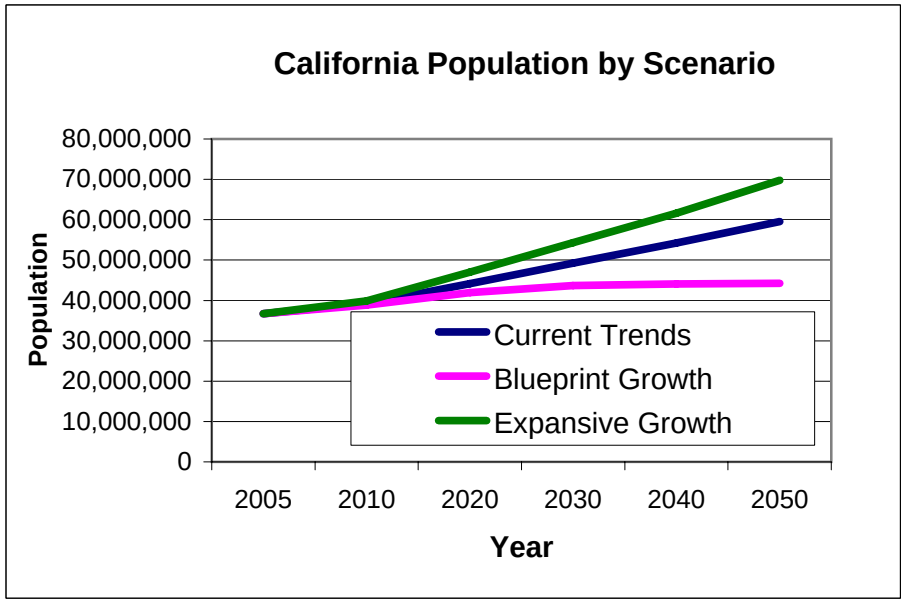
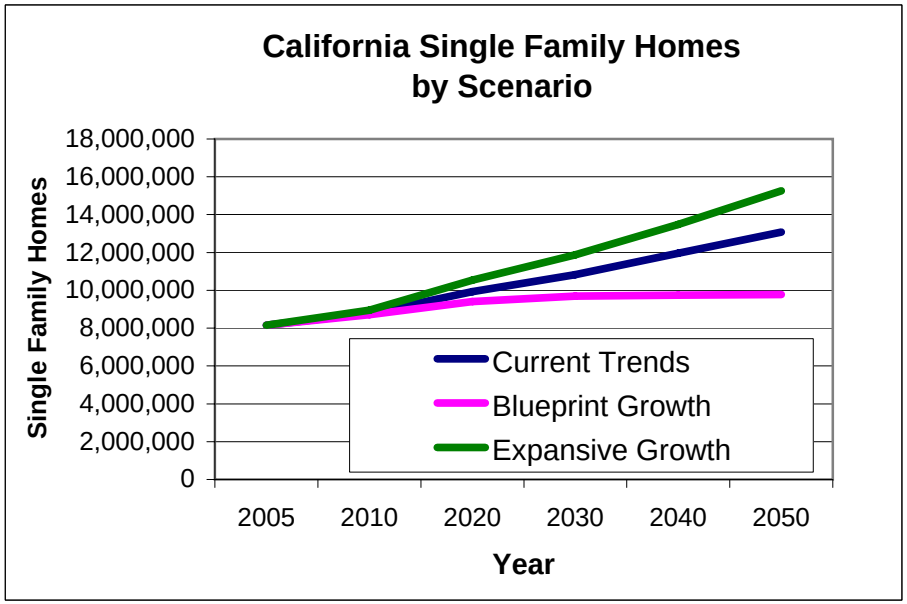
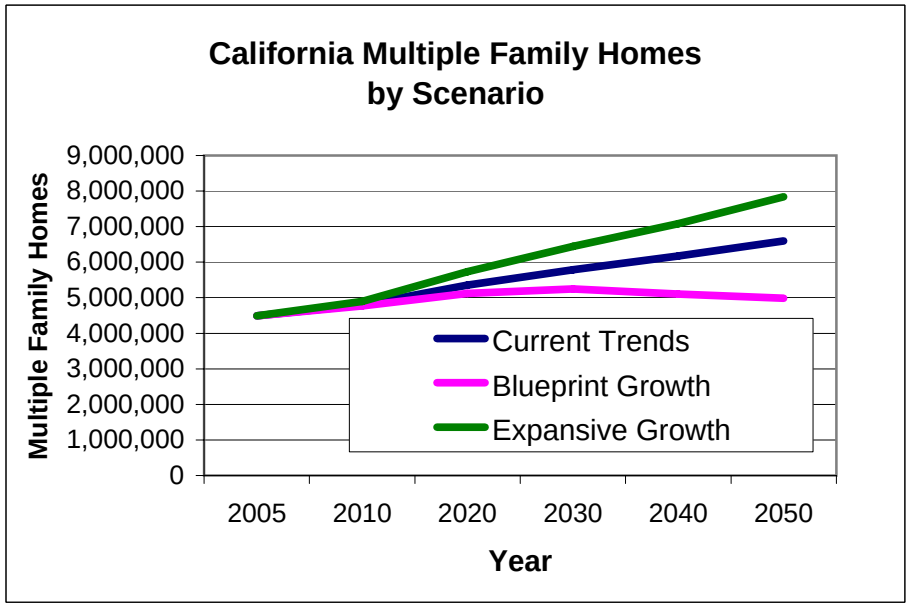
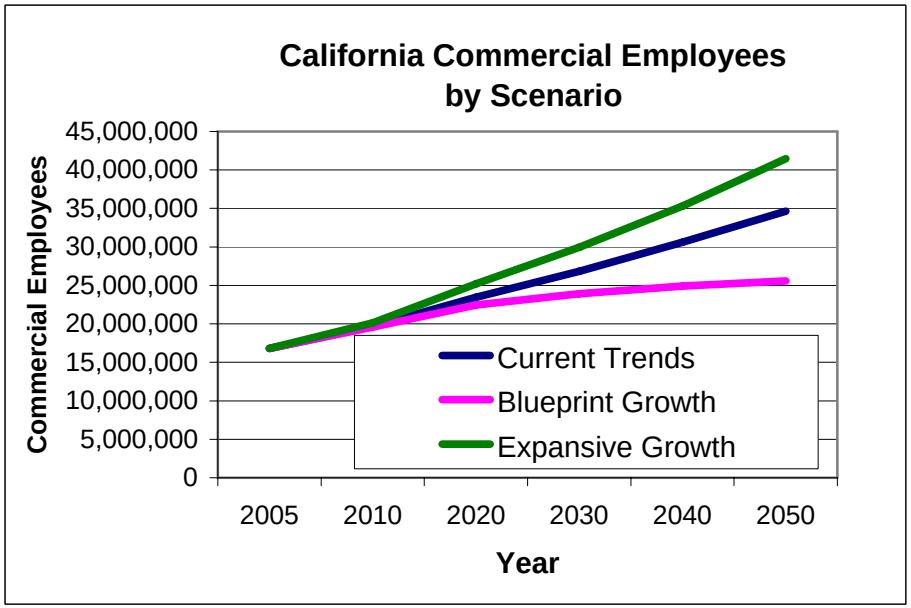
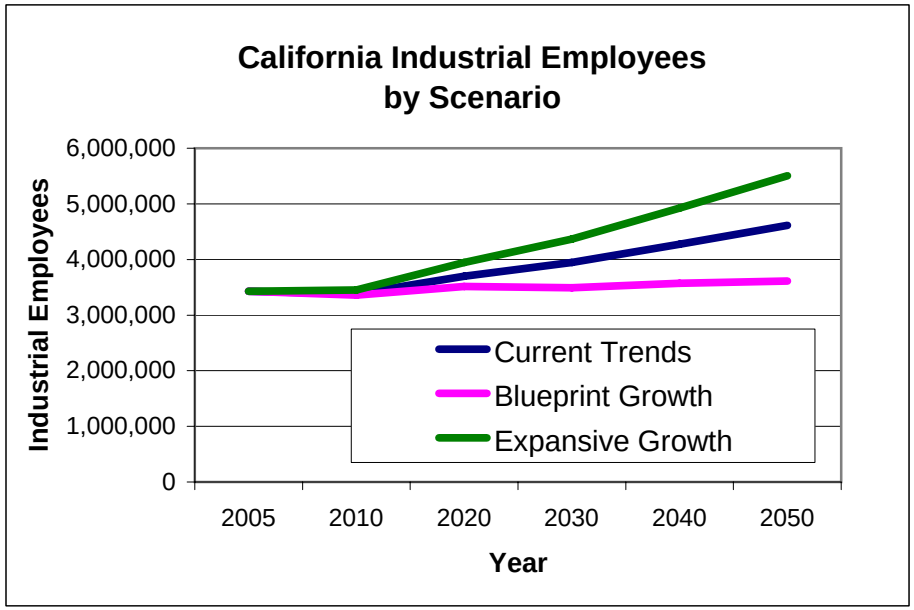
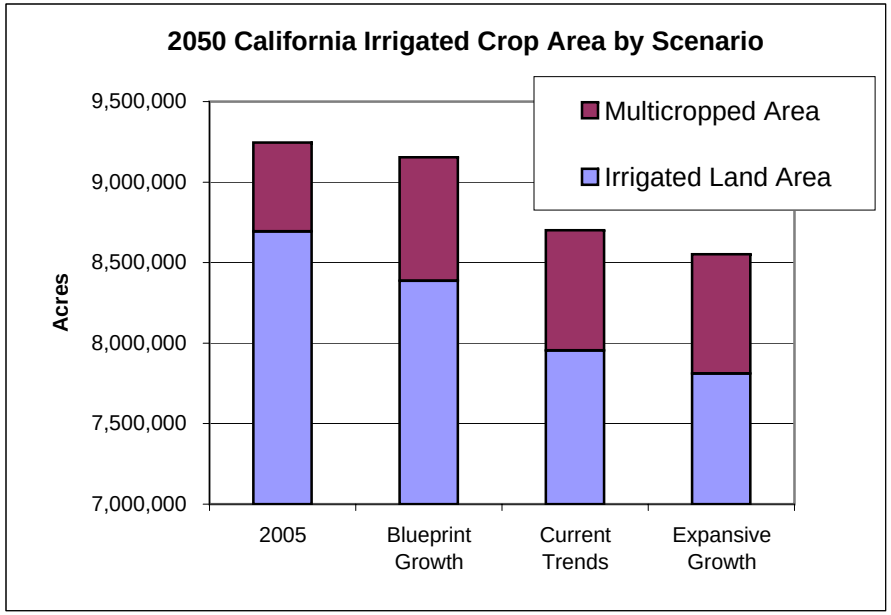

California Population by Scenario
Population
80,000,000
70,000,000
60,000,000
50,000,000
40,000,000
30,000,000
20,000,000
10,000,000
0
2005
2010
2020
2030
2040
2050
Year
Current Trends
Blueprint Growth
Expansive Growth

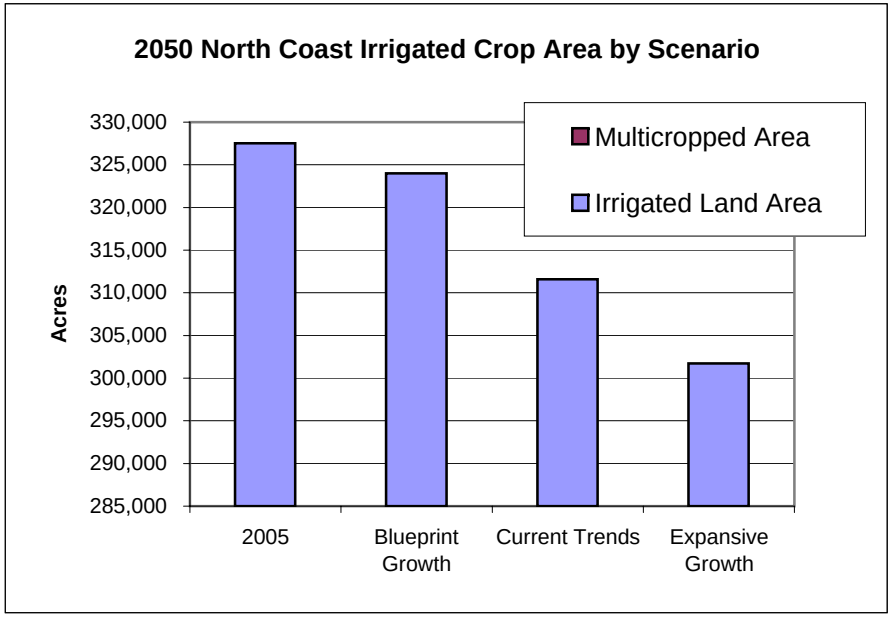

California Single Family Homes by Scenario
Single Family Homes
18,000,000
16,000,000
14,000,000
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
0
2005
2010
2020
2030
2040
2050
Year
Current Trends
Blueprint Growth
Expansive Growth

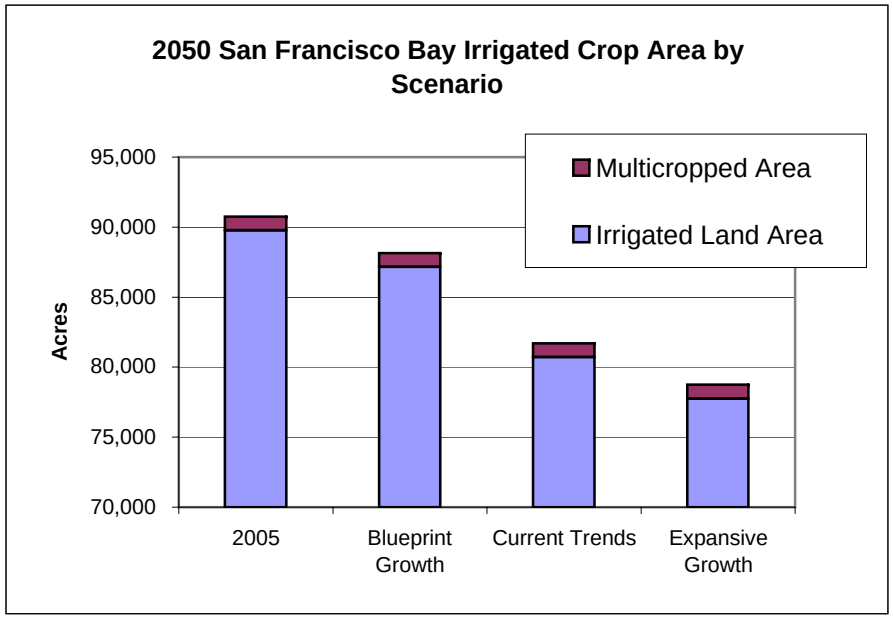

California Multiple Family Homes by Scenario
Multiple Family Homes
9,000,000
8,000,000
7,000,000
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
0
2005
2010
2020
2030
2040
2050
Year
Current Trends
Blueprint Growth
Expansive Growth

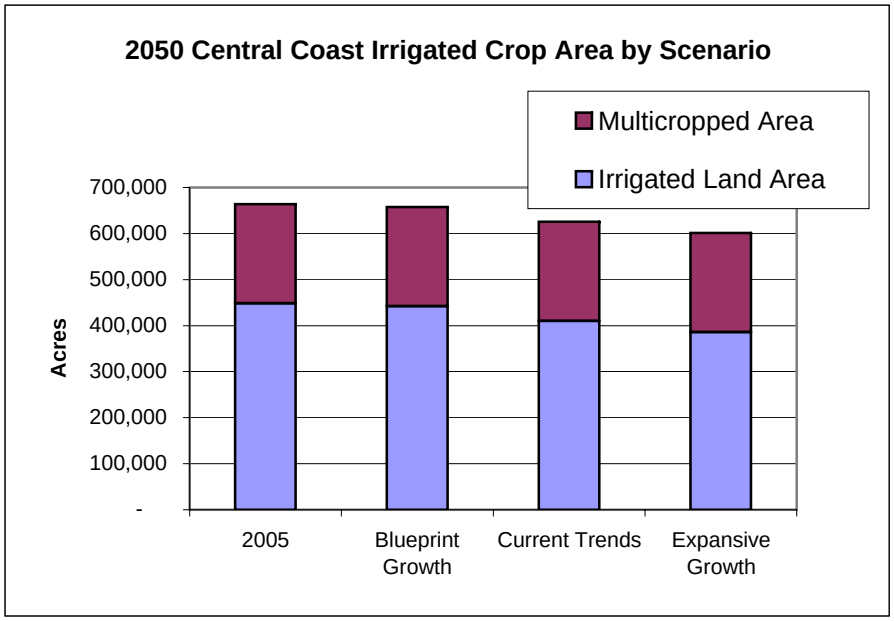

California Commercial Employees by Scenario
Commercial Employees
45,000,000
40,000,000
35,000,000
30,000,000
25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
0
2005
2010
2020
2030
2040
2050
Year
Current Trends
Blueprint Growth
Expansive Growth

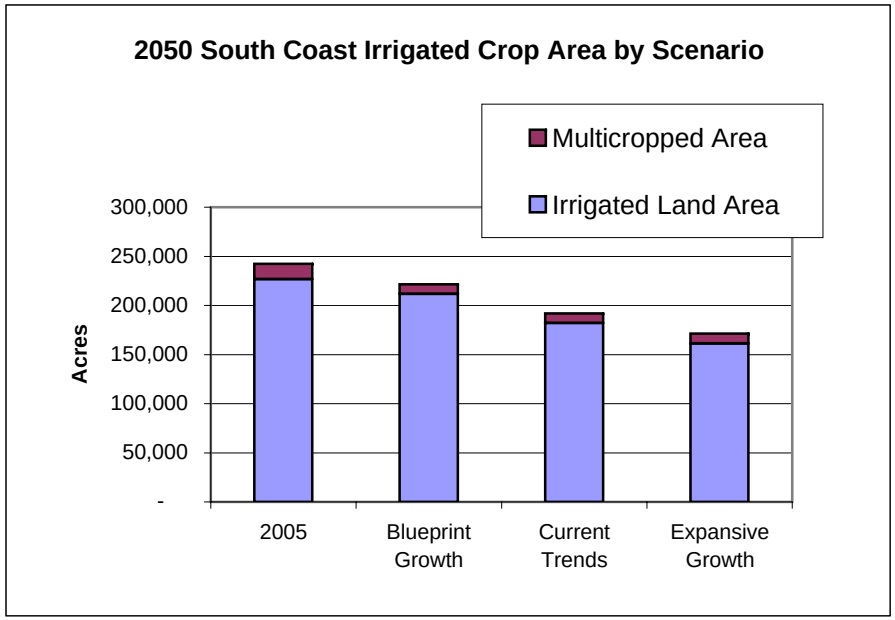

California Industrial Employees
by Scenario
Industrial Employees
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
0
2005
2010
2020
2030
2040
2050
Year
Current Trends
Blueprint Growth
Expansive Growth

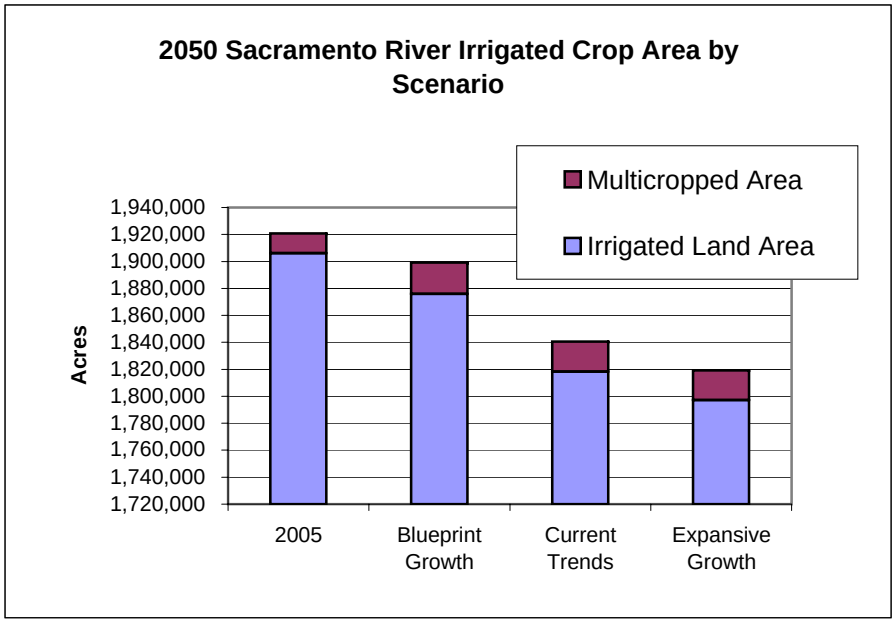

2050 California Irrigated Crop Area by Scenario
Multicropped Area
Irrigated Land Area
Acres
9,500,000
9,000,000
8,500,000
8,000,000
7,500,000
7,000,000
2005
Blueprint Growth
Current Trends
Expansive Growth

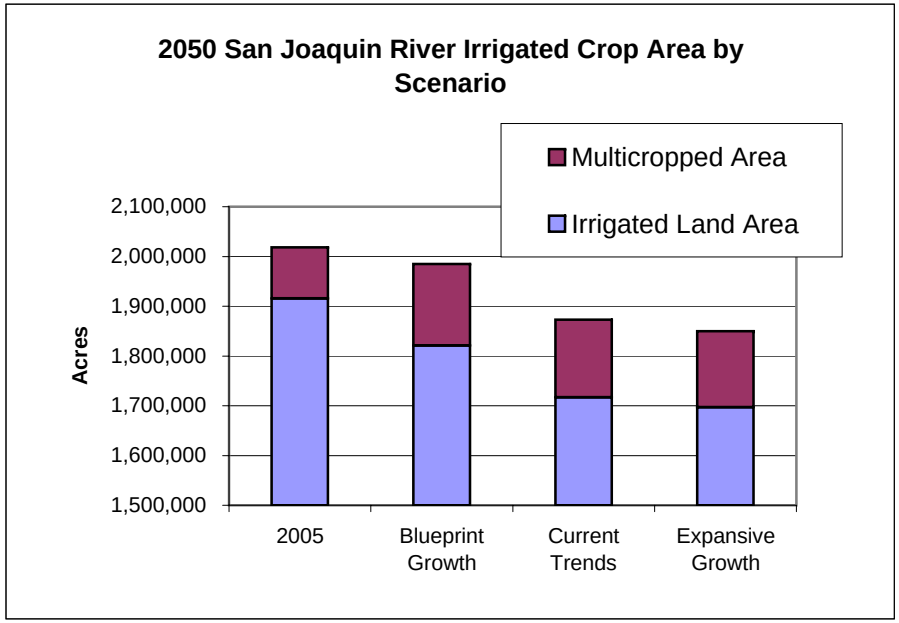

2050 North Coast Irrigated Crop Area by Scenario
Multicropped Area
Irrigated Land Area
Acres
330,000
325,000
320,000
315,000
310,000
305,000
300,000
295,000
290,000
285,000
2005
Blueprint Growth
Current Trends
Expansive Growth

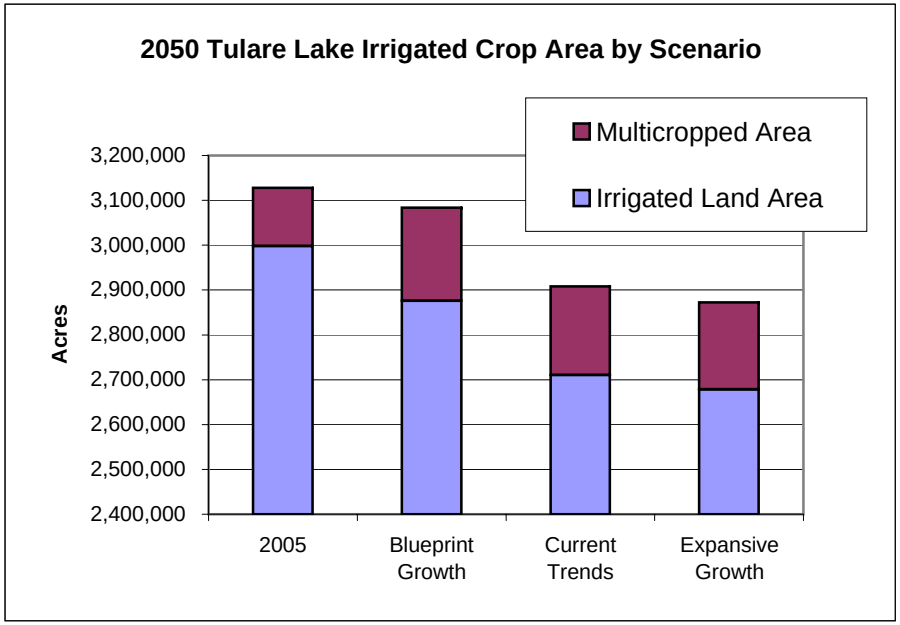

2050 San Francisco Bay Irrigated Crop Area by Scenario
Multicropped Area
Irrigated Land Area
Acres
95,000
90,000
85,000
80,000
75,000
70,000
2005
Blueprint Growth
Current Trends
Expansive Growth

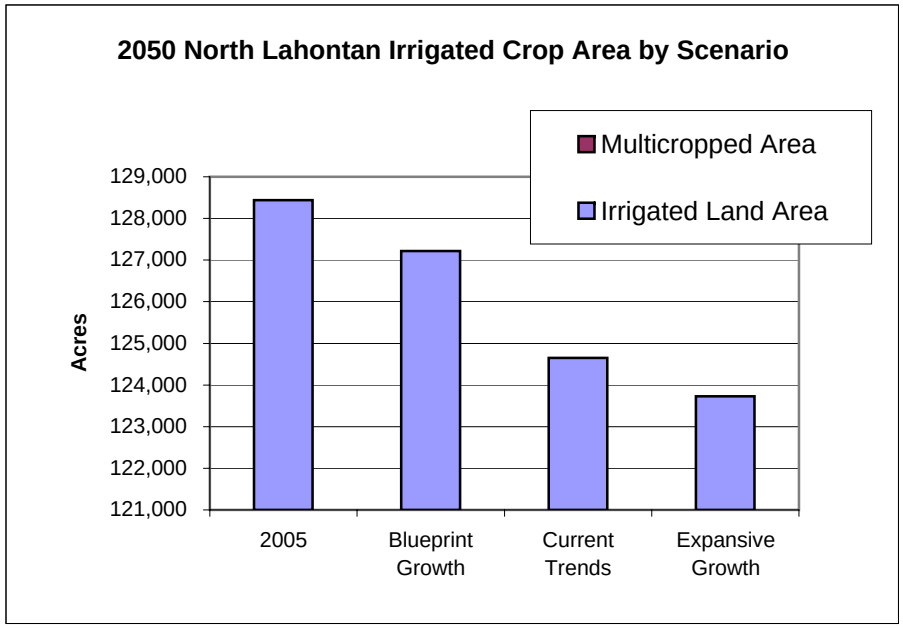

2050 Central Coast Irrigated Crop Area by Scenario
Multicropped Area
Irrigated Land Area
Acres
700,000
600,000
500,000
400,000
300,000
200,000
100,000
-
2005
Blueprint Growth
Current Trends
Expansive Growth

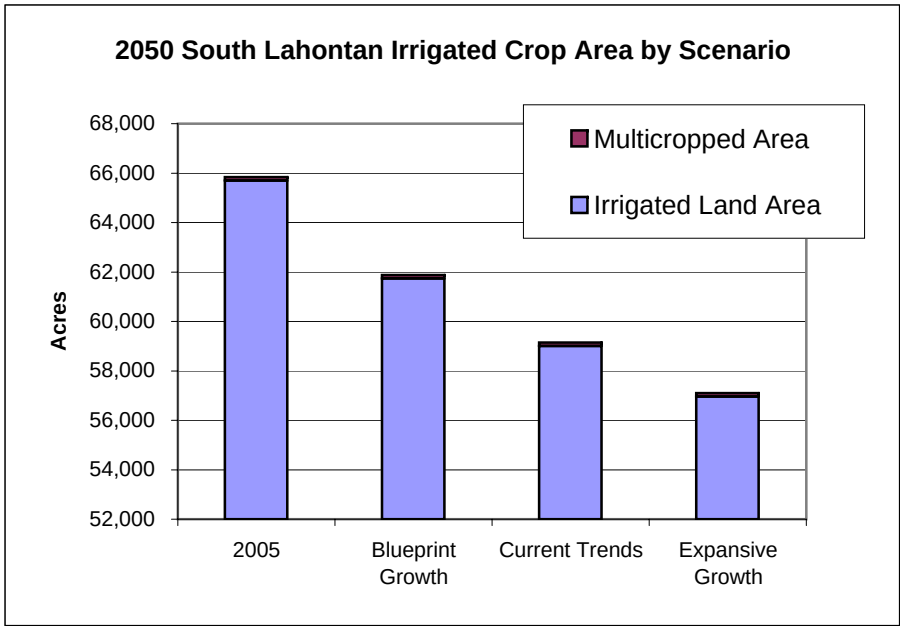

2050 South Coast Irrigated Crop Area by Scenario
Multicropped Area
Irrigated Land Area
Acres
300,000
250,000
200,000
150,000
100,000
50,000
-
2005
Blueprint Growth
Current Trends
Expansive Growth

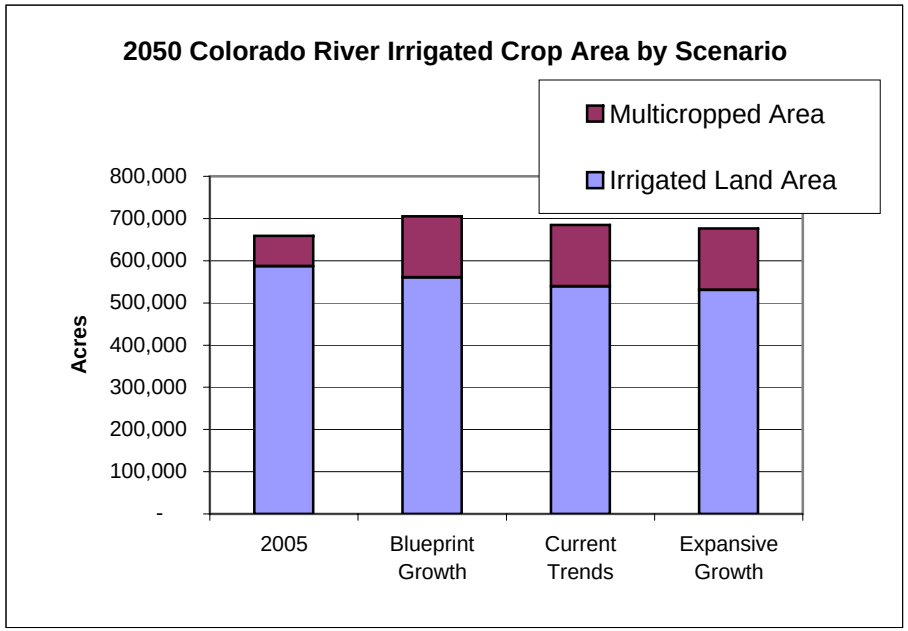

2050 Sacramento River Irrigated Crop Area by Scenario
Multicropped Area
Irrigated Land Area
Acres
1,940,000
1,920,000
1,900,000
1,880,000
1,860,000
1,840,000
1,820,000
1,800,000
1,780,000
1,760,000
1,740,000
1,720,000
2005
Blueprint Growth
Current Trends
Expansive Growth

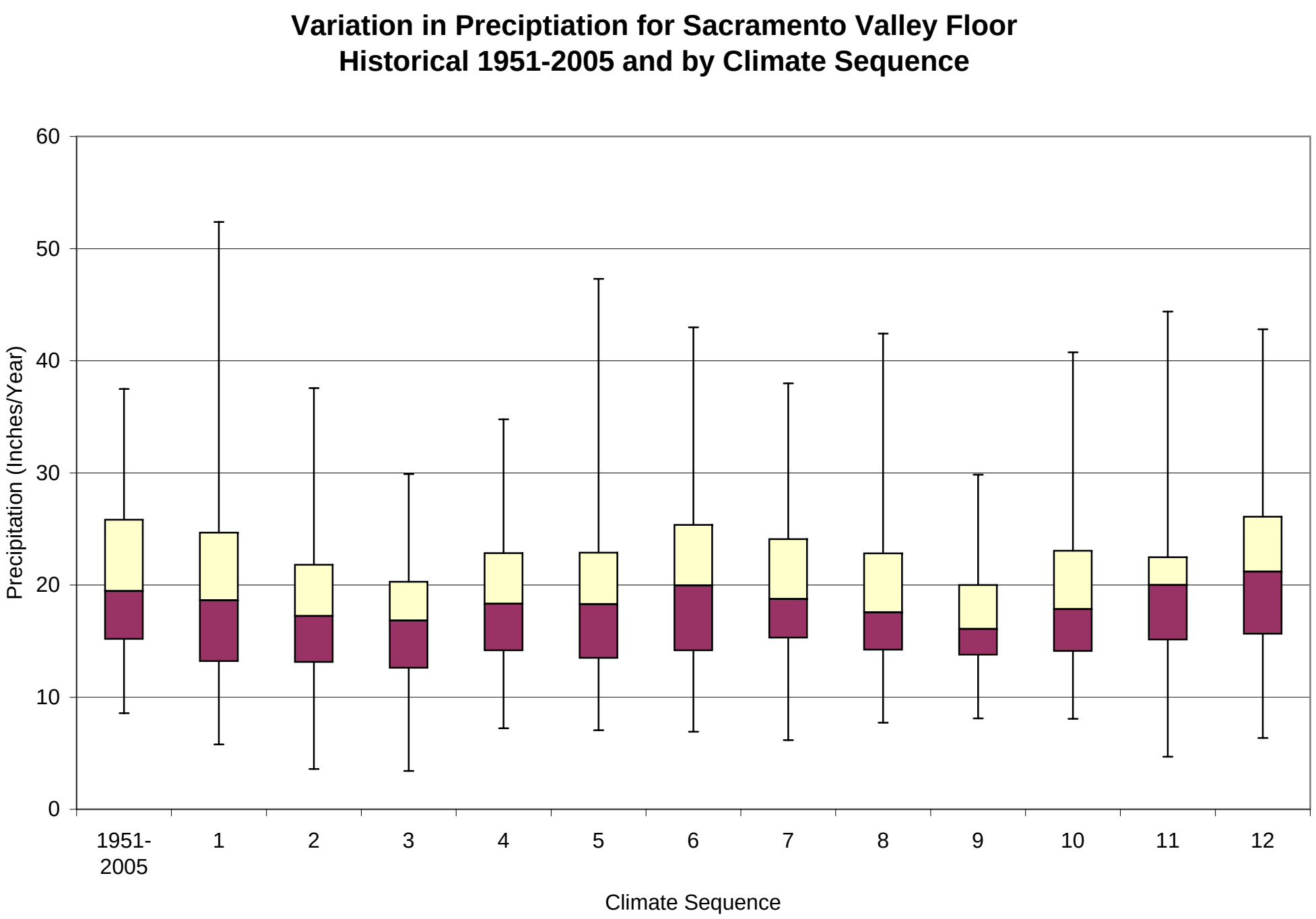

2050 San Joaquin River Irrigated Crop Area by Scenario
Multicropped Area
Irrigated Land Area
Acres
2,100,000
2,000,000
1,900,000
1,800,000
1,700,000
1,600,000
1,500,000
2005
Blueprint Growth
Current Trends
Expansive Growth

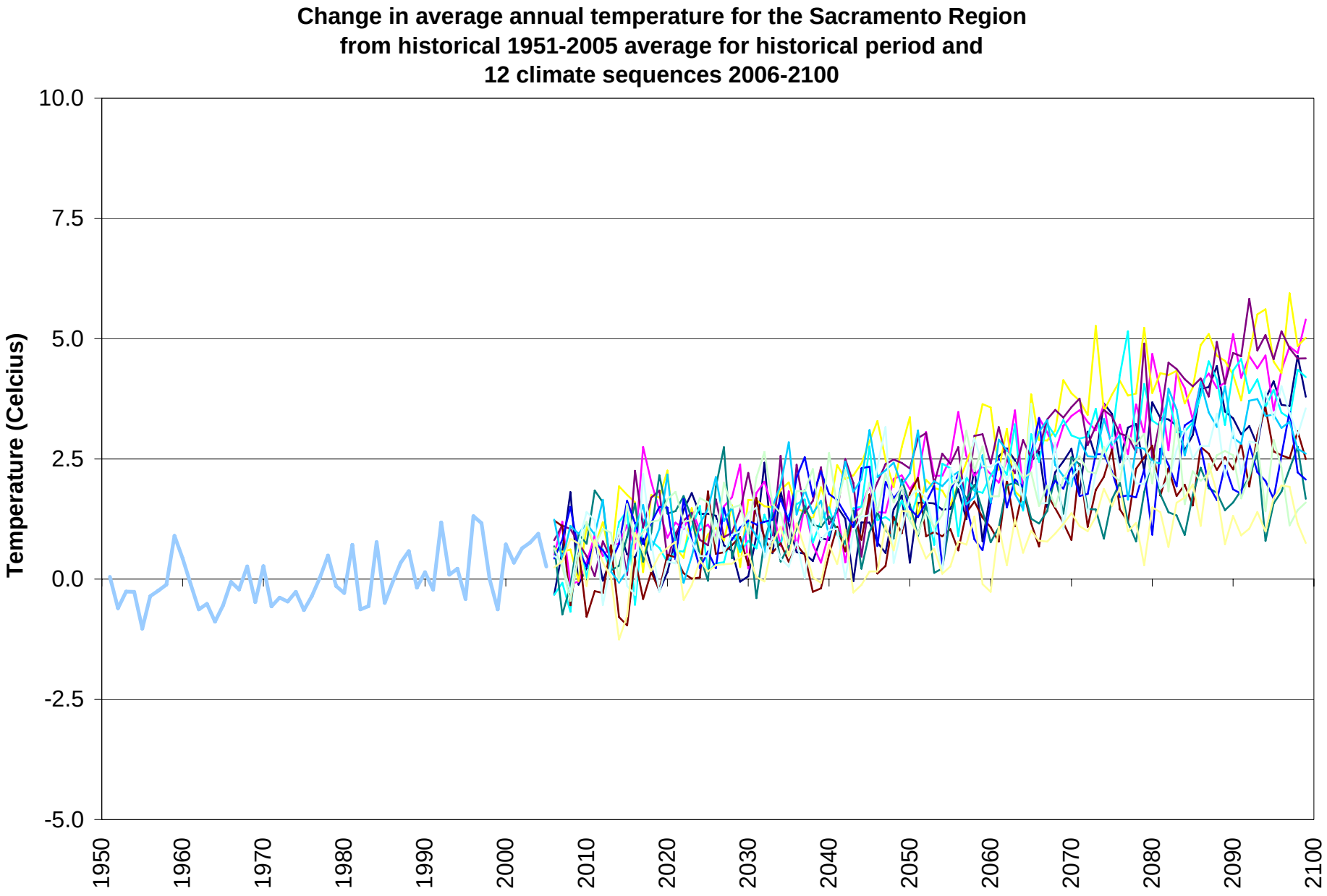

2050 Tulare Lake Irrigated Crop Area by Scenario
Multicropped Area
Irrigated Land Area
Acres
3,200,000
3,100,000
3,000,000
2,900,000
2,800,000
2,700,000
2,600,000
2,500,000
2,400,000
2005
Blueprint Growth
Current Trends
Expansive Growth

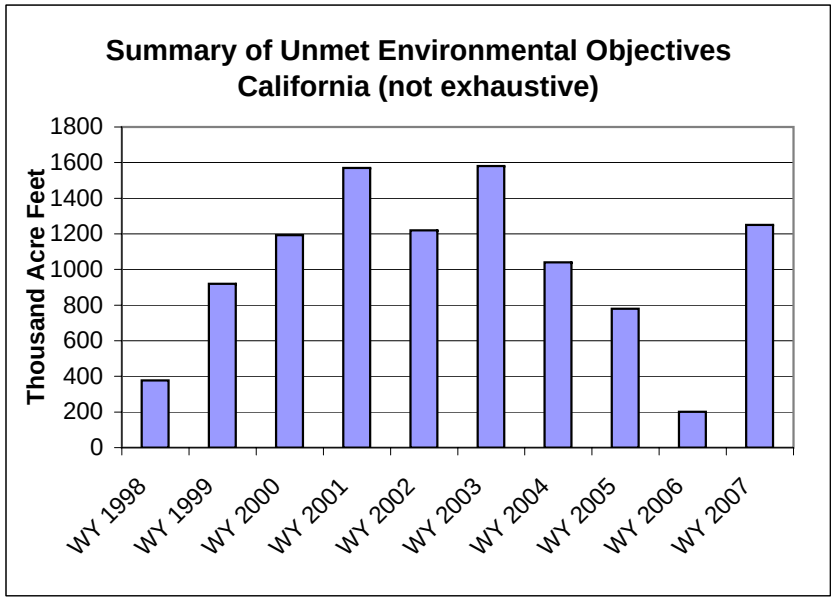

2050 North Lahontan Irrigated Crop Area by Scenario
Multicropped Area
Irrigated Land Area
Acres
129,000
128,000
127,000
126,000
125,000
124,000
123,000
122,000
121,000
2005
Blueprint Growth
Current Trends
Expansive Growth

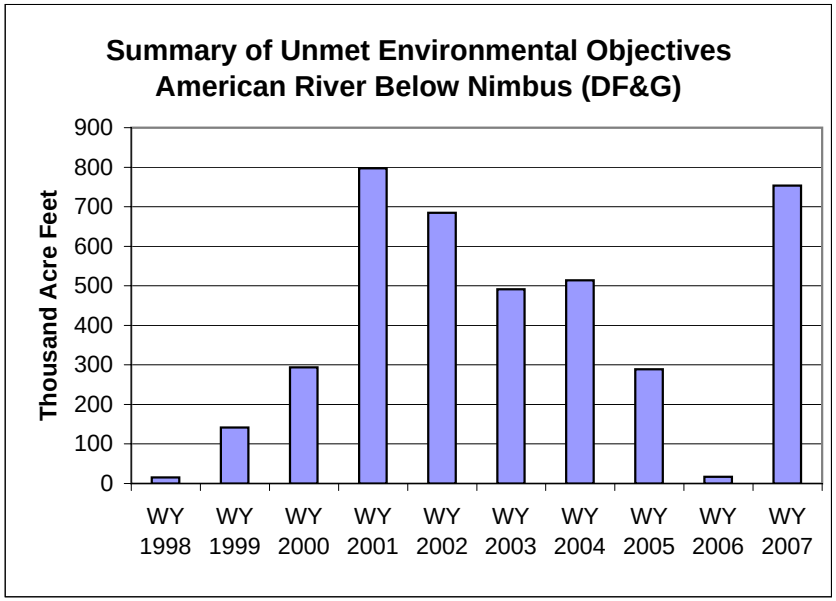

2050 South Lahontan Irrigated Crop Area by Scenario
Multicropped Area
Irrigated Land Area
Acres
68,000
66,000
64,000
62,000
60,000
58,000
56,000
54,000
52,000
2005
Blueprint Growth
Current Trends
Expansive Growth

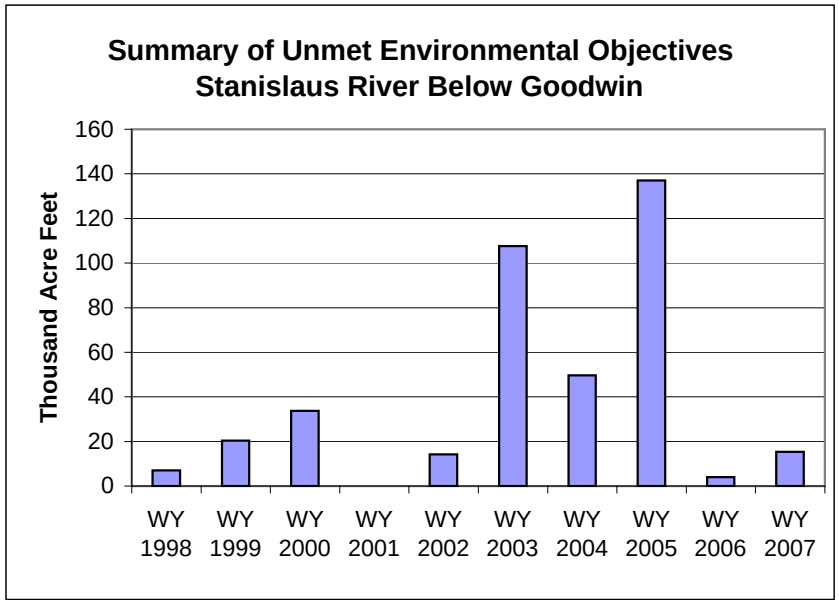

2050 Colorado River Irrigated Crop Area by Scenario
Multicropped Area
Irrigated Land Area
Acres
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
-
2005
Blueprint Growth
Current Trends
Expansive Growth

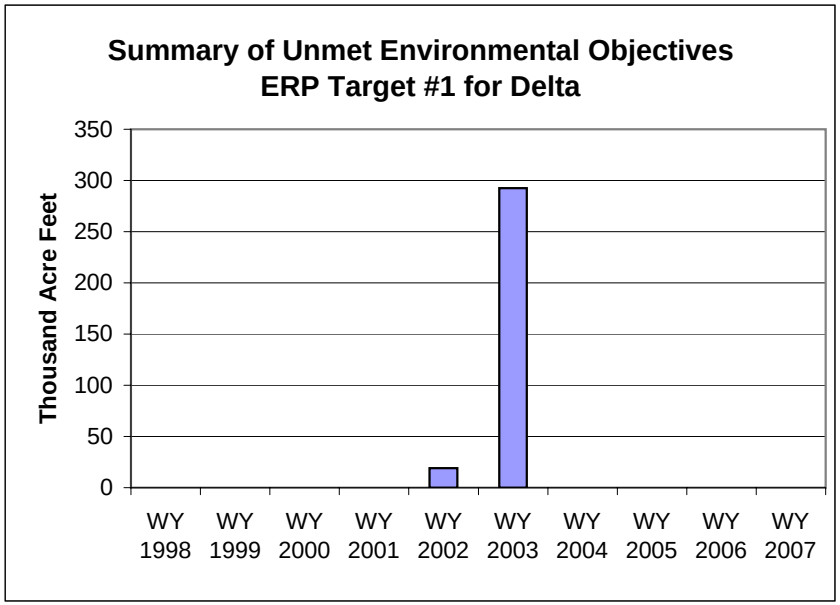

Variation in Preciptiation for Sacramento Valley Floor
Historical 1951-2005 and by Climate Sequence
Precipitation (Inches/Year)
60
50
40
30
20
10
0
1951-2005
1
2
3
4
5
6
7
8
9
10
11
12
Climate Sequence

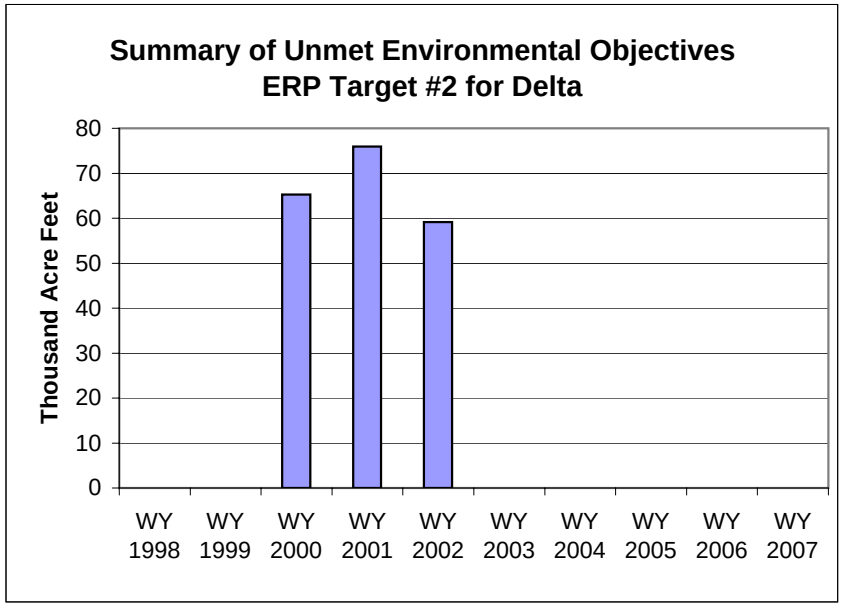

Change in average annual temperature for the Sacramento Region
from historical 1951-2005 average for historical period and
12 climate sequences 2006-2100
Temperature (Celcius)
10.0
7.5
5.0
2.5
0.0
-2.5
-5.0
1950
1960
1970
1980
1990
2000
2010
2020
2030
2040
2050
2060
2070
2080
2090
2100

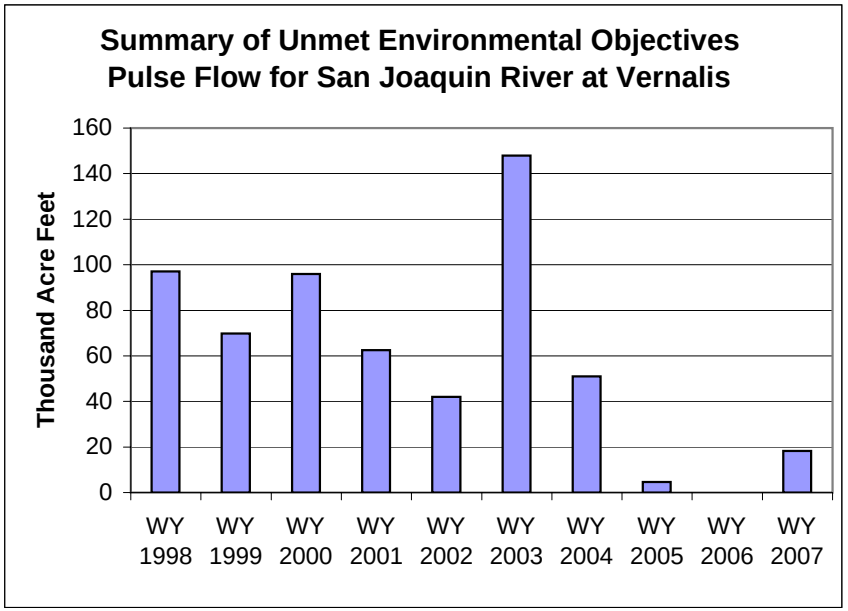

Summary of Unmet Environmental Objectives
California (not exhaustive)
Thousand Acre Feet
1800
1600
1400
1200
1000
800
600
400
200
0
WY 1998
WY 1999
WY 2000
WY 2001
WY 2002
WY 2003
WY 2004
WY 2005
WY 2006
WY 2007

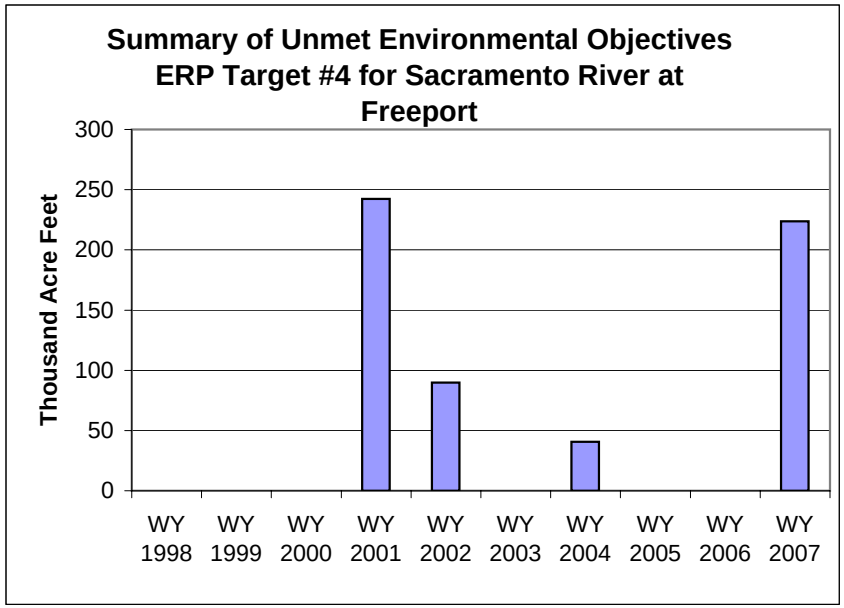

Summary of Unmet Environmental Objectives
American River Below Nimbus (DF&G)
Thousand Acre Feet
900
800
700
600
500
400
300
200
100
0
WY 1998
WY 1999
WY 2000
WY 2001
WY 2002
WY 2003
WY 2004
WY 2005
WY 2006
WY 2007

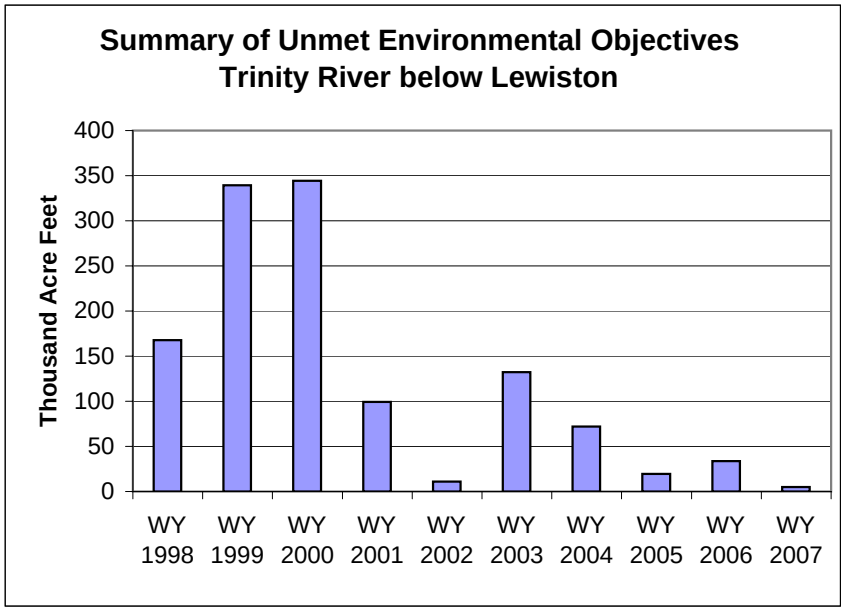

Summary of Unmet Environmental Objectives
Stanislaus River Below Goodwin
Thousand Acre Feet
160
140
120
100
80
60
40
20
0
WY 1998
WY 1999
WY 2000
WY 2001
WY 2002
WY 2003
WY 2004
WY 2005
WY 2006
WY 2007

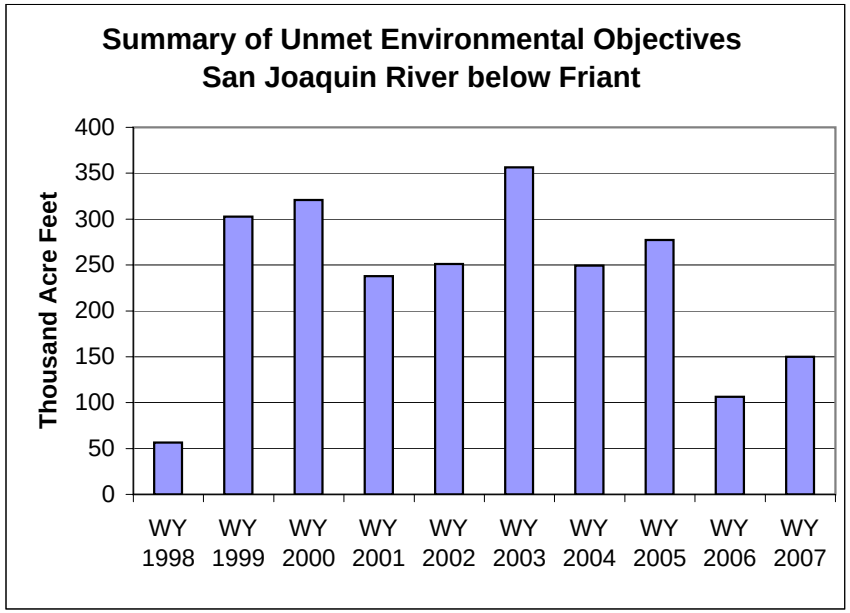

Summary of Unmet Environmental Objectives
ERP Target #1 for Delta
Thousand Acre Feet
350
300
250
200
150
100
50
0
WY 1998
WY 1999
WY 2000
WY 2001
WY 2002
WY 2003
WY 2004
WY 2005
WY 2006
WY 2007

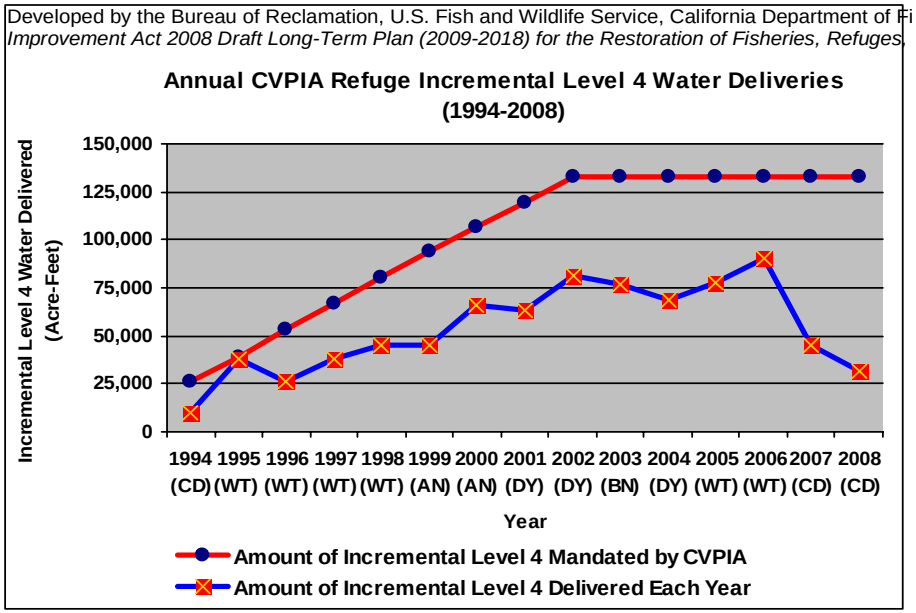

Summary of Unmet Environmental Objectives
ERP Target #2 for Delta
Thousand Acre Feet
0
10
20
30
40
50
60
70
80
WY 1998
WY 1999
WY 2000
WY 2001
WY 2002
WY 2003
WY 2004
WY 2005
WY 2006
WY 2007

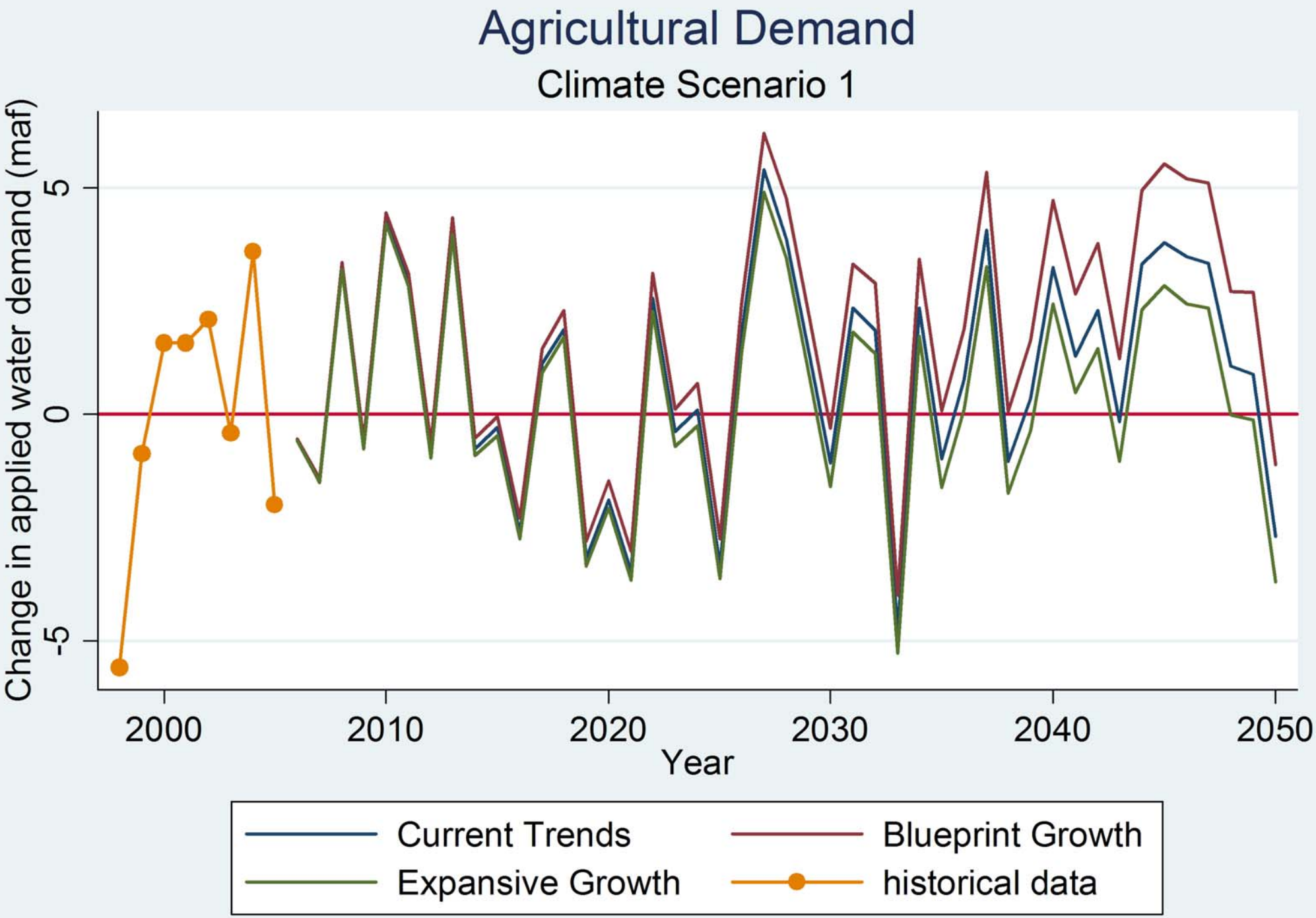

Summary of Unmet Environmental Objectives
Pulse Flow for San Joaquin River at Vernalis
Thousand Acre Feet
0
20
40
60
80
100
120
140
160
WY 1998
WY 1999
WY 2000
WY 2001
WY 2002
WY 2003
WY 2004
WY 2005
WY 2006
WY 2007

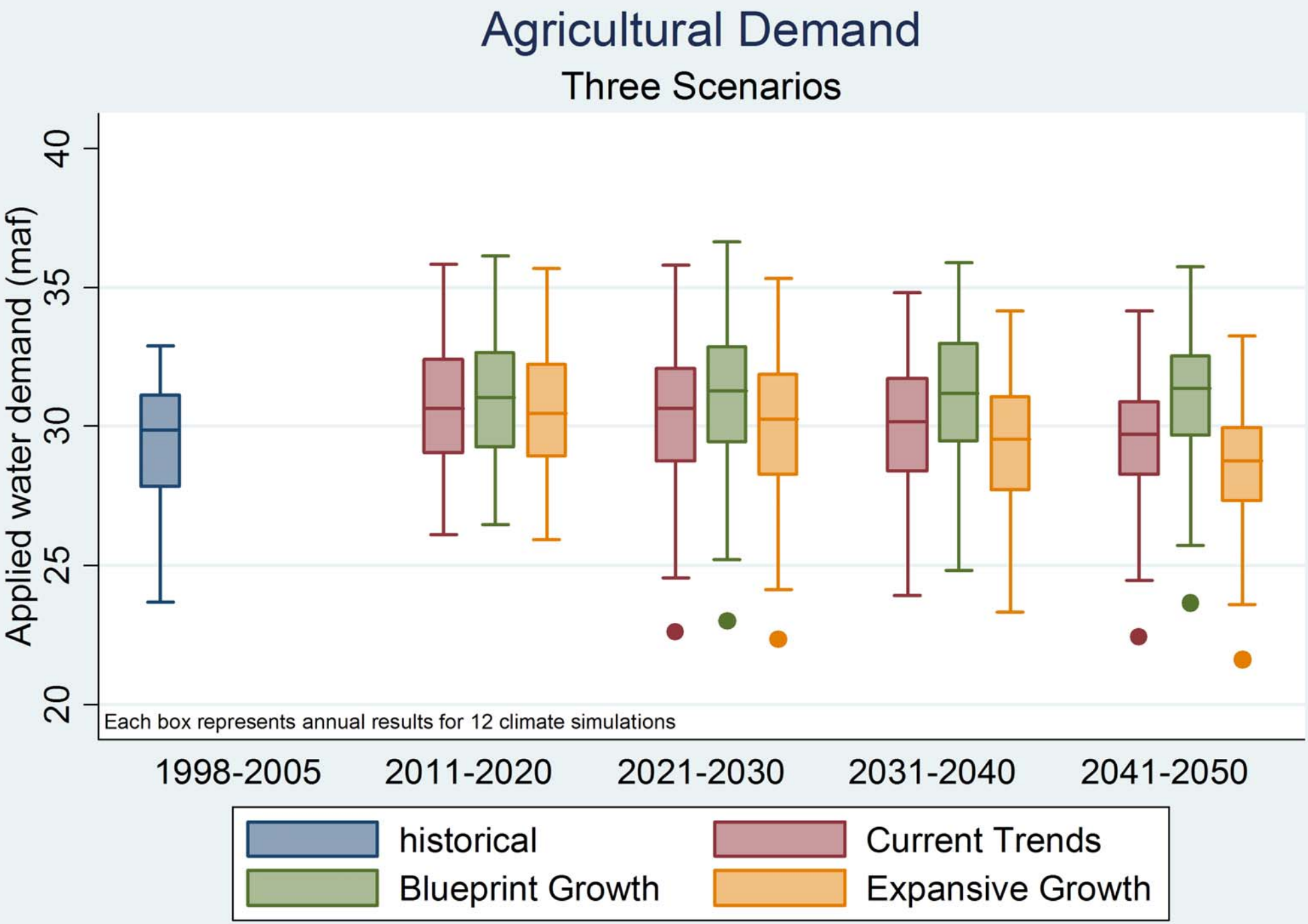

Summary of Unmet Environmental Objectives
ERP Target #4 for Sacramento River at Freeport
Thousand Acre Feet
0
50
100
150
200
250
300
WY 1998
WY 1999
WY 2000
WY 2001
WY 2002
WY 2003
WY 2004
WY 2005
WY 2006
WY 2007

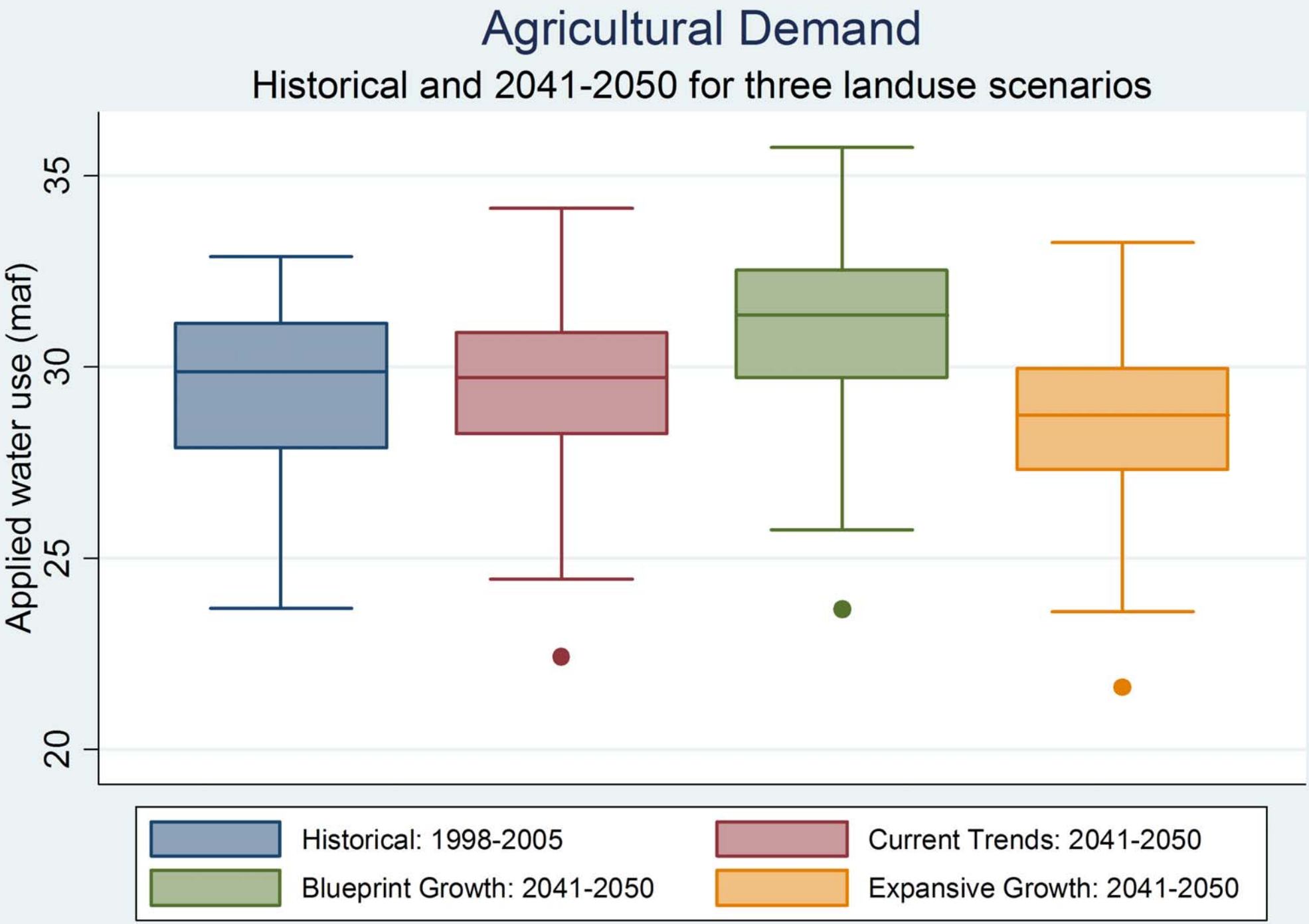

Summary of Unmet Environmental Objectives
Trinity River below Lewiston
Thousand Acre Feet
0
50
100
150
200
250
300
350
400
WY 1998
WY 1999
WY 2000
WY 2001
WY 2002
WY 2003
WY 2004
WY 2005
WY 2006
WY 2007

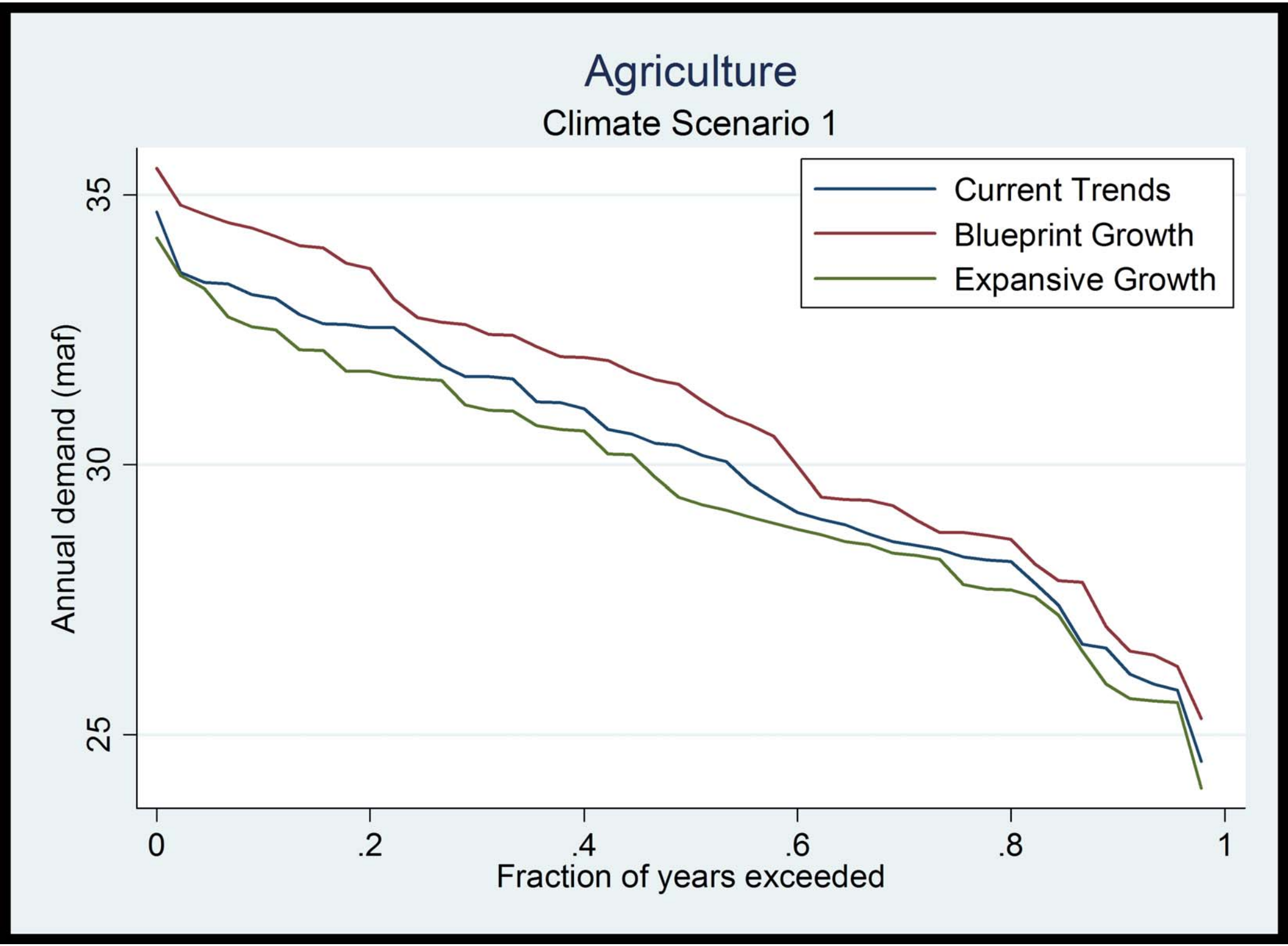

Summary of Unmet Environmental Objectives
San Joaquin River below Friant
Thousand Acre Feet
400
350
300
250
200
150
100
50
0
WY 1998
WY 1999
WY 2000
WY 2001
WY 2002
WY 2003
WY 2004
WY 2005
WY 2006
WY 2007

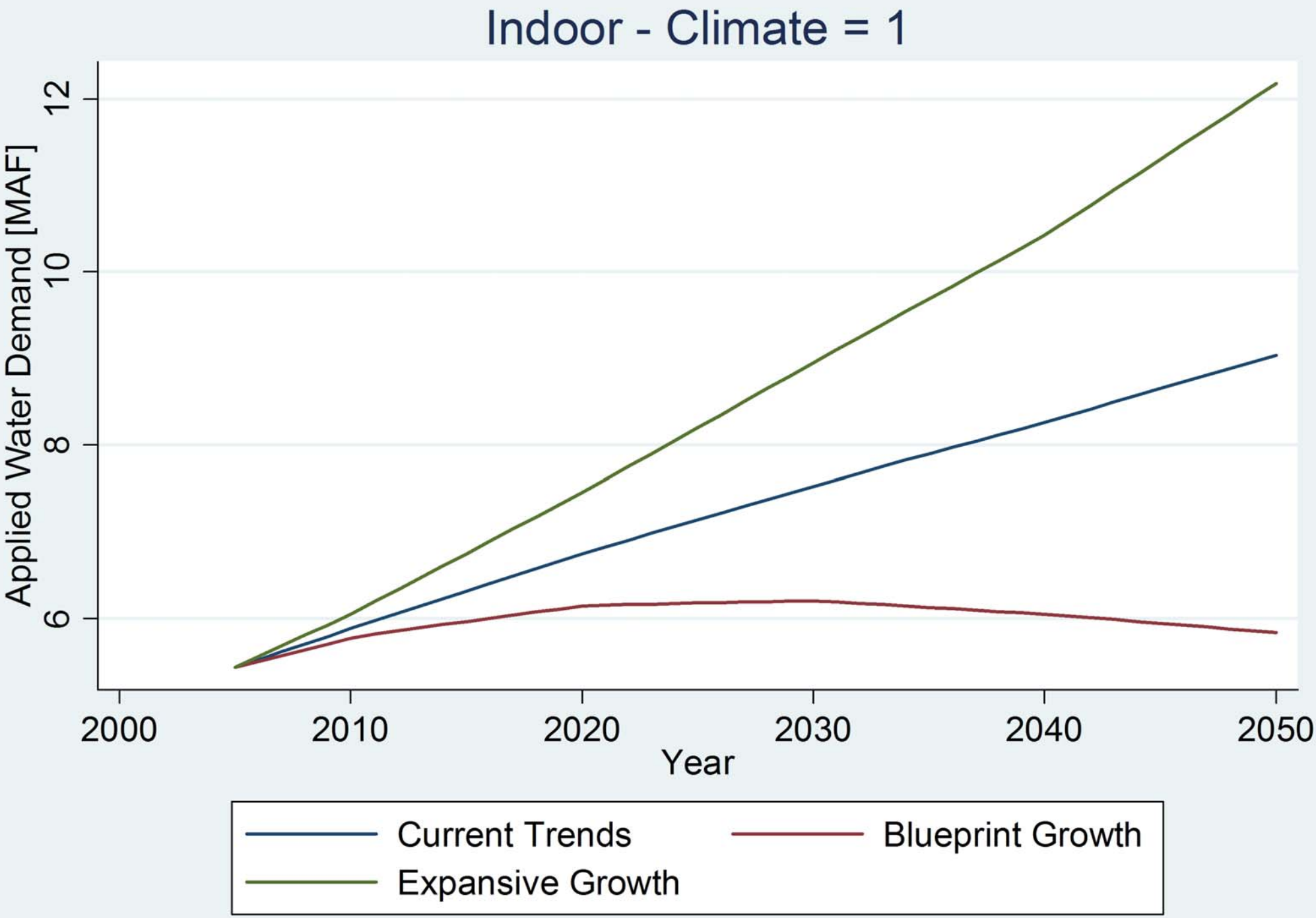

Developed by the Bureau of Reclamation, U.S. Fish and Wildlife Service, California Department of Fi
Improvement Act 2008 Draft Long-Term Plan (2009-2018) for the Restoration of Fisheries, Refuges,
Annual CVPIA Refuge Incremental Level 4 Water Deliveries
(1994-2008)
Incremental Level 4 Water Delivered
(Acre-Feet)
150,000
125,000
100,000
75,000
50,000
25,000
0
1994 (CD)
1995 (WT)
1996 (WT)
1997 (WT)
1998 (WT)
1999 (AN)
2000 (AN)
2001 (DY)
2002 (DY)
2003 (BN)
2004 (DY)
2005 (WT)
2006 (WT)
2007 (CD)
2008 (CD)
Year
Amount of Incremental Level 4 Mandated by CVPIA
Amount of Incremental Level 4 Delivered Each Year

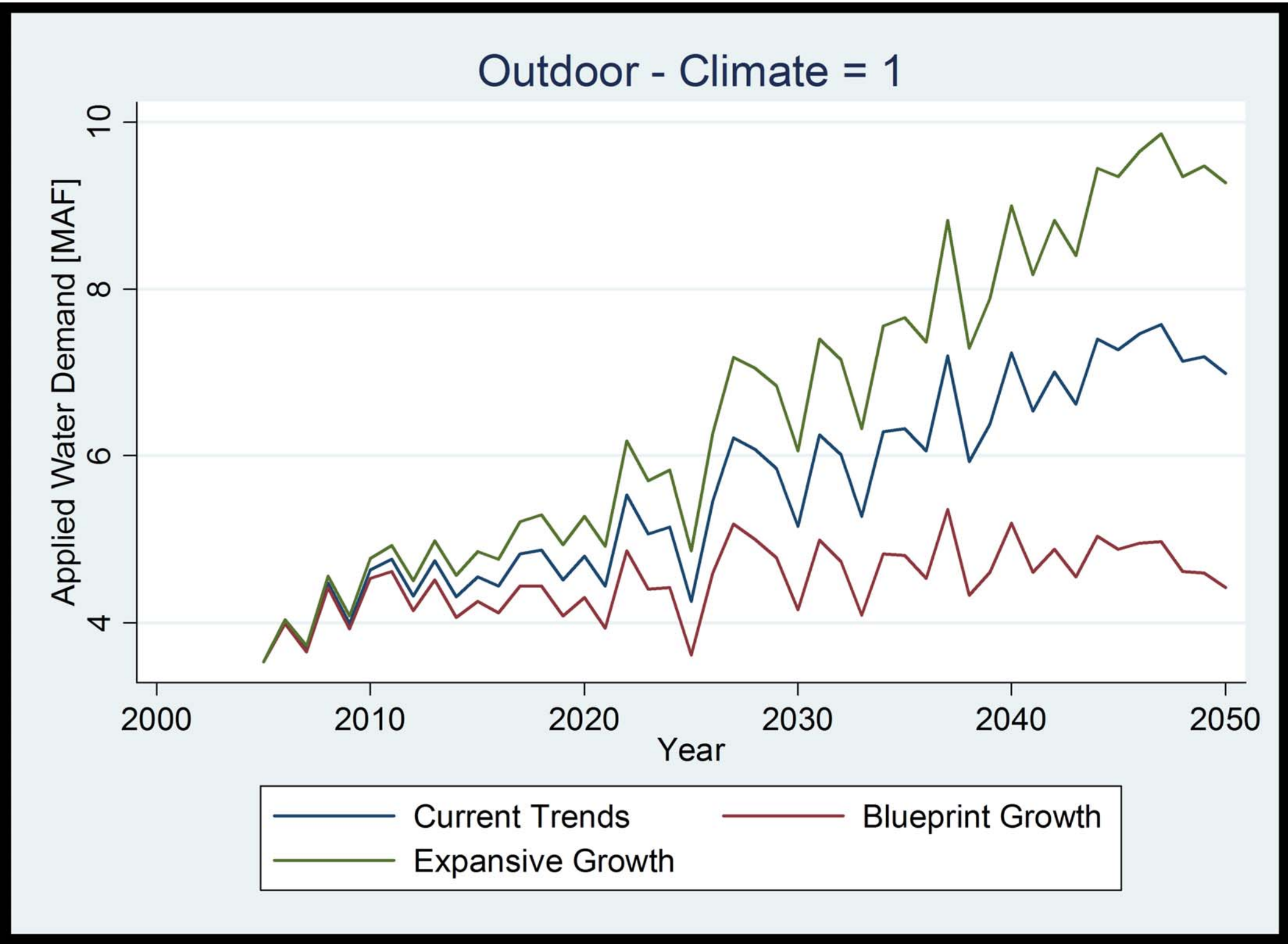

Agricultural Demand
Climate Scenario 1
Change in applied water demand (maf)
5
0
-5
2000
2010
2020
2030
2040
2050
Year
Current Trends
Blueprint Growth
Expansive Growth
historical data

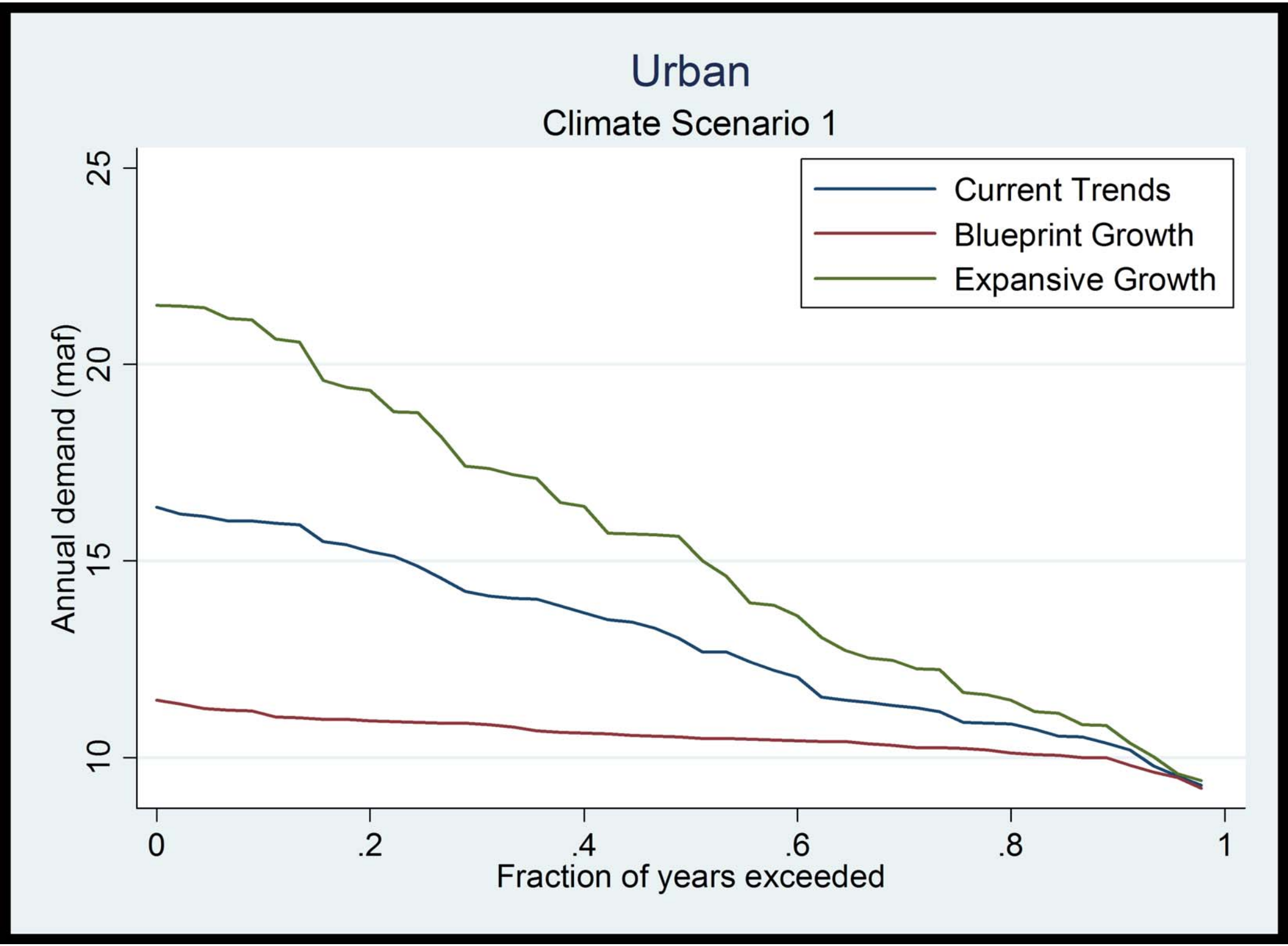

Agricultural Demand
Three Scenarios
Applied water demand (maf)
40
35
30
25
20
Each box represents annual results for 12 climate simulations
1998-2005
2011-2020
2021-2030
2031-2040
2041-2050
historical
Current Trends
Blueprint Growth
Expansive Growth

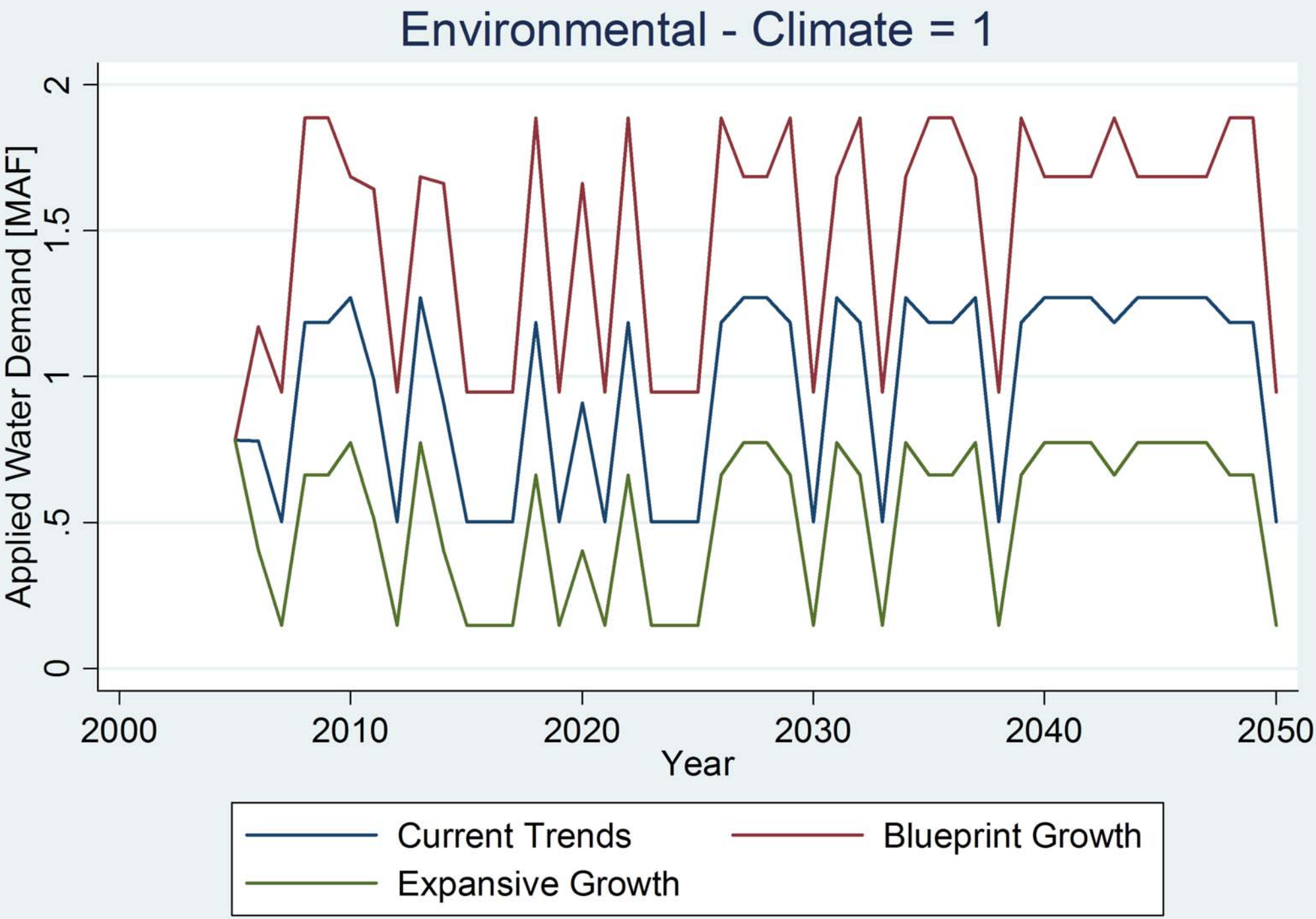

Agricultural Demand
Historical and 2041-2050 for three landuse scenarios
Applied water use (maf)
35
30
25
20
Historical: 1998-2005
Current Trends: 2041-2050
Blueprint Growth: 2041-2050
Expansive Growth: 2041-2050


Agriculture
Climate Scenario 1
Current Trends
Blueprint Growth
Expansive Growth
Annual demand (maf)
35
30
25
0
.2
.4
.6
.8
1
Fraction of years exceeded


Indoor - Climate = 1
Applied Water Demand [MAF]
6
8
10
12
2000
2010
2020
2030
2040
2050
Year
Current Trends
Blueprint Growth
Expansive Growth


Outdoor - Climate = 1
Applied Water Demand [MAF]
10
8
6
4
2000
2010
2020
2030
2040
2050
Year
Current Trends
Blueprint Growth
Expansive Growth


Urban
Climate Scenario 1
Current Trends
Blueprint Growth
Expansive Growth
Annual demand (maf)
25
20
15
10
0
.2
.4
.6
.8
1
Fraction of years exceeded


Environmental - Climate = 1
Applied Water Demand [MAF]
0
.5
1
1.5
2
2000
2010
2020
2030
2040
2050
Year
Current Trends
Blueprint Growth
Expansive Growth