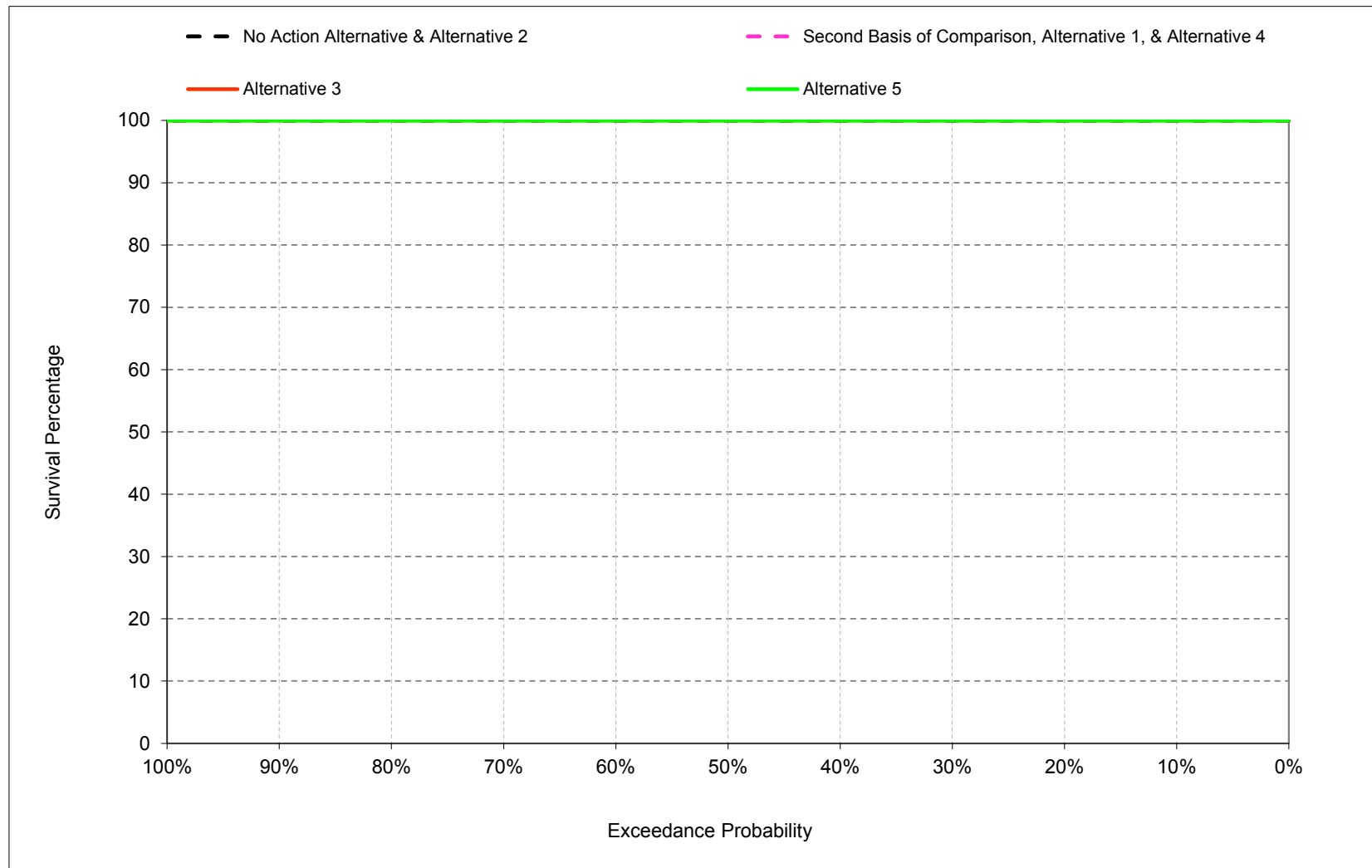
c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

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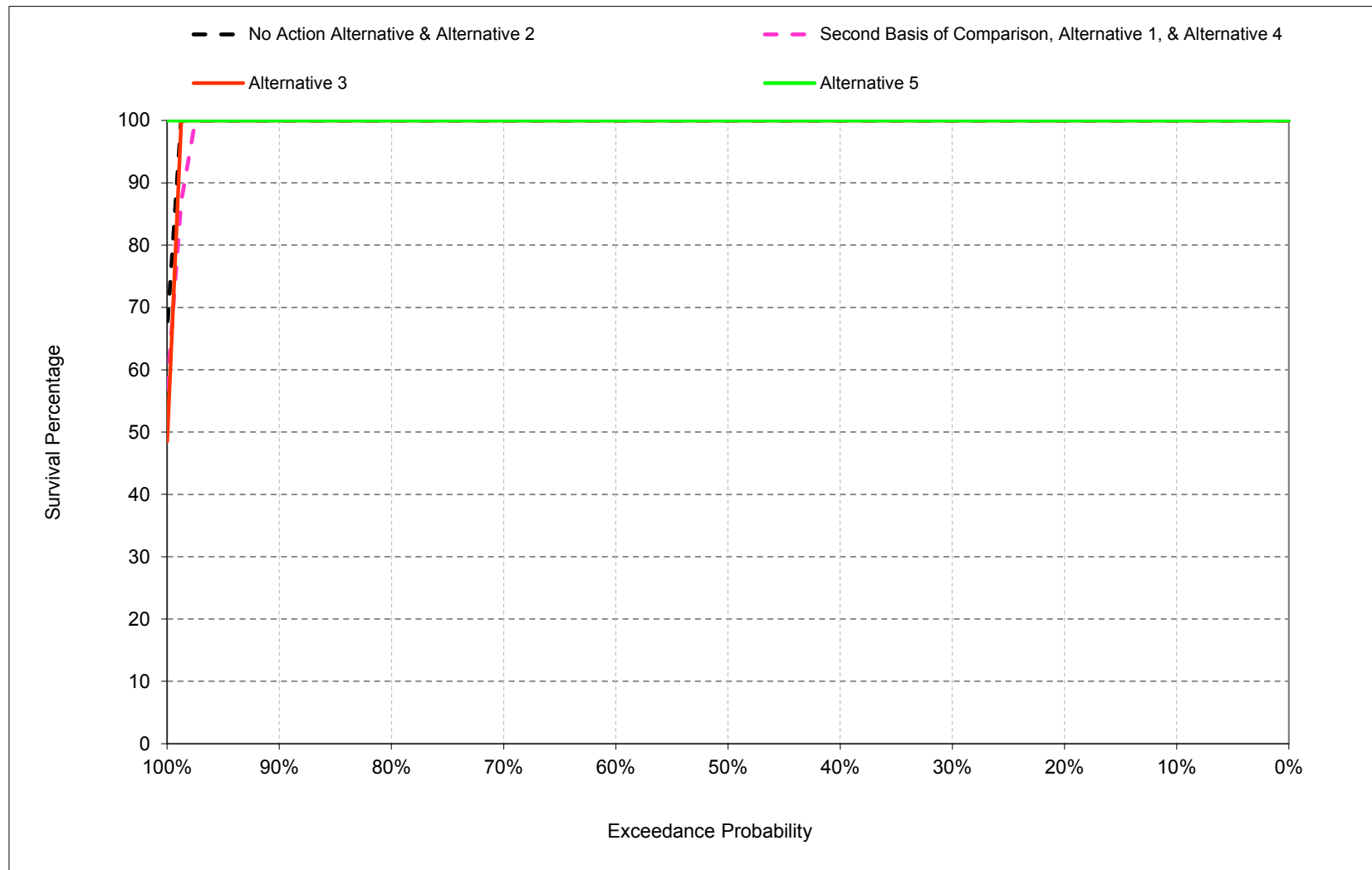
## **B.11. Folsom Small Mouth Bass Survival Percentage**

Figure B-11-1. Folsom Small Mouth Bass Nest Survival Percentage, March



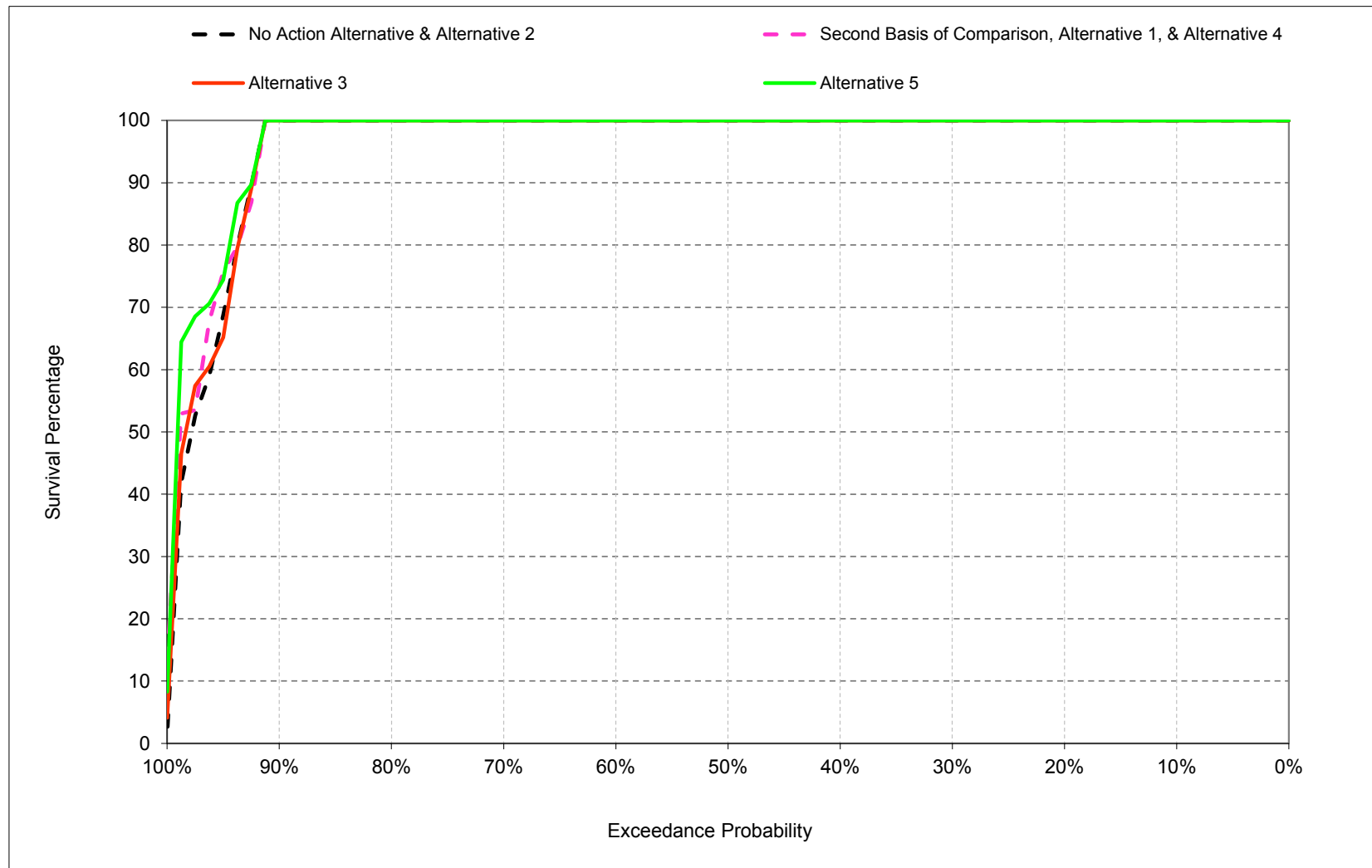
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-11-2. Folsom Small Mouth Bass Nest Survival Percentage, April



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

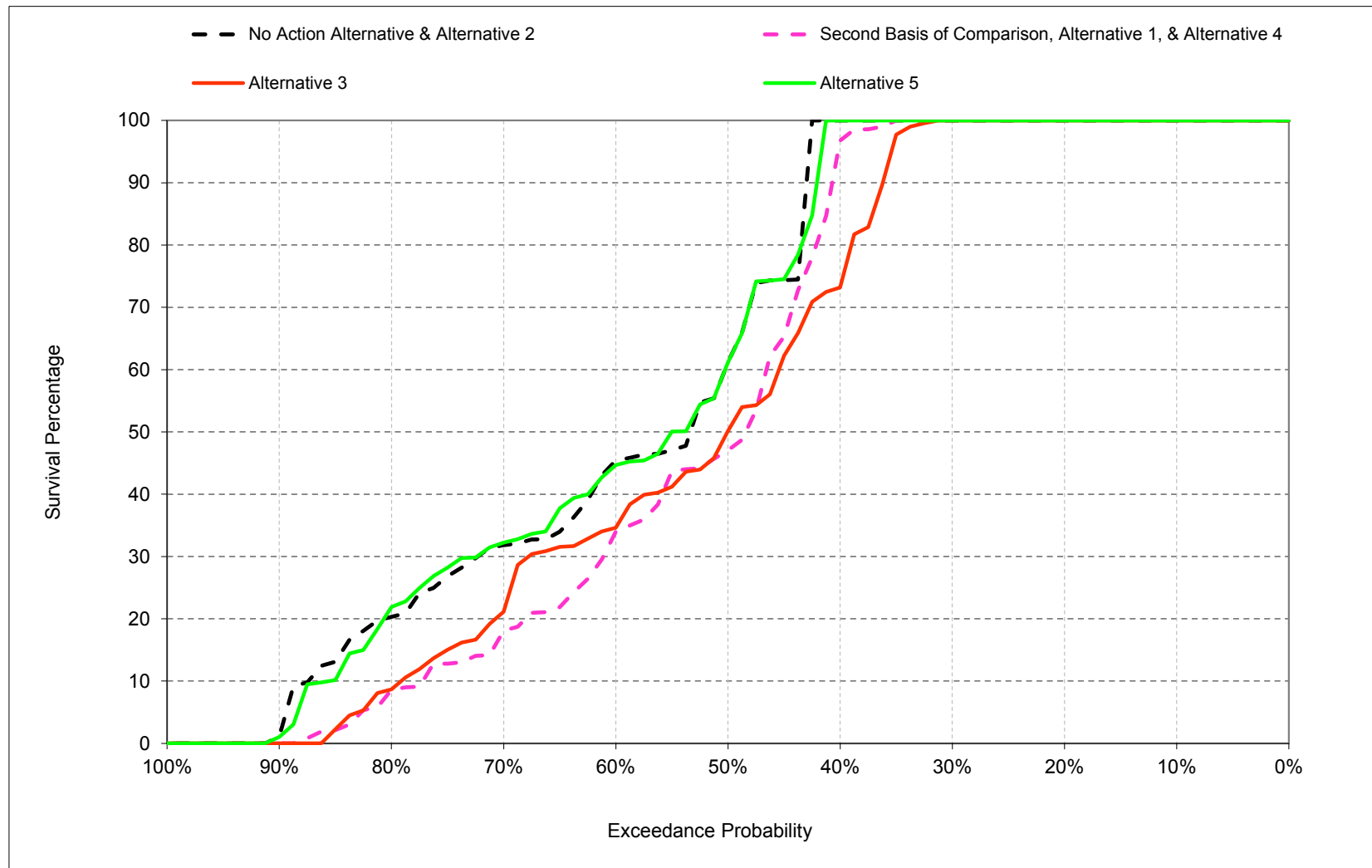
Figure B-11-3. Folsom Small Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.



Figure B-11-4. Folsom Small Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-11-1. Folsom Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	58
60%	100	100	100	44
70%	100	100	100	32
80%	100	100	100	20
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	95	60
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	92
Above Normal (16%)	100	100	100	58
Below Normal (13%)	100	100	98	57
Dry (24%)	100	100	93	32
Critical (15%)	96	92	80	41

<b>Alternative 1</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	92
50%	100	100	100	46
60%	100	100	100	31
70%	100	100	100	15
80%	100	100	100	6
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	95	54
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	89
Above Normal (16%)	100	100	100	43
Below Normal (13%)	100	100	98	34
Dry (24%)	100	100	94	29
Critical (15%)	96	90	81	50

<b>Alternative 1 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	-8
50%	0	0	0	-12
60%	0	0	0	-13
70%	0	0	0	-16
80%	0	0	0	-13
90%	0	0	0	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	-6
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-3
Above Normal (16%)	0	0	0	-15
Below Normal (13%)	0	0	0	-24
Dry (24%)	0	0	1	-2
Critical (15%)	0	-2	1	9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-11-2. Folsom Small Mouth Bass Nest Survival Percentage, Monthly Percentage****No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	58
60%	100	100	100	44
70%	100	100	100	32
80%	100	100	100	20
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	95	60
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	92
Above Normal (16%)	100	100	100	58
Below Normal (13%)	100	100	98	57
Dry (24%)	100	100	93	32
Critical (15%)	96	92	80	41

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	73
50%	100	100	100	48
60%	100	100	100	34
70%	100	100	100	20
80%	100	100	100	8
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	95	54
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	82
Above Normal (16%)	100	100	100	43
Below Normal (13%)	100	100	97	46
Dry (24%)	100	100	94	31
Critical (15%)	95	90	79	50

**Alternative 3 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	-27
50%	0	0	0	-10
60%	0	0	0	-10
70%	0	0	0	-12
80%	0	0	0	-12
90%	0	0	0	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	-6
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-10
Above Normal (16%)	0	0	0	-15
Below Normal (13%)	0	0	-1	-12
Dry (24%)	0	0	2	-1
Critical (15%)	-1	-2	-1	8

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-11-3. Folsom Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	58
60%	100	100	100	44
70%	100	100	100	32
80%	100	100	100	20
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	95	60
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	92
Above Normal (16%)	100	100	100	58
Below Normal (13%)	100	100	98	57
Dry (24%)	100	100	93	32
Critical (15%)	96	92	80	41

<b>Alternative 5</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	58
60%	100	100	100	43
70%	100	100	100	32
80%	100	100	100	19
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	96	60
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	92
Above Normal (16%)	100	100	100	58
Below Normal (13%)	100	100	99	58
Dry (24%)	100	100	95	33
Critical (15%)	96	95	81	38

<b>Alternative 5 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	-1
70%	0	0	0	0
80%	0	0	0	-1
90%	0	0	0	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	1	0
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	1	1
Dry (24%)	0	0	3	1
Critical (15%)	0	3	1	-4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-11-4. Folsom Small Mouth Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	92
50%	100	100	100	46
60%	100	100	100	31
70%	100	100	100	15
80%	100	100	100	6
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	95	54
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	89
Above Normal (16%)	100	100	100	43
Below Normal (13%)	100	100	98	34
Dry (24%)	100	100	94	29
Critical (15%)	96	90	81	50

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	58
60%	100	100	100	44
70%	100	100	100	32
80%	100	100	100	20
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	95	60
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	92
Above Normal (16%)	100	100	100	58
Below Normal (13%)	100	100	98	57
Dry (24%)	100	100	93	32
Critical (15%)	96	92	80	41

**No Action Alternative minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	8
50%	0	0	0	12
60%	0	0	0	13
70%	0	0	0	16
80%	0	0	0	13
90%	0	0	0	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	6
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	3
Above Normal (16%)	0	0	0	15
Below Normal (13%)	0	0	0	24
Dry (24%)	0	0	-1	2
Critical (15%)	0	2	-1	-9

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-11-5. Folsom Small Mouth Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	92
50%	100	100	100	46
60%	100	100	100	31
70%	100	100	100	15
80%	100	100	100	6
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	95	54
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	89
Above Normal (16%)	100	100	100	43
Below Normal (13%)	100	100	98	34
Dry (24%)	100	100	94	29
Critical (15%)	96	90	81	50

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	73
50%	100	100	100	48
60%	100	100	100	34
70%	100	100	100	20
80%	100	100	100	8
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	95	54
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	82
Above Normal (16%)	100	100	100	43
Below Normal (13%)	100	100	97	46
Dry (24%)	100	100	94	31
Critical (15%)	95	90	79	50

**Alternative 3 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	-19
50%	0	0	0	2
60%	0	0	0	3
70%	0	0	0	4
80%	0	0	0	2
90%	0	0	0	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	0
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-6
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	-1	12
Dry (24%)	0	0	0	2
Critical (15%)	-1	0	-1	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-11-6. Folsom Small Mouth Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	92
50%	100	100	100	46
60%	100	100	100	31
70%	100	100	100	15
80%	100	100	100	6
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	95	54
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	89
Above Normal (16%)	100	100	100	43
Below Normal (13%)	100	100	98	34
Dry (24%)	100	100	94	29
Critical (15%)	96	90	81	50

**Alternative 5**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	58
60%	100	100	100	43
70%	100	100	100	32
80%	100	100	100	19
90%	100	100	100	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	99	96	60
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	92
Above Normal (16%)	100	100	100	58
Below Normal (13%)	100	100	99	58
Dry (24%)	100	100	95	33
Critical (15%)	96	95	81	38

**Alternative 5 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	8
50%	0	0	0	12
60%	0	0	0	12
70%	0	0	0	16
80%	0	0	0	13
90%	0	0	0	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	1	0	6
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	3
Above Normal (16%)	0	0	0	15
Below Normal (13%)	0	0	1	24
Dry (24%)	0	0	1	4
Critical (15%)	0	5	1	-12

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

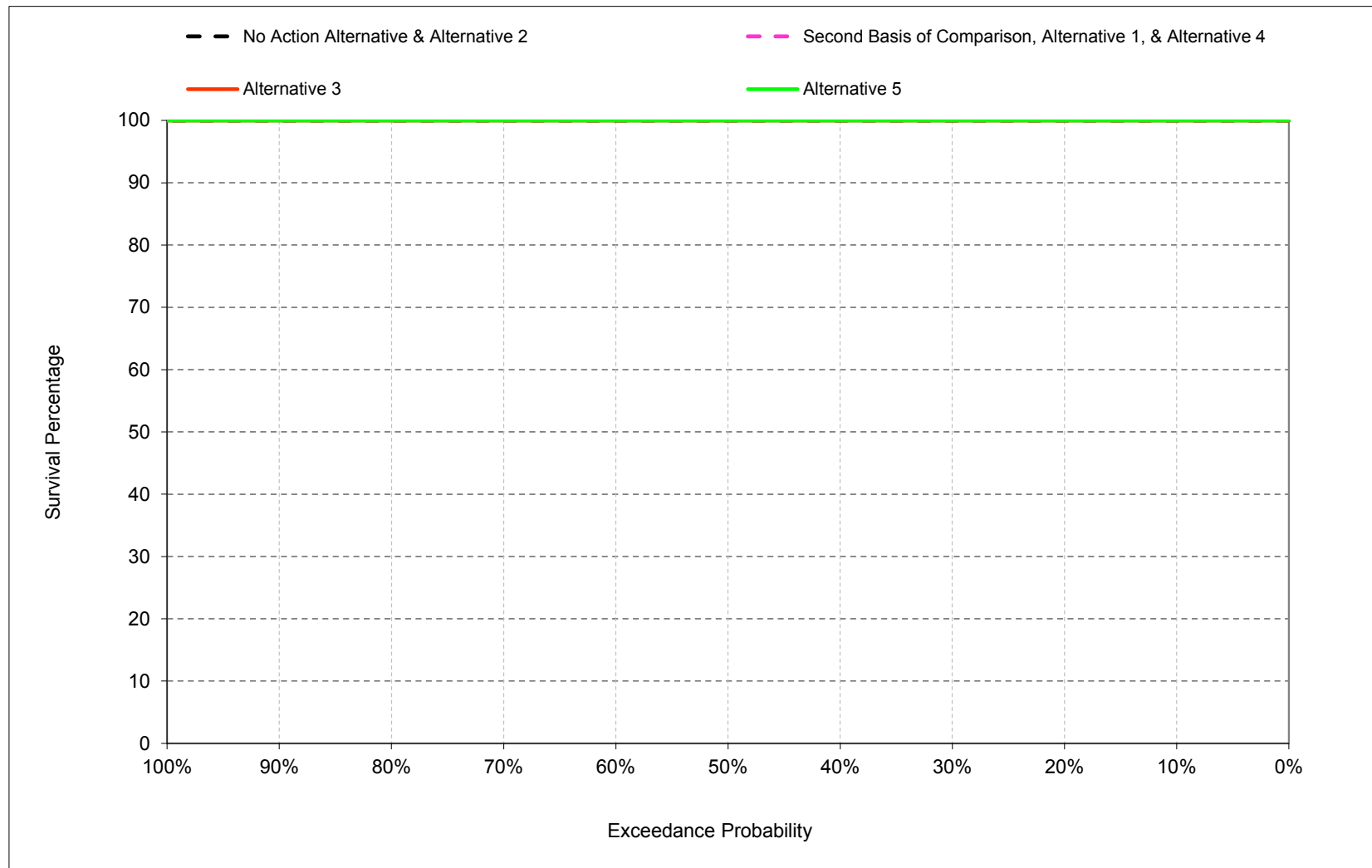
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

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## **B.12. Folsom Spotted Bass Survival Percentage**

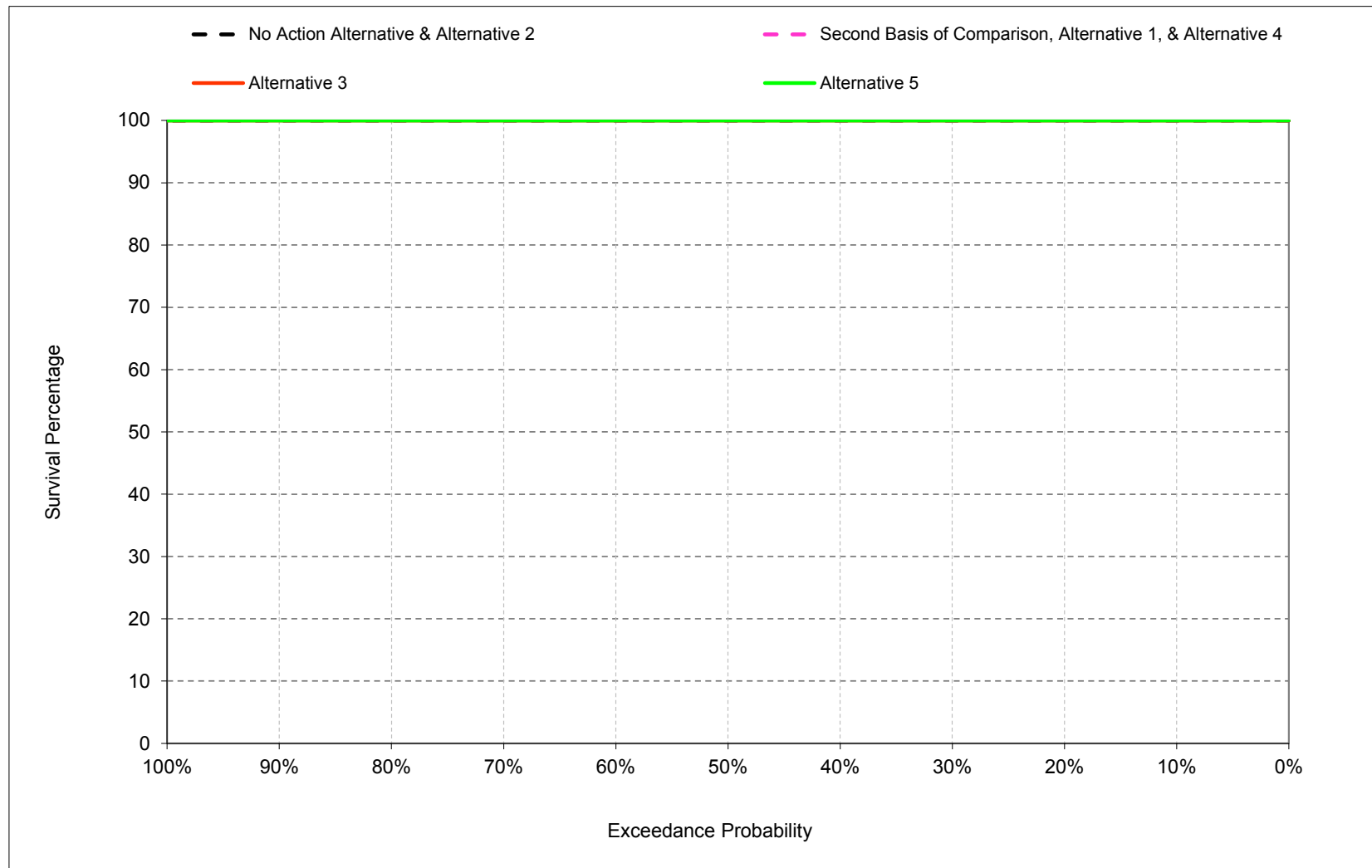


Figure B-12-1. Folsom Spotted Bass Nest Survival Percentage, March



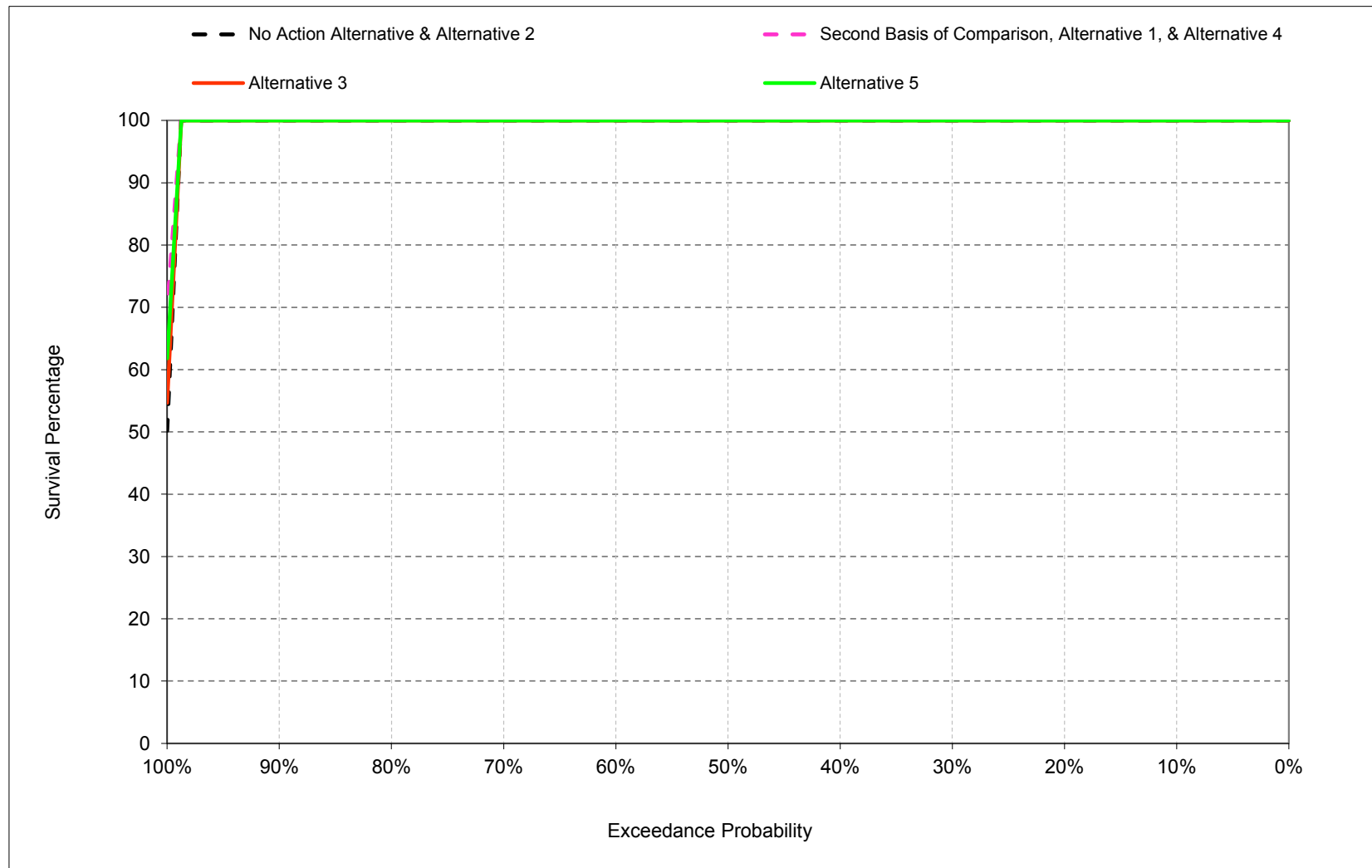
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-12-2. Folsom Spotted Bass Nest Survival Percentage, April



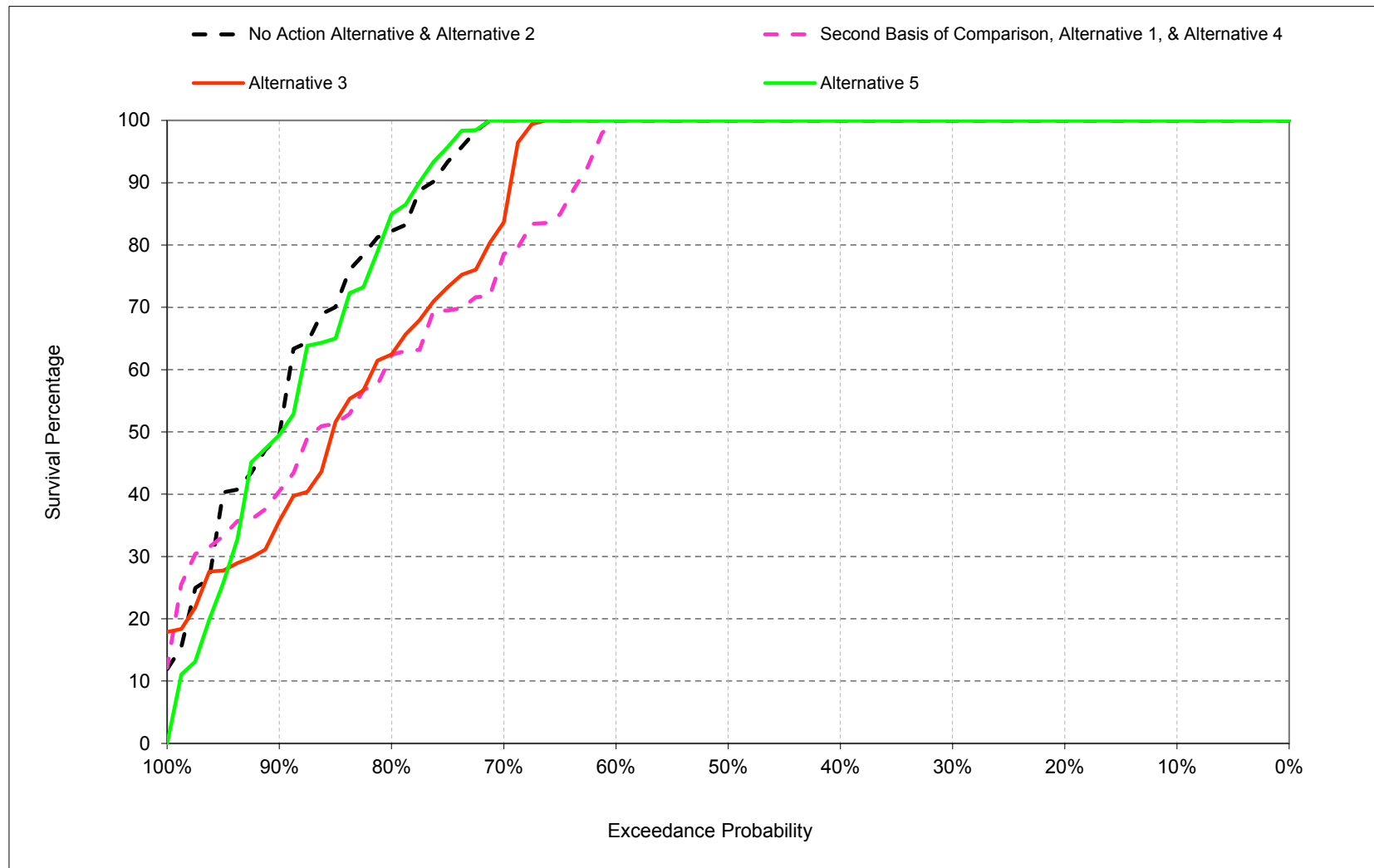
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-12-3. Folsom Spotted Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-12-4. Folsom Spotted Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-12-1. Folsom Spotted Bass Nest Survival Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	81
90%	100	100	100	47
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	99	88
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	100
Above Normal (16%)	100	100	100	94
Below Normal (13%)	100	100	100	90
Dry (24%)	100	100	100	73
Critical (15%)	100	100	91	80

<b>Alternative 1</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	99
70%	100	100	100	74
80%	100	100	100	59
90%	100	100	100	38
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	99	83
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	99
Above Normal (16%)	100	100	100	78
Below Normal (13%)	100	100	100	68
Dry (24%)	100	100	100	72
Critical (15%)	100	100	93	85

<b>Alternative 1 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	-1
70%	0	0	0	-26
80%	0	0	0	-23
90%	0	0	0	-9
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	-6
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-1
Above Normal (16%)	0	0	0	-16
Below Normal (13%)	0	0	0	-22
Dry (24%)	0	0	0	-1
Critical (15%)	0	0	2	4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-12-2. Folsom Spotted Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	81
90%	100	100	100	47
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	99	88
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	100
Above Normal (16%)	100	100	100	94
Below Normal (13%)	100	100	100	90
Dry (24%)	100	100	100	73
Critical (15%)	100	100	91	80

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	81
80%	100	100	100	62
90%	100	100	100	32
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	99	84
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	98
Above Normal (16%)	100	100	100	75
Below Normal (13%)	100	100	100	84
Dry (24%)	100	100	100	70
Critical (15%)	100	100	91	83

**Alternative 3 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	-19
80%	0	0	0	-20
90%	0	0	0	-16
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	-5
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-2
Above Normal (16%)	0	0	0	-19
Below Normal (13%)	0	0	0	-6
Dry (24%)	0	0	0	-3
Critical (15%)	0	0	0	3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-12-3. Folsom Spotted Bass Nest Survival Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	81
90%	100	100	100	47
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	99	88
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	100
Above Normal (16%)	100	100	100	94
Below Normal (13%)	100	100	100	90
Dry (24%)	100	100	100	73
Critical (15%)	100	100	91	80

<b>Alternative 5</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	80
90%	100	100	100	48
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	99	87
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	100
Above Normal (16%)	100	100	100	94
Below Normal (13%)	100	100	100	91
Dry (24%)	100	100	100	73
Critical (15%)	100	100	94	73

<b>Alternative 5 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	0
80%	0	0	0	-1
90%	0	0	0	0
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	-1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	0
Above Normal (16%)	0	0	0	0
Below Normal (13%)	0	0	0	0
Dry (24%)	0	0	0	0
Critical (15%)	0	0	3	-7

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-12-4. Folsom Spotted Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	99
70%	100	100	100	74
80%	100	100	100	59
90%	100	100	100	38
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	99	83
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	99
Above Normal (16%)	100	100	100	78
Below Normal (13%)	100	100	100	68
Dry (24%)	100	100	100	72
Critical (15%)	100	100	93	85

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	81
90%	100	100	100	47
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	99	88
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	100
Above Normal (16%)	100	100	100	94
Below Normal (13%)	100	100	100	90
Dry (24%)	100	100	100	73
Critical (15%)	100	100	91	80

**No Action Alternative minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	1
70%	0	0	0	26
80%	0	0	0	23
90%	0	0	0	9
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	6
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	1
Above Normal (16%)	0	0	0	16
Below Normal (13%)	0	0	0	22
Dry (24%)	0	0	0	1
Critical (15%)	0	0	-2	-4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.



**Table B-12-5. Folsom Spotted Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	99
70%	100	100	100	74
80%	100	100	100	59
90%	100	100	100	38
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	99	83
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	99
Above Normal (16%)	100	100	100	78
Below Normal (13%)	100	100	100	68
Dry (24%)	100	100	100	72
Critical (15%)	100	100	93	85

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	81
80%	100	100	100	62
90%	100	100	100	32
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	99	84
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	98
Above Normal (16%)	100	100	100	75
Below Normal (13%)	100	100	100	84
Dry (24%)	100	100	100	70
Critical (15%)	100	100	91	83

**Alternative 3 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	1
70%	0	0	0	7
80%	0	0	0	3
90%	0	0	0	-6
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	-1
Above Normal (16%)	0	0	0	-3
Below Normal (13%)	0	0	0	16
Dry (24%)	0	0	0	-2
Critical (15%)	0	0	-2	-1

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-12-6. Folsom Spotted Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	99
70%	100	100	100	74
80%	100	100	100	59
90%	100	100	100	38
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	99	83
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	99
Above Normal (16%)	100	100	100	78
Below Normal (13%)	100	100	100	68
Dry (24%)	100	100	100	72
Critical (15%)	100	100	93	85

**Alternative 5**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	100	100	80
90%	100	100	100	48
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	100	99	87
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	100	100
Above Normal (16%)	100	100	100	94
Below Normal (13%)	100	100	100	91
Dry (24%)	100	100	100	73
Critical (15%)	100	100	94	73

**Alternative 5 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	1
70%	0	0	0	26
80%	0	0	0	22
90%	0	0	0	10
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	0	0	5
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	0	1
Above Normal (16%)	0	0	0	16
Below Normal (13%)	0	0	0	23
Dry (24%)	0	0	0	1
Critical (15%)	0	0	1	-11

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

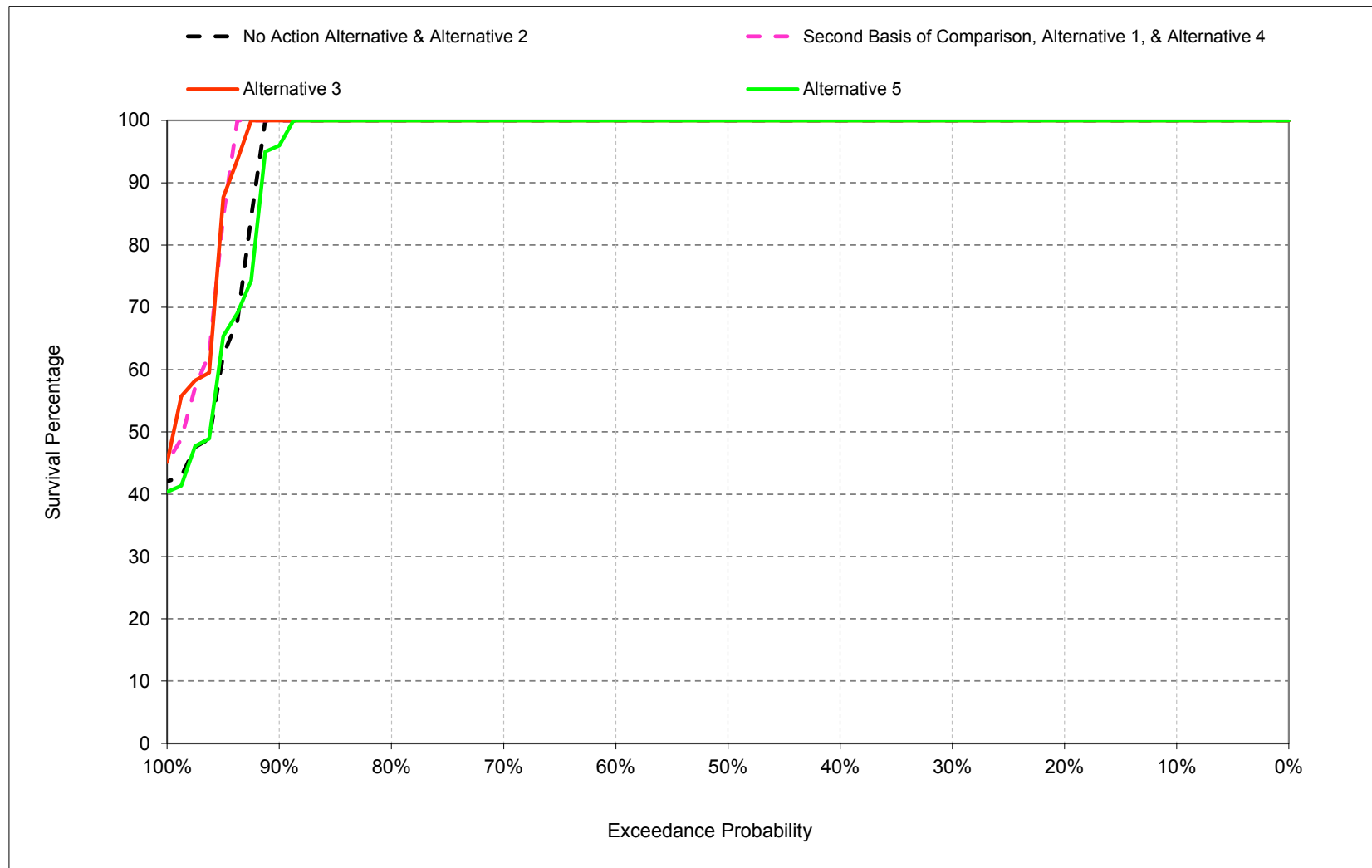
c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

1  
2

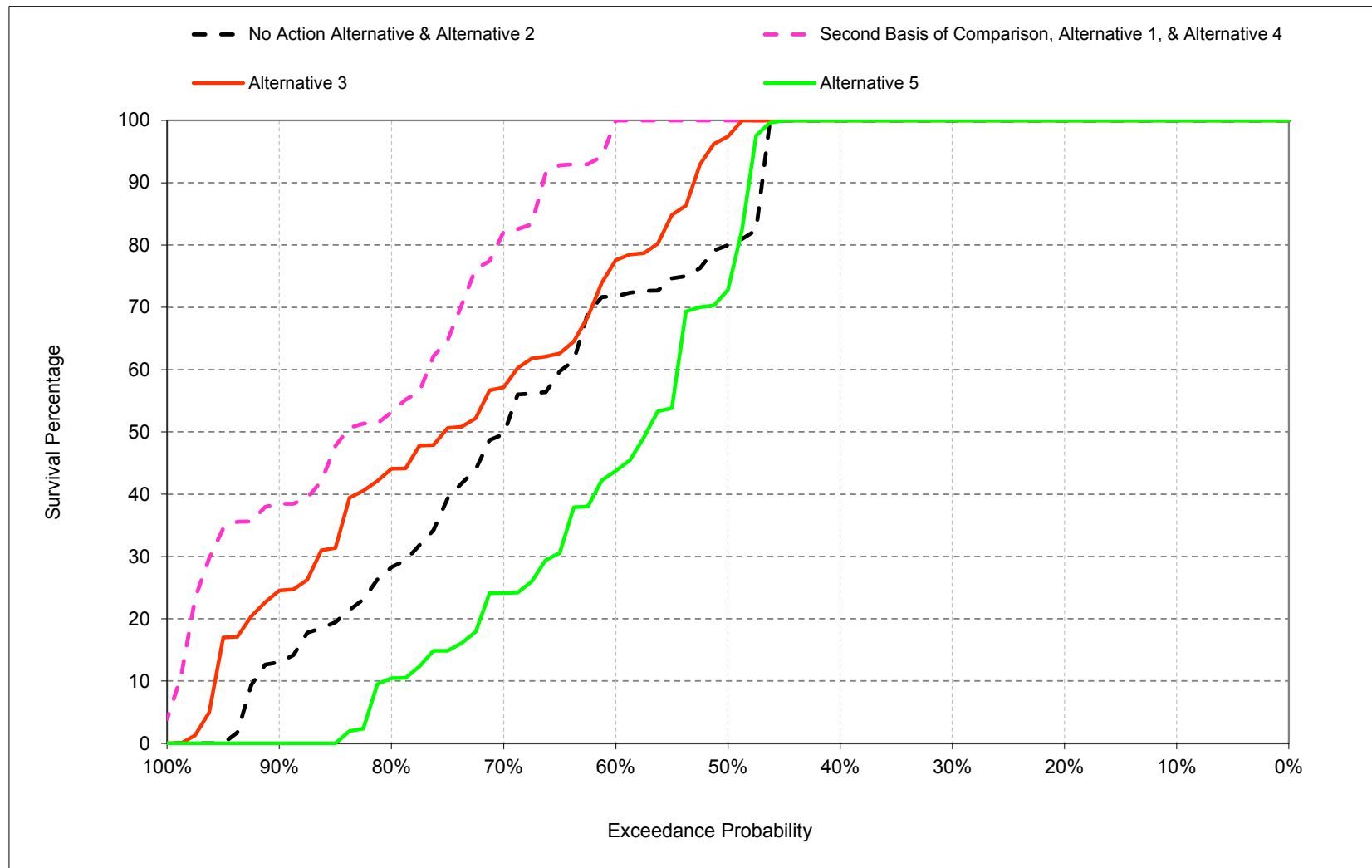
## **B.13. New Melones Large Mouth Bass Survival Percentage**

Figure B-13-1. New Melones Large Mouth Bass Nest Survival Percentage, March



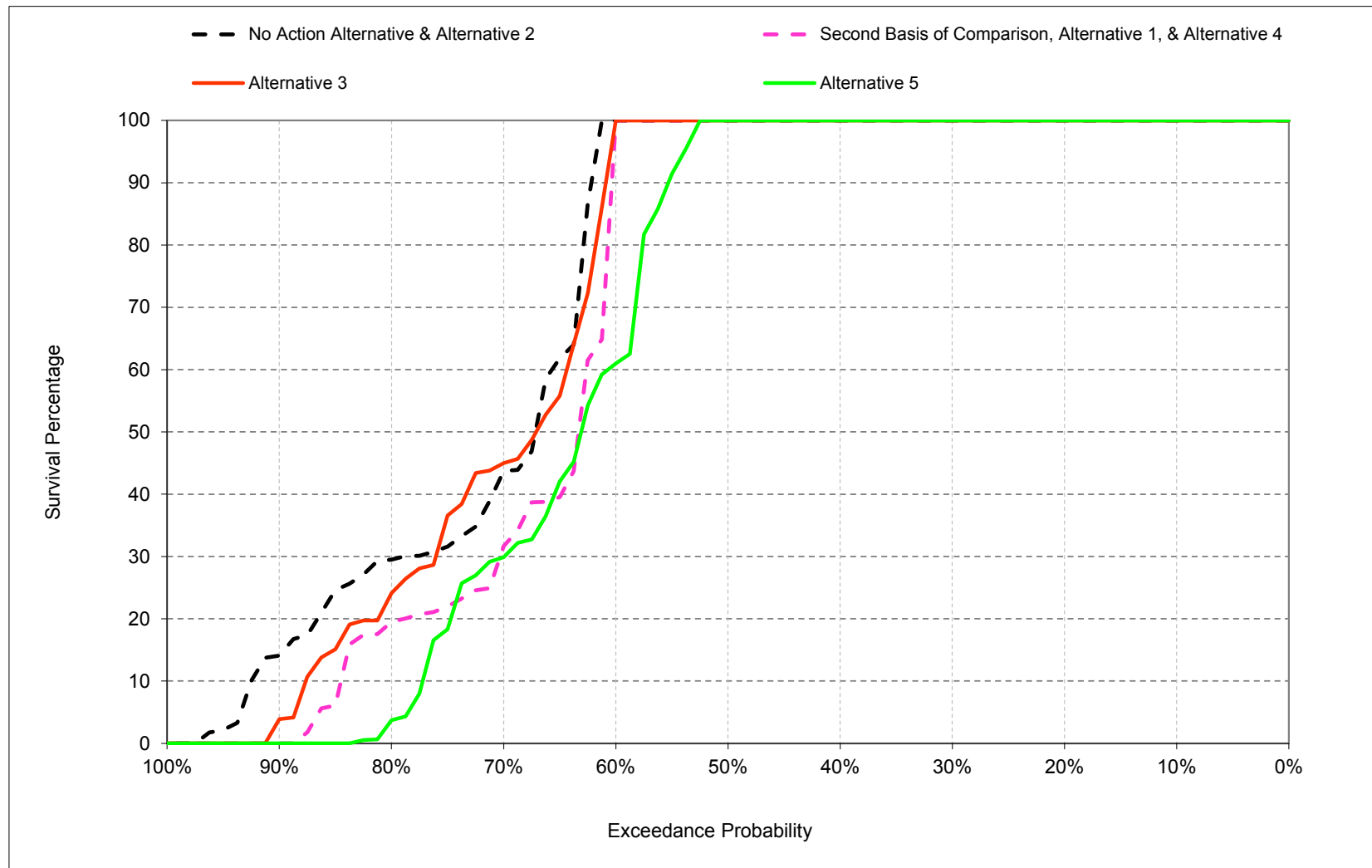
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-13-2. New Melones Large Mouth Bass Nest Survival Percentage, April



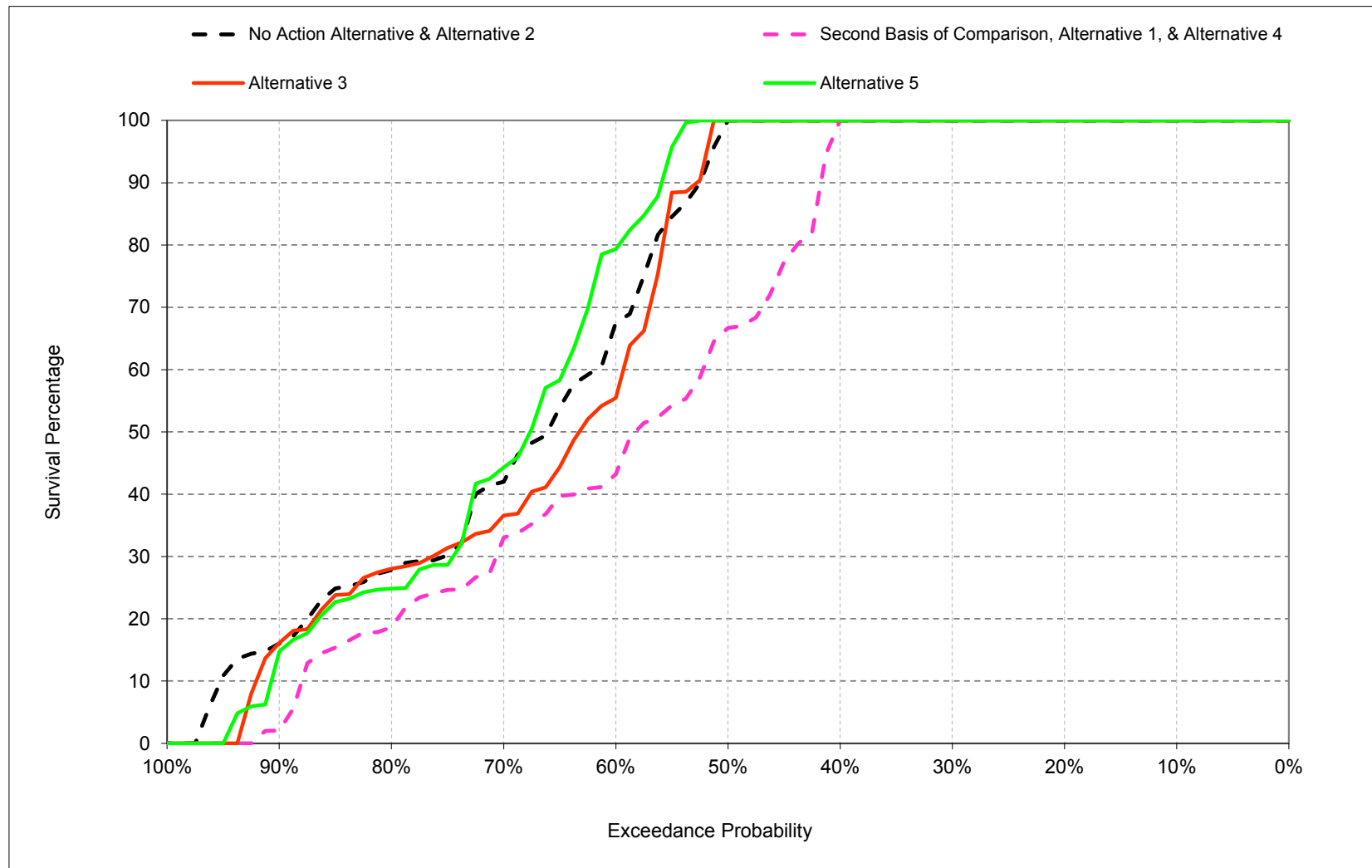
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-13-3. New Melones Large Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-13-4. New Melones Large Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-13-1. New Melones Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	80	100	98
60%	100	72	100	63
70%	100	49	40	42
80%	100	27	29	27
90%	100	13	14	15
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	95	68	72	69
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	94	83	98	95
Above Normal (16%)	100	88	100	72
Below Normal (13%)	95	58	65	61
Dry (24%)	98	66	51	54
Critical (15%)	87	29	25	43

**Alternative 1**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	98
50%	100	100	100	66
60%	100	97	79	42
70%	100	79	27	29
80%	100	52	18	18
90%	100	38	0	2
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	82	67	60
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	93	94	76
Above Normal (16%)	100	95	100	68
Below Normal (13%)	100	77	62	50
Dry (24%)	98	84	43	51
Critical (15%)	86	44	17	43

**Alternative 1 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	-2
50%	0	20	0	-32
60%	0	25	-21	-21
70%	0	30	-13	-13
80%	0	25	-11	-9
90%	0	25	-14	-13
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	2	14	-5	-9
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	4	10	-4	-19
Above Normal (16%)	0	7	0	-5
Below Normal (13%)	5	19	-4	-10
Dry (24%)	0	18	-7	-4
Critical (15%)	-1	15	-8	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.



**Table B-13-2. New Melones Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	80	100	98
60%	100	72	100	63
70%	100	49	40	42
80%	100	27	29	27
90%	100	13	14	15
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	95	68	72	69
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	94	83	98	95
Above Normal (16%)	100	88	100	72
Below Normal (13%)	95	58	65	61
Dry (24%)	98	66	51	54
Critical (15%)	87	29	25	43

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	97	100	100
60%	100	75	92	55
70%	100	57	44	35
80%	100	43	21	28
90%	100	23	0	14
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	73	70	67
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	92	91	77
Above Normal (16%)	100	94	100	90
Below Normal (13%)	100	62	73	64
Dry (24%)	98	68	46	59
Critical (15%)	83	30	30	40

**Alternative 3 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	17	0	2
60%	0	4	-8	-9
70%	0	8	4	-7
80%	0	16	-9	0
90%	0	10	-13	-1
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	1	5	-2	-2
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	4	9	-7	-18
Above Normal (16%)	0	6	0	17
Below Normal (13%)	5	4	7	3
Dry (24%)	0	2	-4	5
Critical (15%)	-4	1	5	-2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-13-3. New Melones Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	80	100	98
60%	100	72	100	63
70%	100	49	40	42
80%	100	27	29	27
90%	100	13	14	15
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	95	68	72	69
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	94	83	98	95
Above Normal (16%)	100	88	100	72
Below Normal (13%)	95	58	65	61
Dry (24%)	98	66	51	54
Critical (15%)	87	29	25	43

**Alternative 5**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	72	100	100
60%	100	43	60	79
70%	100	24	29	43
80%	100	10	1	25
90%	95	0	0	7
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	95	60	64	70
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	95	87	93	97
Above Normal (16%)	100	79	94	61
Below Normal (13%)	95	50	58	59
Dry (24%)	98	45	37	52
Critical (15%)	85	14	19	60

**Alternative 5 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	-8	0	2
60%	0	-29	-40	15
70%	0	-25	-11	1
80%	0	-17	-28	-3
90%	-5	-13	-14	-8
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	-9	-8	1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	1	4	-5	2
Above Normal (16%)	0	-9	-6	-12
Below Normal (13%)	0	-8	-7	-2
Dry (24%)	0	-21	-13	-2
Critical (15%)	-1	-15	-6	17

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-13-4. New Melones Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	98
50%	100	100	100	66
60%	100	97	79	42
70%	100	79	27	29
80%	100	52	18	18
90%	100	38	0	2
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	82	67	60
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	93	94	76
Above Normal (16%)	100	95	100	68
Below Normal (13%)	100	77	62	50
Dry (24%)	98	84	43	51
Critical (15%)	86	44	17	43

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	80	100	98
60%	100	72	100	63
70%	100	49	40	42
80%	100	27	29	27
90%	100	13	14	15
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	95	68	72	69
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	94	83	98	95
Above Normal (16%)	100	88	100	72
Below Normal (13%)	95	58	65	61
Dry (24%)	98	66	51	54
Critical (15%)	87	29	25	43

**No Action Alternative minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	2
50%	0	-20	0	32
60%	0	-25	21	21
70%	0	-30	13	13
80%	0	-25	11	9
90%	0	-25	14	13
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	-2	-14	5	9
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	-4	-10	4	19
Above Normal (16%)	0	-7	0	5
Below Normal (13%)	-5	-19	4	10
Dry (24%)	0	-18	7	4
Critical (15%)	1	-15	8	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-13-5. New Melones Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	98
50%	100	100	100	66
60%	100	97	79	42
70%	100	79	27	29
80%	100	52	18	18
90%	100	38	0	2
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	82	67	60
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	93	94	76
Above Normal (16%)	100	95	100	68
Below Normal (13%)	100	77	62	50
Dry (24%)	98	84	43	51
Critical (15%)	86	44	17	43

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	97	100	100
60%	100	75	92	55
70%	100	57	44	35
80%	100	43	21	28
90%	100	23	0	14
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	73	70	67
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	92	91	77
Above Normal (16%)	100	94	100	90
Below Normal (13%)	100	62	73	64
Dry (24%)	98	68	46	59
Critical (15%)	83	30	30	40

**Alternative 3 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	2
50%	0	-3	0	34
60%	0	-21	13	13
70%	0	-22	17	6
80%	0	-9	3	10
90%	0	-15	0	12
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	-8	3	7
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	-1	-3	1
Above Normal (16%)	0	-1	0	22
Below Normal (13%)	0	-15	11	13
Dry (24%)	0	-16	3	8
Critical (15%)	-3	-13	13	-2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-13-6. New Melones Large Mouth Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	98
50%	100	100	100	66
60%	100	97	79	42
70%	100	79	27	29
80%	100	52	18	18
90%	100	38	0	2
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	97	82	67	60
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	93	94	76
Above Normal (16%)	100	95	100	68
Below Normal (13%)	100	77	62	50
Dry (24%)	98	84	43	51
Critical (15%)	86	44	17	43

**Alternative 5**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	72	100	100
60%	100	43	60	79
70%	100	24	29	43
80%	100	10	1	25
90%	95	0	0	7
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	95	60	64	70
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	95	87	93	97
Above Normal (16%)	100	79	94	61
Below Normal (13%)	95	50	58	59
Dry (24%)	98	45	37	52
Critical (15%)	85	14	19	60

**Alternative 5 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	2
50%	0	-28	0	34
60%	0	-54	-19	37
70%	0	-55	2	14
80%	0	-42	-17	7
90%	-5	-38	0	5
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	-2	-22	-3	10
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	-3	-6	-1	21
Above Normal (16%)	0	-16	-6	-7
Below Normal (13%)	-5	-27	-4	9
Dry (24%)	0	-39	-6	2
Critical (15%)	-1	-30	2	17

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

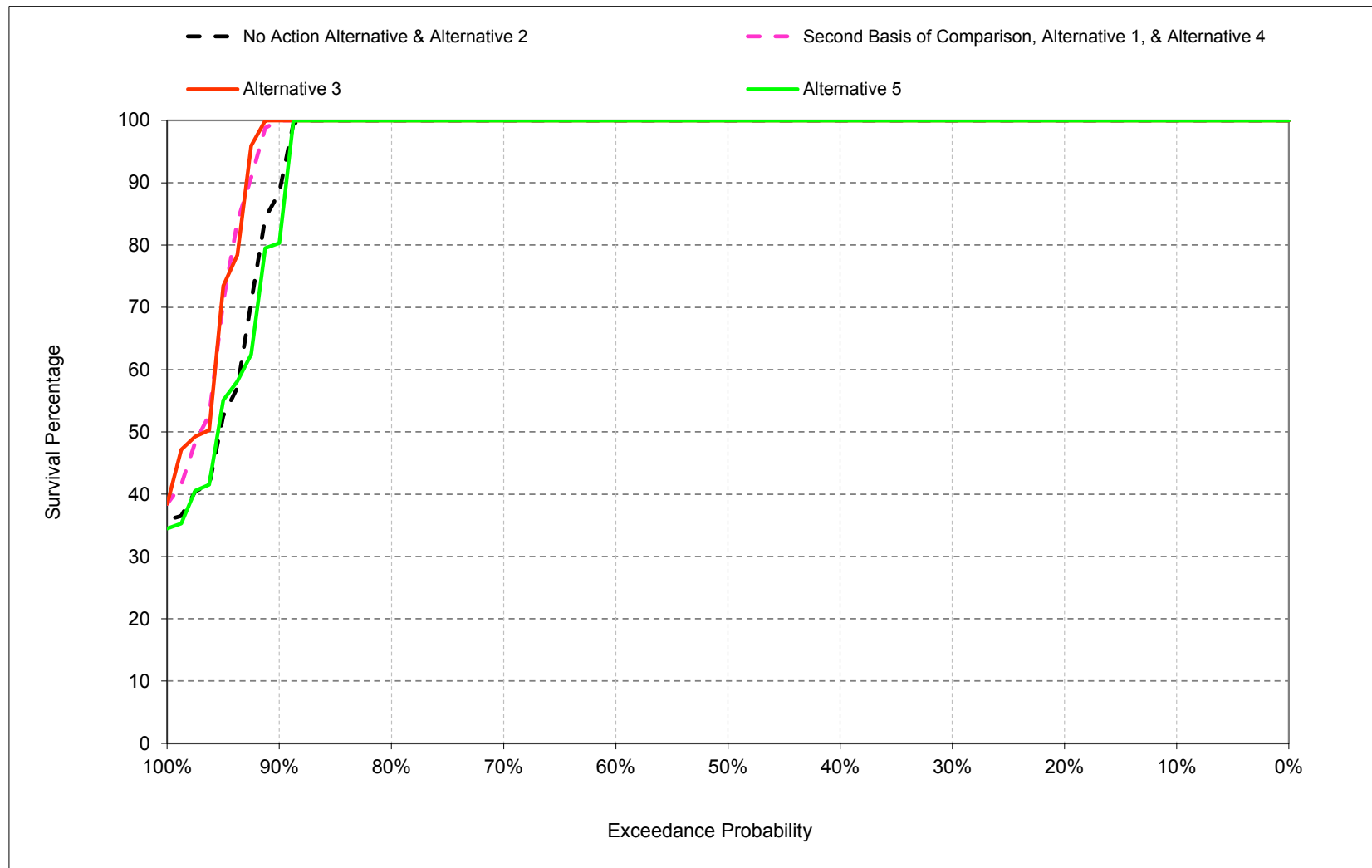
c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

1  
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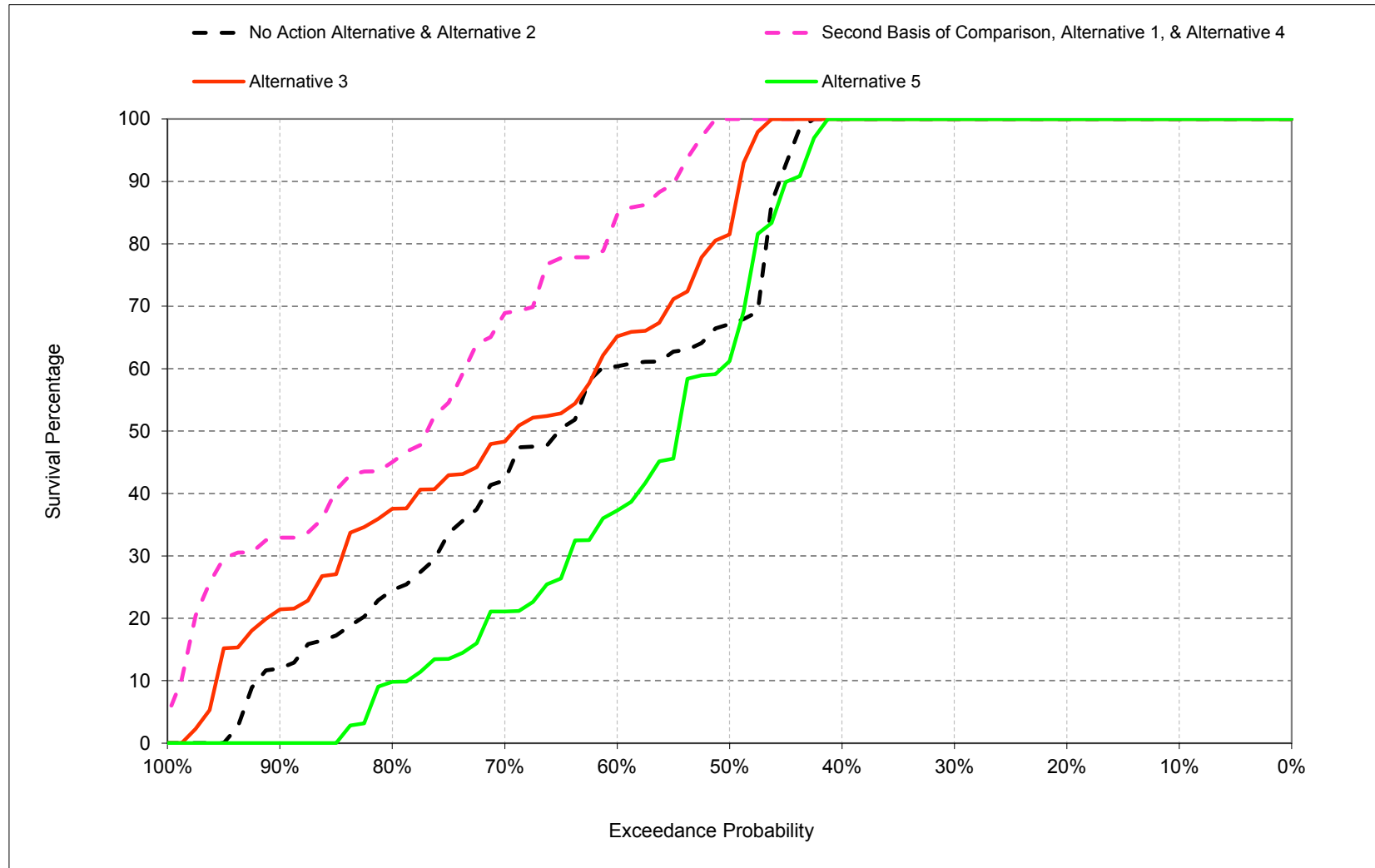
## **B.14. New Melones Small Mouth Bass Survival Percentage**

Figure B-14-1. New Melones Small Mouth Bass Nest Survival Percentage, March



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

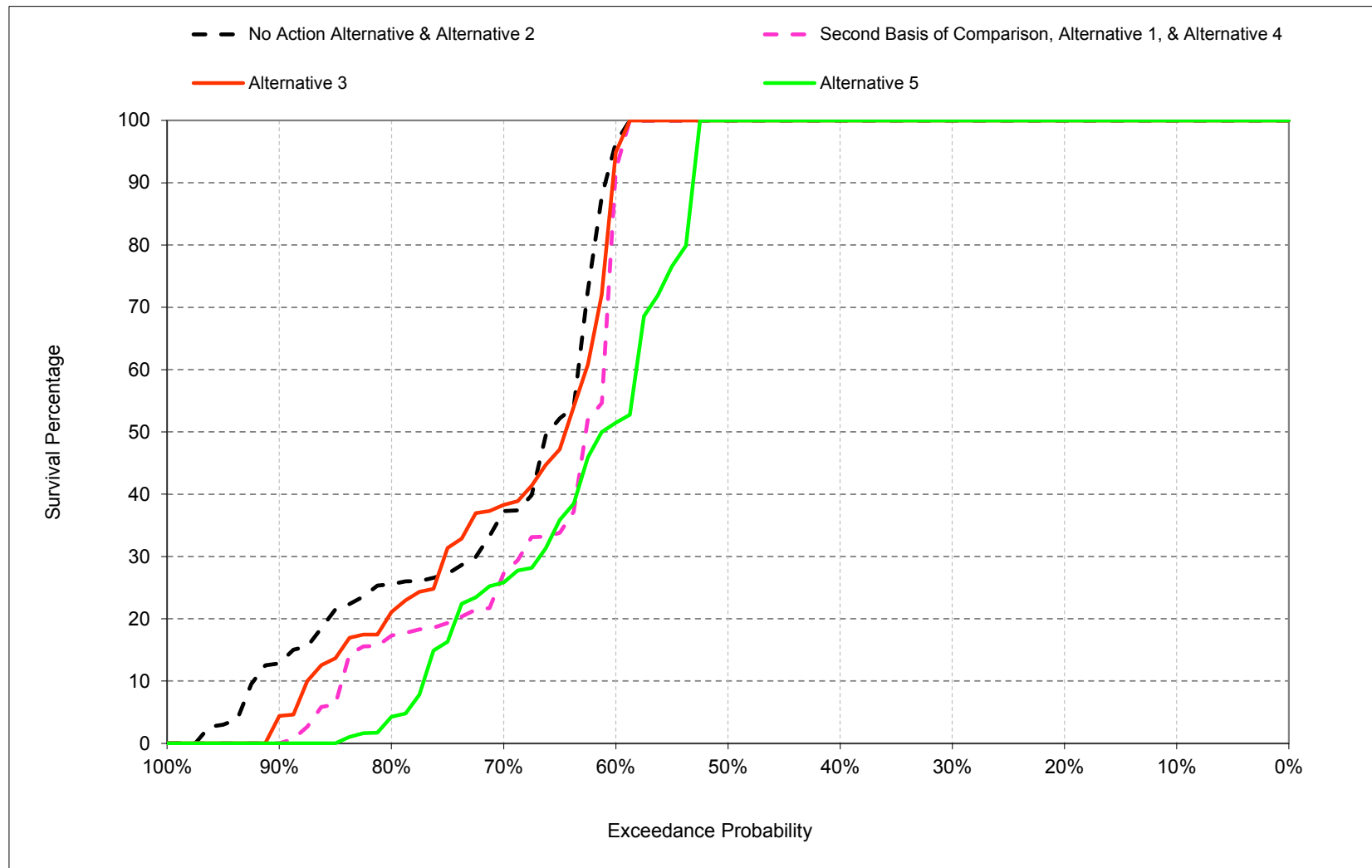
Figure B-14-2. New Melones Small Mouth Bass Nest Survival Percentage, April



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

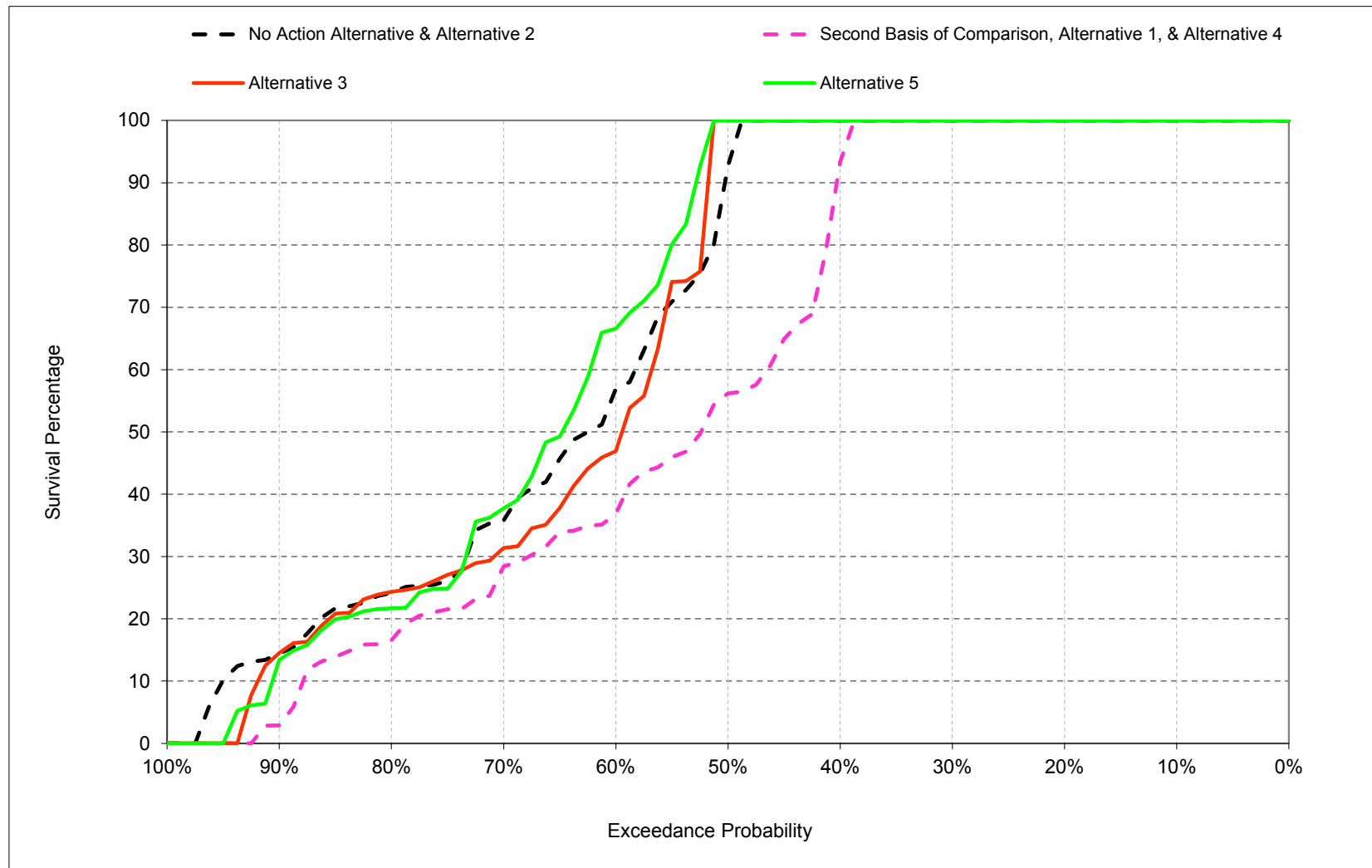


Figure B-14-3. New Melones Small Mouth Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-14-4. New Melones Small Mouth Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-14-1. New Melones Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	67	100	86
60%	100	60	91	53
70%	100	42	34	35
80%	100	23	25	24
90%	85	12	13	14
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	94	65	70	66
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	93	81	97	93
Above Normal (16%)	100	86	99	68
Below Normal (13%)	94	55	63	59
Dry (24%)	98	59	48	50
Critical (15%)	82	26	23	40

**Alternative 1**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	88
50%	100	100	100	55
60%	100	81	70	36
70%	100	66	23	25
80%	100	44	16	16
90%	99	33	0	3
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	77	66	57
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	90	94	73
Above Normal (16%)	100	94	99	64
Below Normal (13%)	100	72	59	49
Dry (24%)	97	77	42	47
Critical (15%)	82	39	16	40

**Alternative 1 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	-12
50%	0	33	0	-31
60%	0	21	-22	-18
70%	0	25	-11	-10
80%	0	21	-9	-8
90%	14	21	-13	-11
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	2	13	-4	-9
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	4	9	-4	-20
Above Normal (16%)	0	8	0	-4
Below Normal (13%)	6	17	-3	-10
Dry (24%)	-1	18	-6	-3
Critical (15%)	0	13	-7	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-14-2. New Melones Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	67	100	86
60%	100	60	91	53
70%	100	42	34	35
80%	100	23	25	24
90%	85	12	13	14
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	94	65	70	66
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	93	81	97	93
Above Normal (16%)	100	86	99	68
Below Normal (13%)	94	55	63	59
Dry (24%)	98	59	48	50
Critical (15%)	82	26	23	40

<b>Alternative 3</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	81	100	100
60%	100	63	81	46
70%	100	48	38	30
80%	100	36	18	24
90%	100	20	0	13
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	70	69	65
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	89	90	77
Above Normal (16%)	100	93	100	88
Below Normal (13%)	100	57	69	61
Dry (24%)	97	62	44	54
Critical (15%)	79	27	27	37

<b>Alternative 3 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	14	0	14
60%	0	3	-10	-7
70%	0	6	3	-6
80%	0	13	-7	0
90%	15	8	-12	-1
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	2	5	-1	-1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	4	8	-7	-16
Above Normal (16%)	0	7	1	20
Below Normal (13%)	6	2	7	2
Dry (24%)	0	3	-4	4
Critical (15%)	-3	1	4	-3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-14-3. New Melones Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	67	100	86
60%	100	60	91	53
70%	100	42	34	35
80%	100	23	25	24
90%	85	12	13	14
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	94	65	70	66
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	93	81	97	93
Above Normal (16%)	100	86	99	68
Below Normal (13%)	94	55	63	59
Dry (24%)	98	59	48	50
Critical (15%)	82	26	23	40

**Alternative 5**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	60	100	100
60%	100	37	51	66
70%	100	21	25	37
80%	100	9	2	22
90%	80	0	0	7
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	94	57	62	67
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	95	84	90	94
Above Normal (16%)	100	76	93	58
Below Normal (13%)	94	47	56	57
Dry (24%)	97	43	36	49
Critical (15%)	81	13	19	58

**Alternative 5 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	-7	0	14
60%	0	-24	-41	13
70%	0	-20	-9	1
80%	0	-14	-23	-2
90%	-5	-12	-13	-6
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	-7	-8	1
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	1	3	-7	1
Above Normal (16%)	0	-10	-7	-10
Below Normal (13%)	0	-8	-6	-2
Dry (24%)	-1	-16	-12	-1
Critical (15%)	-1	-13	-4	18

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-14-4. New Melones Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	88
50%	100	100	100	55
60%	100	81	70	36
70%	100	66	23	25
80%	100	44	16	16
90%	99	33	0	3
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	77	66	57
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	90	94	73
Above Normal (16%)	100	94	99	64
Below Normal (13%)	100	72	59	49
Dry (24%)	97	77	42	47
Critical (15%)	82	39	16	40

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	67	100	86
60%	100	60	91	53
70%	100	42	34	35
80%	100	23	25	24
90%	85	12	13	14
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	94	65	70	66
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	93	81	97	93
Above Normal (16%)	100	86	99	68
Below Normal (13%)	94	55	63	59
Dry (24%)	98	59	48	50
Critical (15%)	82	26	23	40

**No Action Alternative minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	12
50%	0	-33	0	31
60%	0	-21	22	18
70%	0	-25	11	10
80%	0	-21	9	8
90%	-14	-21	13	11
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	-2	-13	4	9
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	-4	-9	4	20
Above Normal (16%)	0	-8	0	4
Below Normal (13%)	-6	-17	3	10
Dry (24%)	1	-18	6	3
Critical (15%)	0	-13	7	0

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-14-5. New Melones Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

**Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	88
50%	100	100	100	55
60%	100	81	70	36
70%	100	66	23	25
80%	100	44	16	16
90%	99	33	0	3
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	77	66	57
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	90	94	73
Above Normal (16%)	100	94	99	64
Below Normal (13%)	100	72	59	49
Dry (24%)	97	77	42	47
Critical (15%)	82	39	16	40

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	81	100	100
60%	100	63	81	46
70%	100	48	38	30
80%	100	36	18	24
90%	100	20	0	13
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	96	70	69	65
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	98	89	90	77
Above Normal (16%)	100	93	100	88
Below Normal (13%)	100	57	69	61
Dry (24%)	97	62	44	54
Critical (15%)	79	27	27	37

**Alternative 3 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	12
50%	0	-19	0	45
60%	0	-18	12	10
70%	0	-18	14	5
80%	0	-8	2	8
90%	1	-12	0	10
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	-8	3	8
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	-1	-3	4
Above Normal (16%)	0	-1	1	24
Below Normal (13%)	0	-16	10	13
Dry (24%)	0	-15	2	7
Critical (15%)	-3	-12	11	-3

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-14-6. New Melones Small Mouth Bass Nest Survival Percentage, Monthly Percentage**

Second Basis of Comparison				
Statistic	Mar	Apr	May	Jun
Probability of Exceedance <sup>a</sup>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	88
50%	100	100	100	55
60%	100	81	70	36
70%	100	66	23	25
80%	100	44	16	16
90%	99	33	0	3
Long Term				
Full Simulation Period <sup>b</sup>	96	77	66	57
Water Year Types <sup>c</sup>				
Wet (32%)	98	90	94	73
Above Normal (16%)	100	94	99	64
Below Normal (13%)	100	72	59	49
Dry (24%)	97	77	42	47
Critical (15%)	82	39	16	40

Alternative 5				
Statistic	Mar	Apr	May	Jun
Probability of Exceedance <sup>a</sup>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	60	100	100
60%	100	37	51	66
70%	100	21	25	37
80%	100	9	2	22
90%	80	0	0	7
Long Term				
Full Simulation Period <sup>b</sup>	94	57	62	67
Water Year Types <sup>c</sup>				
Wet (32%)	95	84	90	94
Above Normal (16%)	100	76	93	58
Below Normal (13%)	94	47	56	57
Dry (24%)	97	43	36	49
Critical (15%)	81	13	19	58

Alternative 5 minus Second Basis of Comparison				
Statistic	Mar	Apr	May	Jun
Probability of Exceedance <sup>a</sup>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	12
50%	0	-40	0	45
60%	0	-45	-19	30
70%	0	-45	2	12
80%	0	-35	-14	6
90%	-19	-33	0	4
Long Term				
Full Simulation Period <sup>b</sup>	-2	-20	-4	10
Water Year Types <sup>c</sup>				
Wet (32%)	-3	-6	-3	21
Above Normal (16%)	0	-18	-7	-6
Below Normal (13%)	-6	-26	-3	9
Dry (24%)	0	-34	-6	2
Critical (15%)	-1	-26	3	18

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

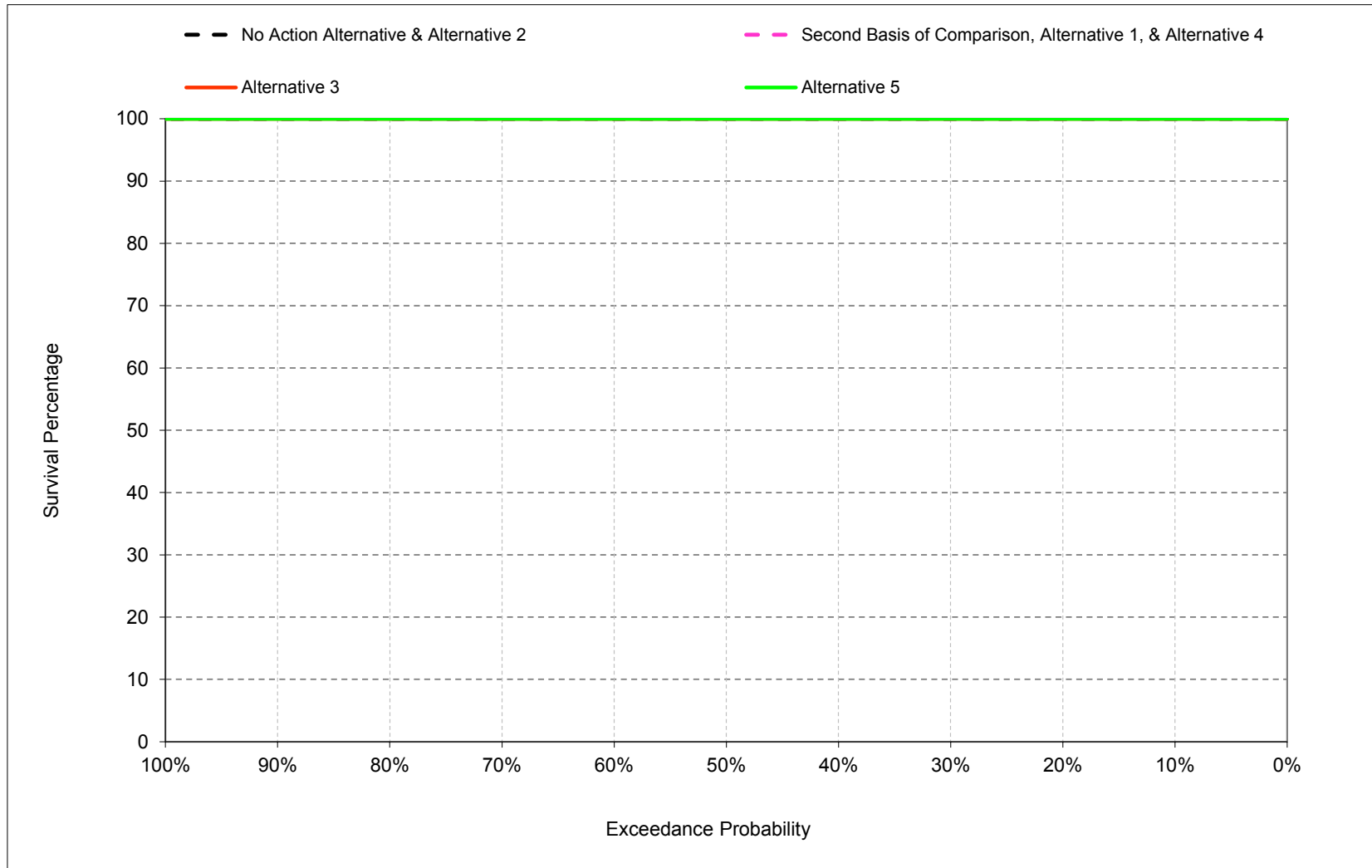
Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.



**B.15. New Melones Spotted Bass Survival Percentage**

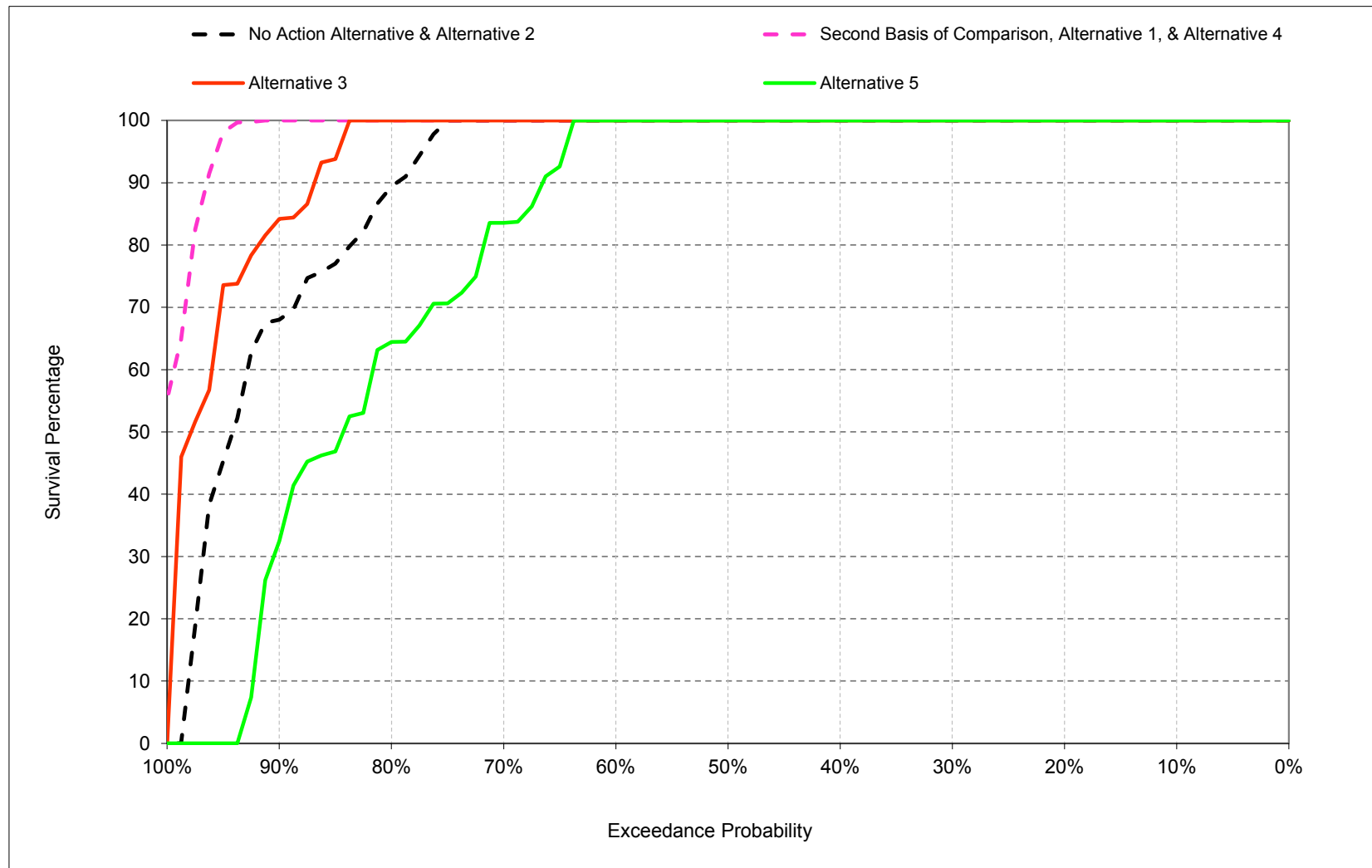
1  
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29

Figure B-15-1. New Melones Spotted Bass Nest Survival Percentage, March



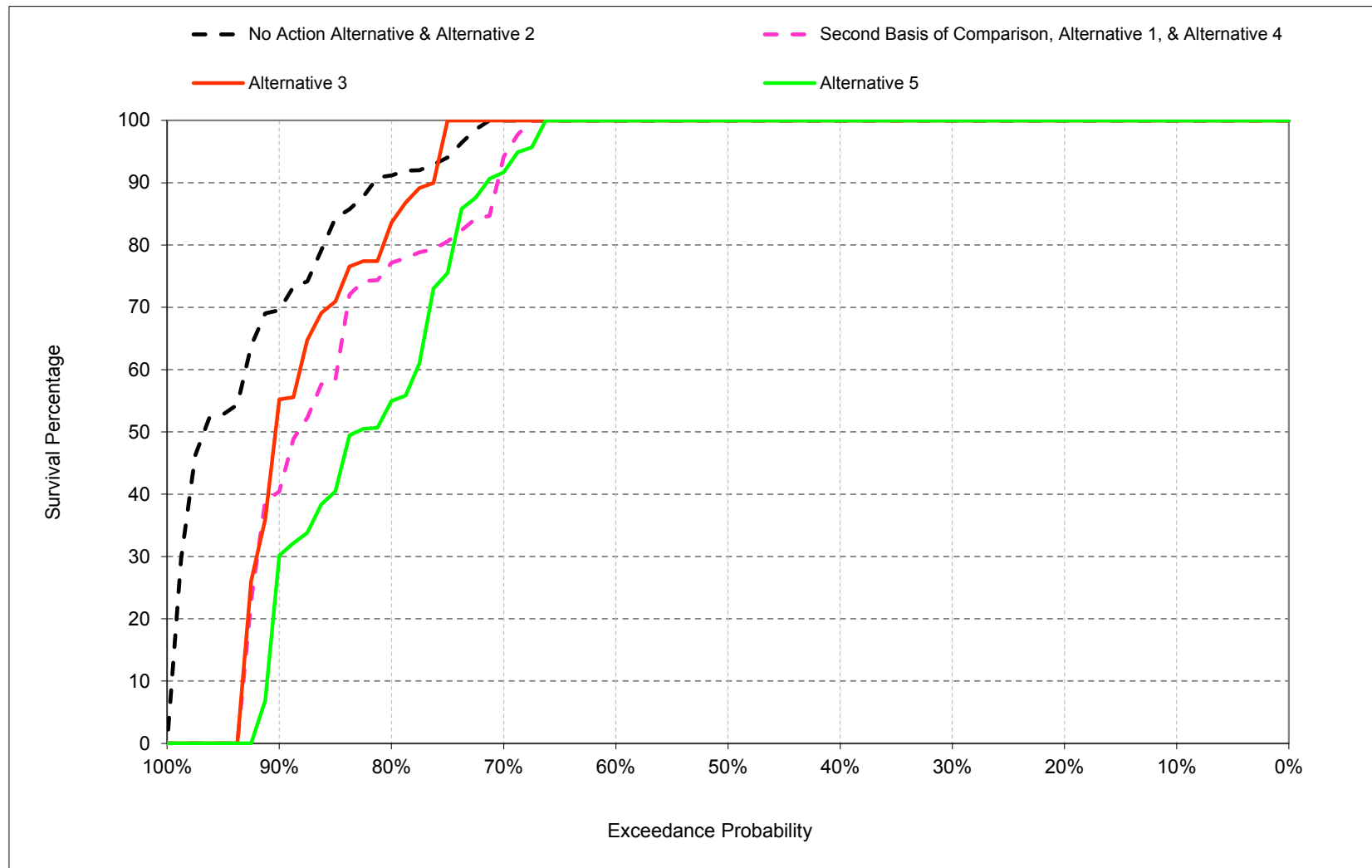
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-15-2. New Melones Spotted Bass Nest Survival Percentage, April



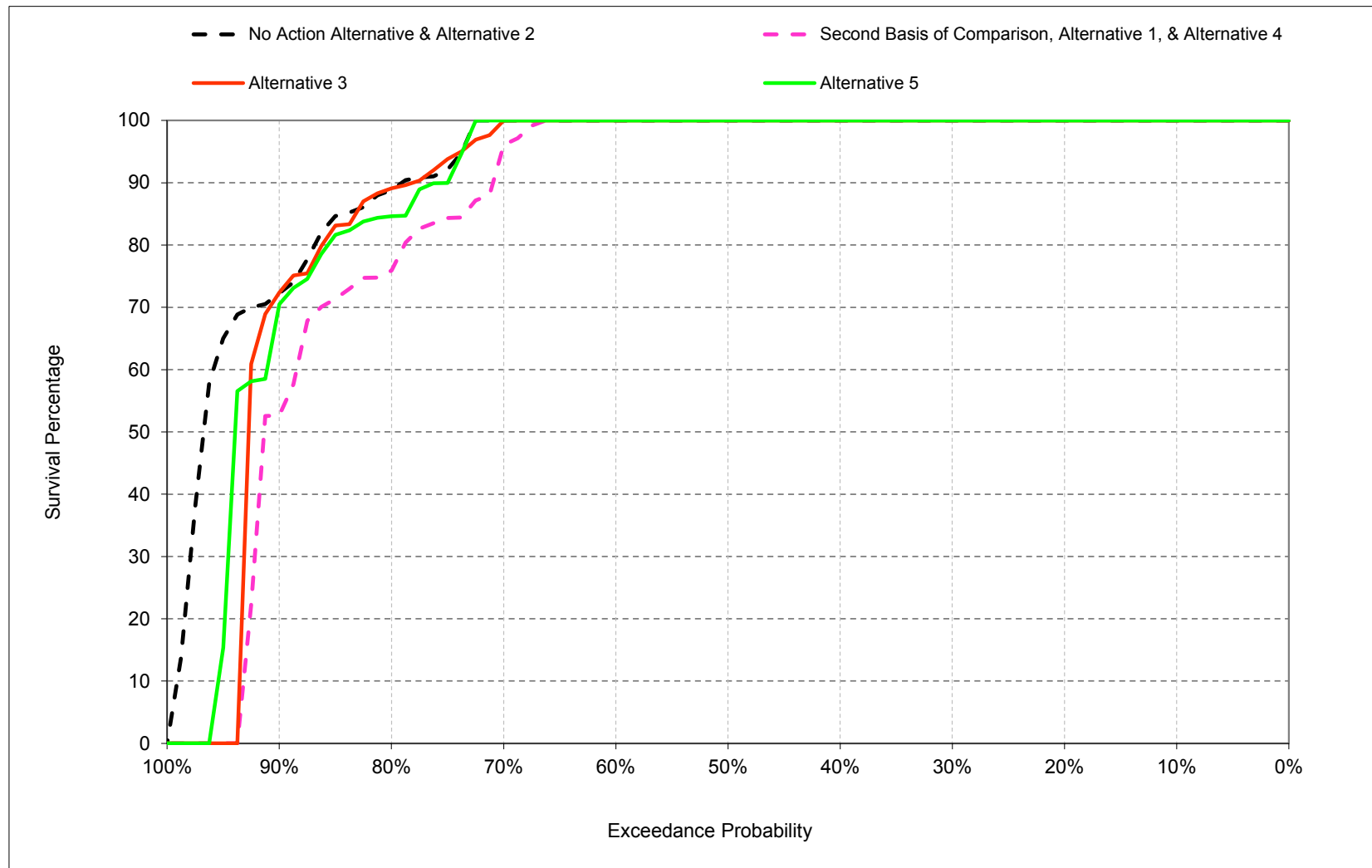
Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-15-3. New Melones Spotted Bass Nest Survival Percentage, May



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

Figure B-15-4. New Melones Spotted Bass Nest Survival Percentage, June



Notes: 1) Exceedance probability is defined as the probability a given value will be exceeded in any one year. 2) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 3) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternatives 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 4) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-15-1. New Melones Spotted Bass Nest Survival Percentage, Monthly Percentage****No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	87	91	88
90%	100	68	69	71
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	90	91	91
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	96	88	100	96
Above Normal (16%)	100	98	100	99
Below Normal (13%)	100	90	90	94
Dry (24%)	100	97	92	89
Critical (15%)	100	73	62	72

**Alternative 1**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	88	90
80%	100	100	75	75
90%	100	100	39	53
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	98	84	85
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	96	92
Above Normal (16%)	100	100	100	96
Below Normal (13%)	100	100	88	76
Dry (24%)	100	100	79	78
Critical (15%)	100	87	45	78

**Alternative 1 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	-12	-10
80%	0	13	-16	-13
90%	0	32	-30	-18
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	1	8	-7	-6
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	4	12	-4	-4
Above Normal (16%)	0	2	0	-3
Below Normal (13%)	0	10	-2	-18
Dry (24%)	0	3	-13	-12
Critical (15%)	0	15	-17	6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Second Basis of Comparison and Alternative 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-15-2. New Melones Spotted Bass Nest Survival Percentage, Monthly Percentage**

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	87	91	88
90%	100	68	69	71
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	90	91	91
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	96	88	100	96
Above Normal (16%)	100	98	100	99
Below Normal (13%)	100	90	90	94
Dry (24%)	100	97	92	89
Critical (15%)	100	73	62	72

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	98
80%	100	100	79	88
90%	100	82	38	69
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	94	86	88
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	92	77
Above Normal (16%)	100	100	100	99
Below Normal (13%)	100	90	95	97
Dry (24%)	100	93	73	93
Critical (15%)	92	79	71	83

**Alternative 3 minus No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	0	-2
80%	0	13	-12	0
90%	0	14	-31	-1
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	0	4	-5	-3
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	4	12	-8	-19
Above Normal (16%)	0	2	0	0
Below Normal (13%)	0	0	4	3
Dry (24%)	0	-4	-18	4
Critical (15%)	-8	6	9	11

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-15-3. New Melones Spotted Bass Nest Survival Percentage, Monthly Percentage**

<b>No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	87	91	88
90%	100	68	69	71
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	90	91	91
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	96	88	100	96
Above Normal (16%)	100	98	100	99
Below Normal (13%)	100	90	90	94
Dry (24%)	100	97	92	89
Critical (15%)	100	73	62	72

<b>Alternative 5</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	84	91	100
80%	100	63	52	84
90%	100	27	9	60
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	81	80	88
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	99	99	100	100
Above Normal (16%)	100	90	100	76
Below Normal (13%)	100	78	74	92
Dry (24%)	100	78	71	85
Critical (15%)	100	38	38	80

<b>Alternative 5 minus No Action Alternative</b>				
Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	-16	-9	0
80%	0	-24	-39	-4
90%	0	-41	-60	-11
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	1	-9	-11	-3
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	3	11	0	4
Above Normal (16%)	0	-9	0	-23
Below Normal (13%)	0	-12	-17	-3
Dry (24%)	0	-19	-20	-5
Critical (15%)	0	-35	-24	8

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.



**Table B-15-4. New Melones Spotted Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	88	90
80%	100	100	75	75
90%	100	100	39	53
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	98	84	85
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	96	92
Above Normal (16%)	100	100	100	96
Below Normal (13%)	100	100	88	76
Dry (24%)	100	100	79	78
Critical (15%)	100	87	45	78

**No Action Alternative**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	100
80%	100	87	91	88
90%	100	68	69	71
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	90	91	91
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	96	88	100	96
Above Normal (16%)	100	98	100	99
Below Normal (13%)	100	90	90	94
Dry (24%)	100	97	92	89
Critical (15%)	100	73	62	72

**No Action Alternative minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	12	10
80%	0	-13	16	13
90%	0	-32	30	18
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	-1	-8	7	6
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	-4	-12	4	4
Above Normal (16%)	0	-2	0	3
Below Normal (13%)	0	-10	2	18
Dry (24%)	0	-3	13	12
Critical (15%)	0	-15	17	-6

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-15-5. New Melones Spotted Bass Nest Survival Percentage, Monthly Percentage****Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	88	90
80%	100	100	75	75
90%	100	100	39	53
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	100	98	84	85
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	96	92
Above Normal (16%)	100	100	100	96
Below Normal (13%)	100	100	88	76
Dry (24%)	100	100	79	78
Critical (15%)	100	87	45	78

**Alternative 3**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	100	98
80%	100	100	79	88
90%	100	82	38	69
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	99	94	86	88
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	100	100	92	77
Above Normal (16%)	100	100	100	99
Below Normal (13%)	100	90	95	97
Dry (24%)	100	93	73	93
Critical (15%)	92	79	71	83

**Alternative 3 minus Second Basis of Comparison**

Statistic	Mar	Apr	May	Jun
<b>Probability of Exceedance<sup>a</sup></b>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	0	12	8
80%	0	0	4	13
90%	0	-18	-1	17
<b>Long Term</b>				
Full Simulation Period <sup>b</sup>	-1	-4	2	3
<b>Water Year Types<sup>c</sup></b>				
Wet (32%)	0	0	-4	-15
Above Normal (16%)	0	0	0	3
Below Normal (13%)	0	-10	6	21
Dry (24%)	0	-7	-5	16
Critical (15%)	-8	-8	26	4

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.

**Table B-15-6. New Melones Spotted Bass Nest Survival Percentage, Monthly Percentage**

Second Basis of Comparison				
Statistic	Mar	Apr	May	Jun
Probability of Exceedance <sup>a</sup>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	100	88	90
80%	100	100	75	75
90%	100	100	39	53
Long Term				
Full Simulation Period <sup>b</sup>	100	98	84	85
Water Year Types <sup>c</sup>				
Wet (32%)	100	100	96	92
Above Normal (16%)	100	100	100	96
Below Normal (13%)	100	100	88	76
Dry (24%)	100	100	79	78
Critical (15%)	100	87	45	78

Alternative 5				
Statistic	Mar	Apr	May	Jun
Probability of Exceedance <sup>a</sup>				
10%	100	100	100	100
20%	100	100	100	100
30%	100	100	100	100
40%	100	100	100	100
50%	100	100	100	100
60%	100	100	100	100
70%	100	84	91	100
80%	100	63	52	84
90%	100	27	9	60
Long Term				
Full Simulation Period <sup>b</sup>	100	81	80	88
Water Year Types <sup>c</sup>				
Wet (32%)	99	99	100	100
Above Normal (16%)	100	90	100	76
Below Normal (13%)	100	78	74	92
Dry (24%)	100	78	71	85
Critical (15%)	100	38	38	80

Alternative 5 minus Second Basis of Comparison				
Statistic	Mar	Apr	May	Jun
Probability of Exceedance <sup>a</sup>				
10%	0	0	0	0
20%	0	0	0	0
30%	0	0	0	0
40%	0	0	0	0
50%	0	0	0	0
60%	0	0	0	0
70%	0	-16	3	10
80%	0	-37	-23	9
90%	0	-73	-30	7
Long Term				
Full Simulation Period <sup>b</sup>	0	-17	-3	3
Water Year Types <sup>c</sup>				
Wet (32%)	-1	-1	4	8
Above Normal (16%)	0	-10	0	-20
Below Normal (13%)	0	-22	-15	15
Dry (24%)	0	-22	-7	7
Critical (15%)	0	-50	-6	2

a Exceedance probability is defined as the probability a given value will be exceeded in any one year.

b Based on the 82-year simulation period.

c As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999); projected to Year 2030.

Notes: 1) All alternatives are simulated with projected hydrology and sea level at Year 2030 conditions. 2) Model results for Alternatives 1, 4, and Second Basis of Comparison are the same, therefore Alternative 1 and 4 results are not presented. Qualitative differences, if applicable, are discussed in the text. 3) Model results for Alternative 2 and No Action Alternative are the same, therefore Alternative 2 results are not presented. Qualitative differences, if applicable, are discussed in the text.