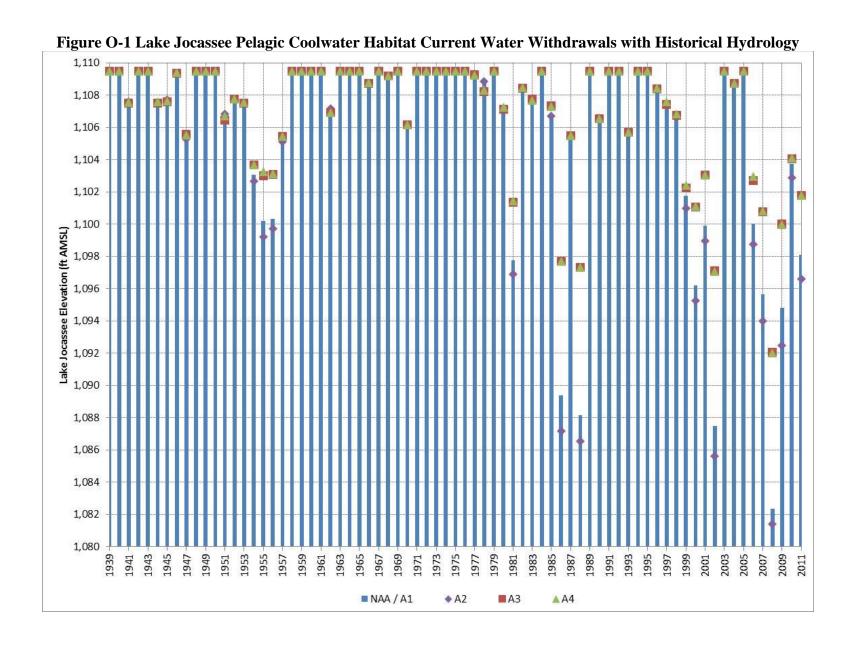
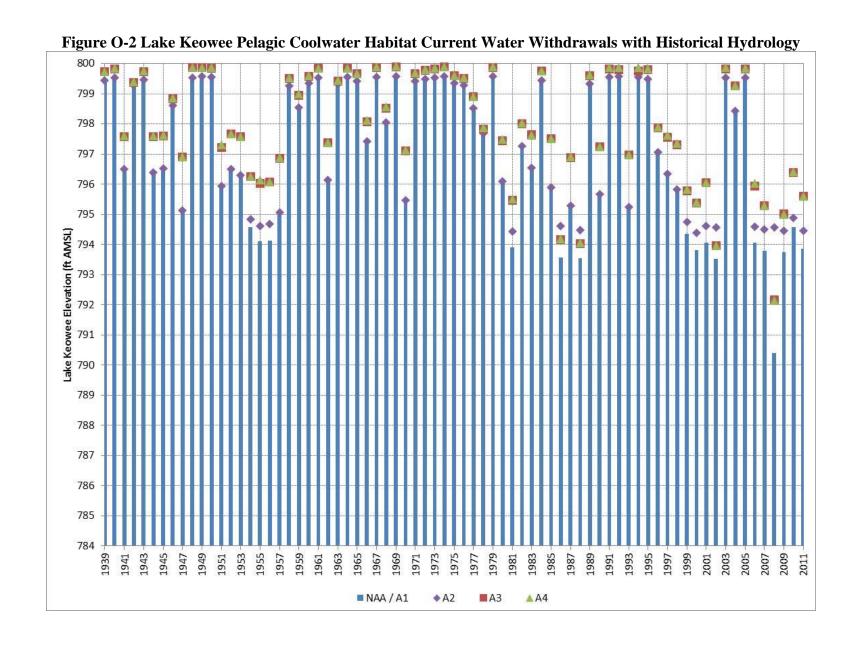
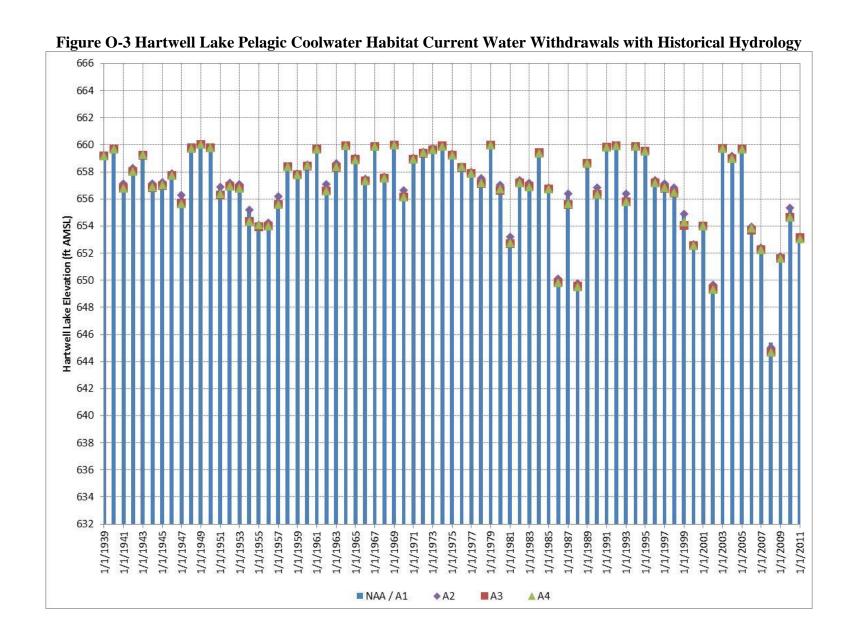
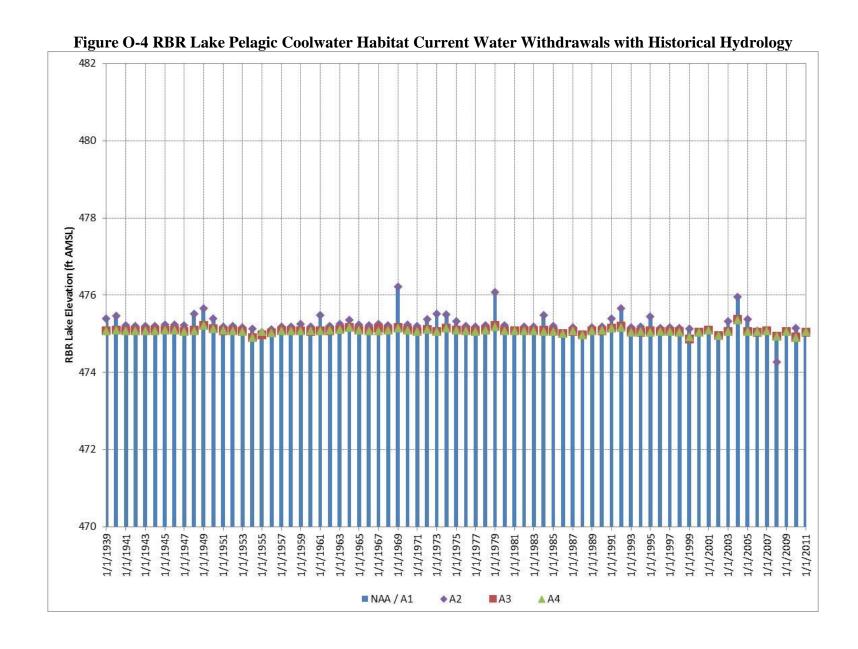
## APPENDIX O BIOTIC COMMUNITIES MODEL SENSITIVITY RESULTS

## Appendix O Biotic Communities Model Sensitivity Results

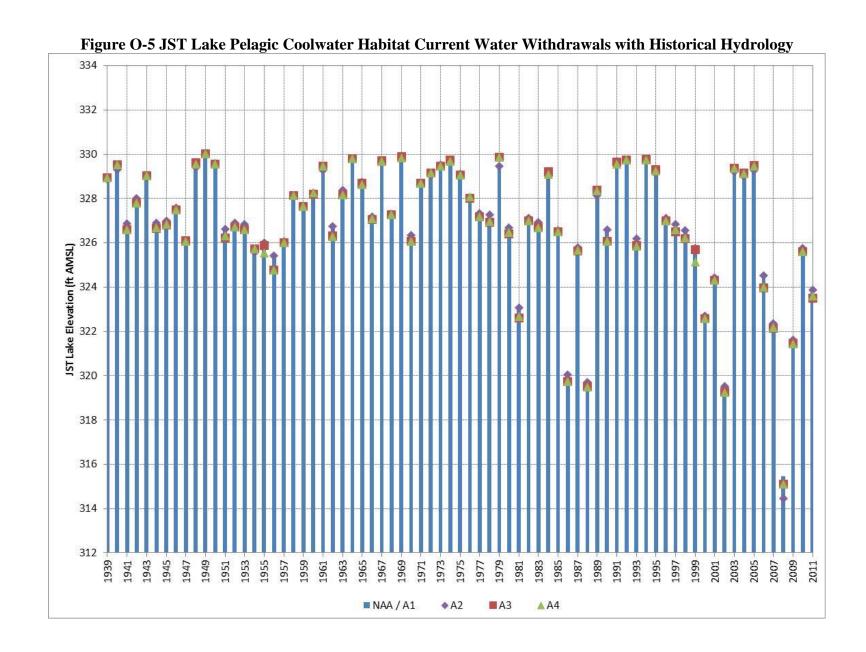




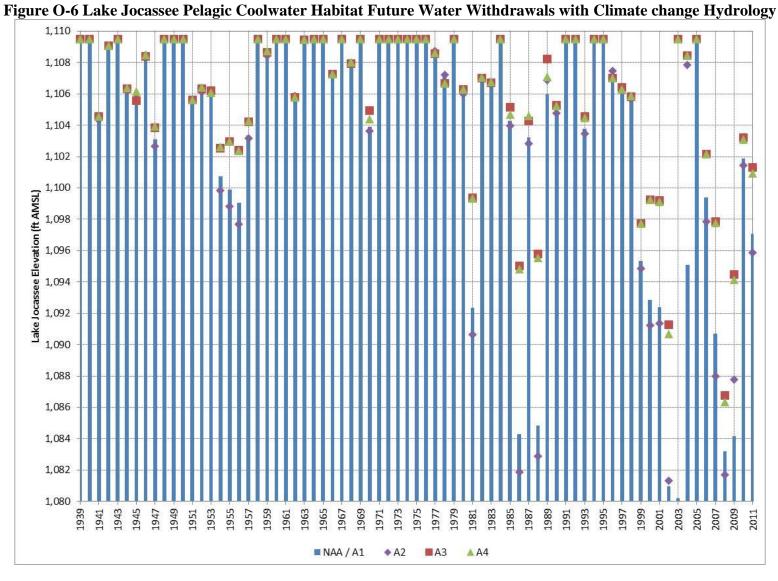


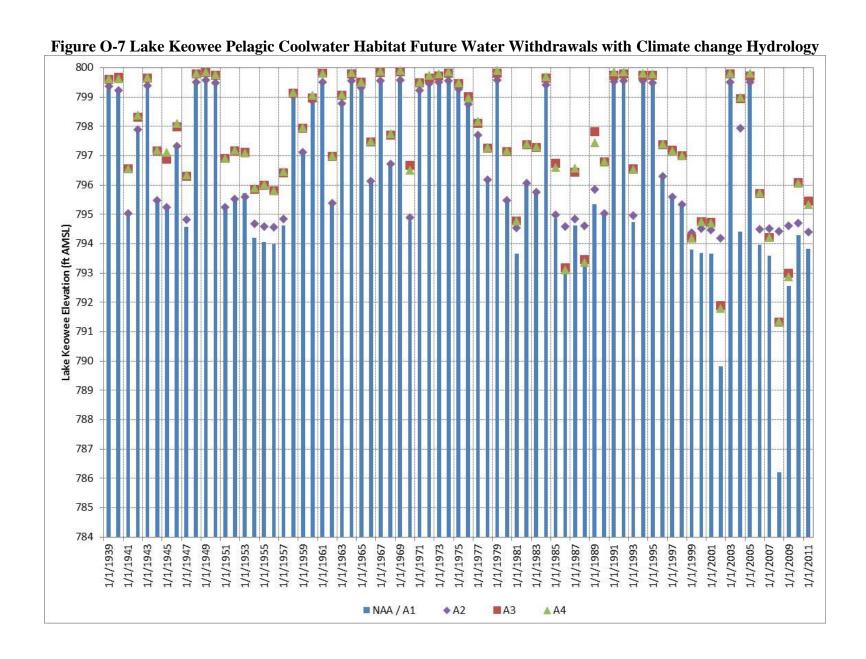


Appendix O-4

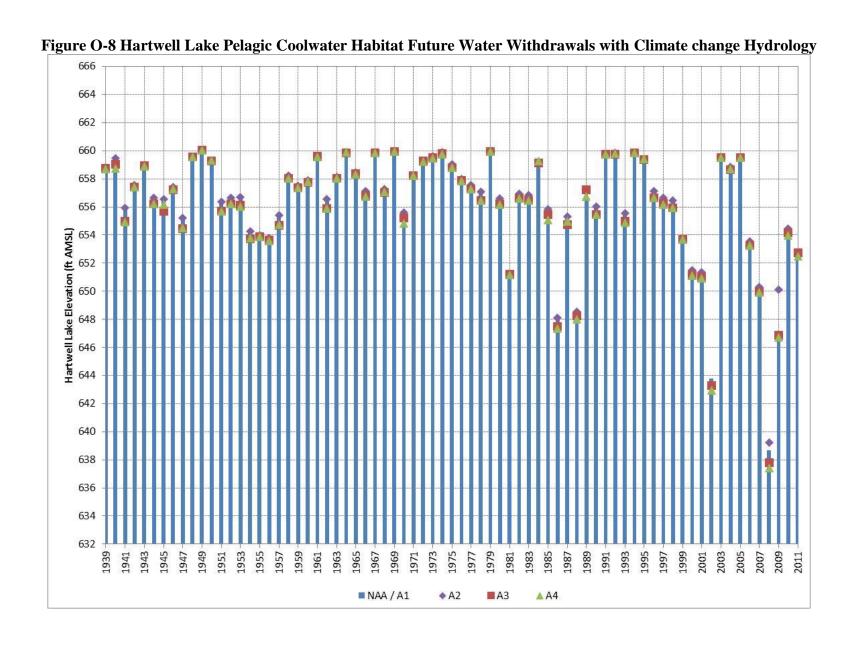


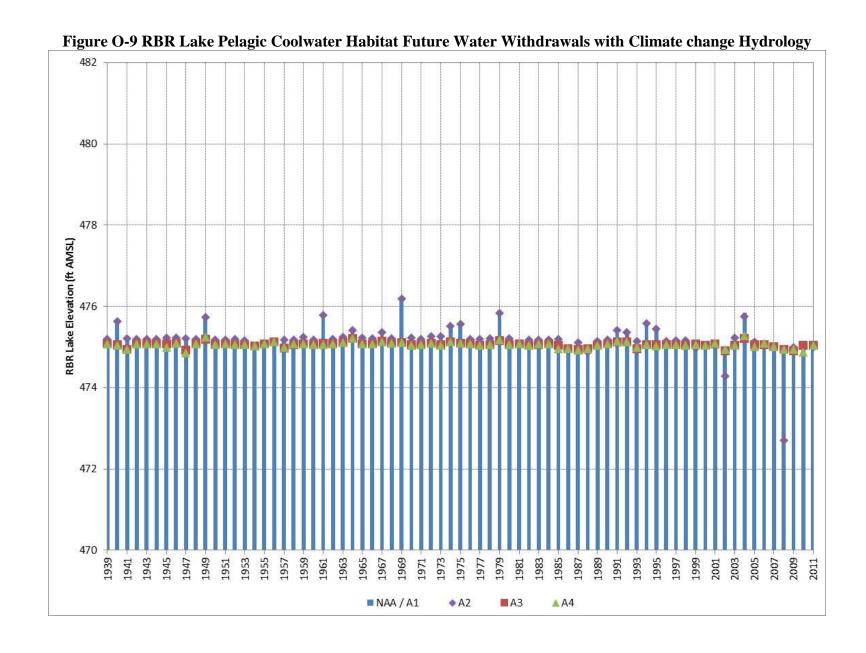
Appendix O-5



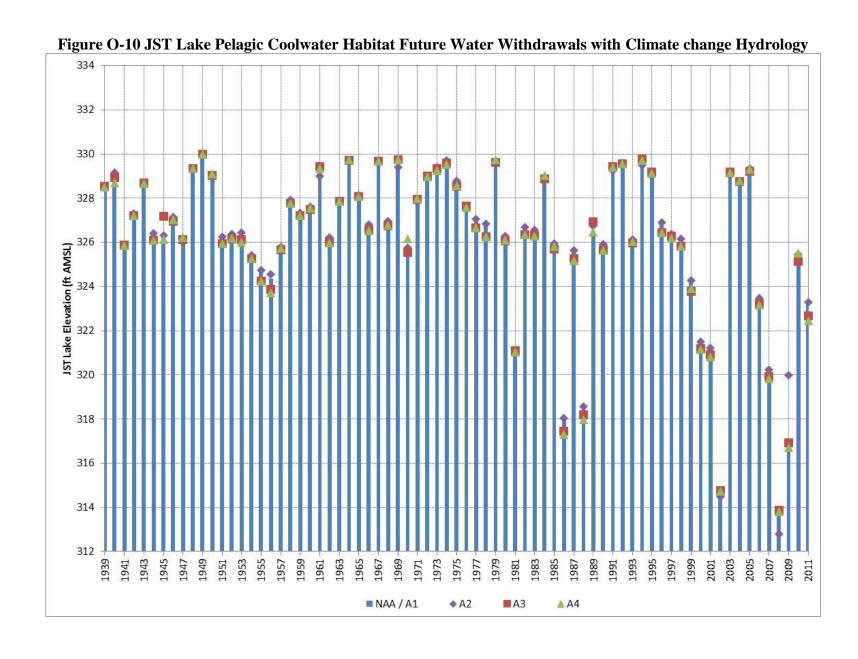


Appendix O-7





Appendix O-9



Appendix O-10

Figure O-11 Mean January JST Lake Flow Release **Current Water Withdrawals with Historical Hydrology** 27,000 26,000 25,000 24,000 23,000 22,000 21,000 20,000 19,000 18,000 17,000 15,000 15,000 14,000 12,000 12,000 11,000 10,000 9,000 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 1957 1959 1961 1963 1965 1969 1975 1979 1985 1987 1989 1995 1997 1999 2003 1949 1967 1971 1981 1991 2001 ■ NAA / A1 ◆ A2 ■ A3 ▲ A4

Appendix O-11

Figure O-12 Mean February JST Lake Flow Release **Current Water Withdrawals with Historical Hydrology** 27,000 26,000 25,000 24,000 23,000 22,000 21,000 20,000 19,000 18,000 17,000 Flow Relation 15,000 15,000 12,000 12,000 5 11,000 10,000 9,000 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 1953 1955 1959 1963 1969 1973 1975 1979 1985 1993 1961 1965 1967 1971 1977 1981 1987 1991 1995 1997 1999 NAA / A1 ◆ A2 **■**A3 AA4

Appendix O-12

**Current Water Withdrawals with Historical Hydrology** 25,000 24,000 23,000 22,000 21,000 20,000 19,000 18,000 17,000 16,000 15,000 14,000 13,000 12,000 11,000 10,000 9,000 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 1985 1993 1995 1963 1965 1969 2001 1951 1957 1961 1967 1971 1973 1975 1977 1979 1981 1987 1991 1997 ■NAA / A1 ◆ A2 ■ A3 ▲ A4

Figure O-13 Mean March JST Lake Flow Release

Figure O-14 Mean April JST Lake Flow Release Current Water Withdrawals with Historical Hydrology

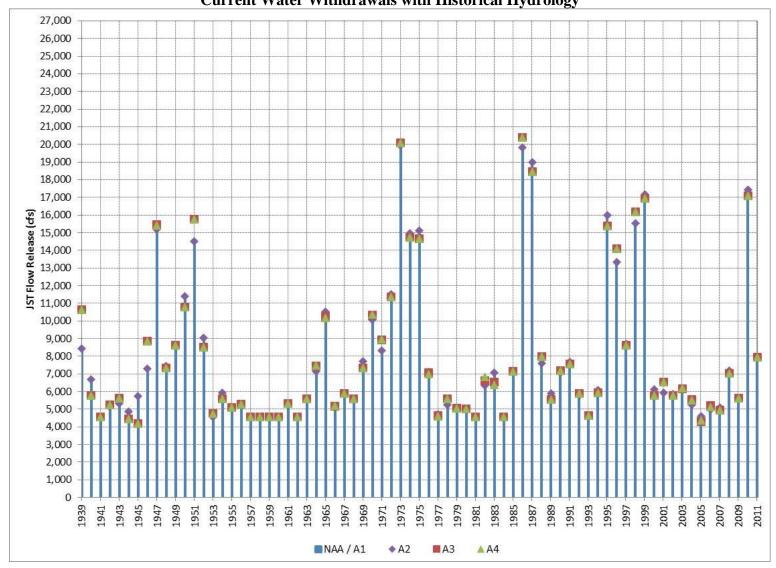


Figure O-15 Mean May JST Lake Flow Release Current Water Withdrawals with Historical Hydrology

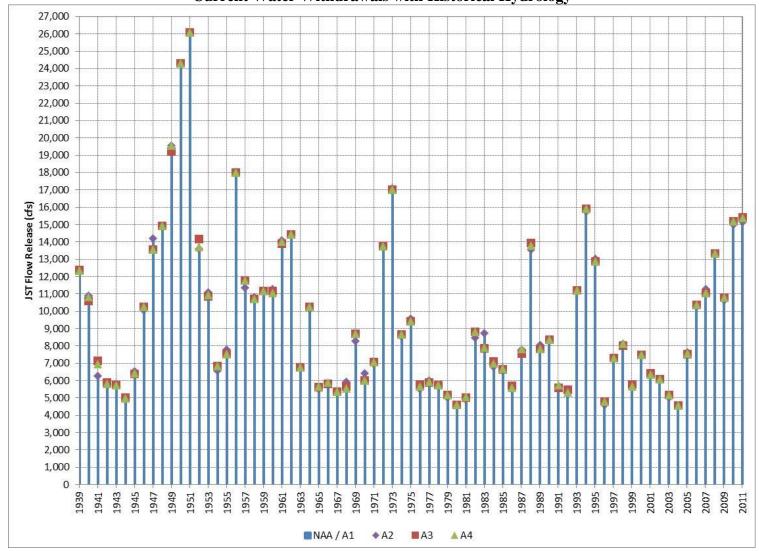


Figure O-16 Mean June JST Lake Flow Release Current Water Withdrawals with Historical Hydrology

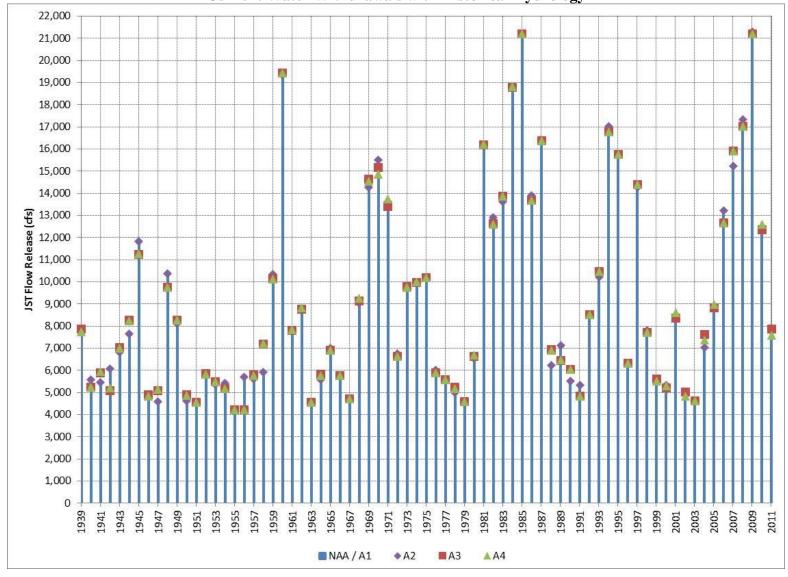


Figure O-17 Mean July JST Lake Flow Release Current Water Withdrawals with Historical Hydrology

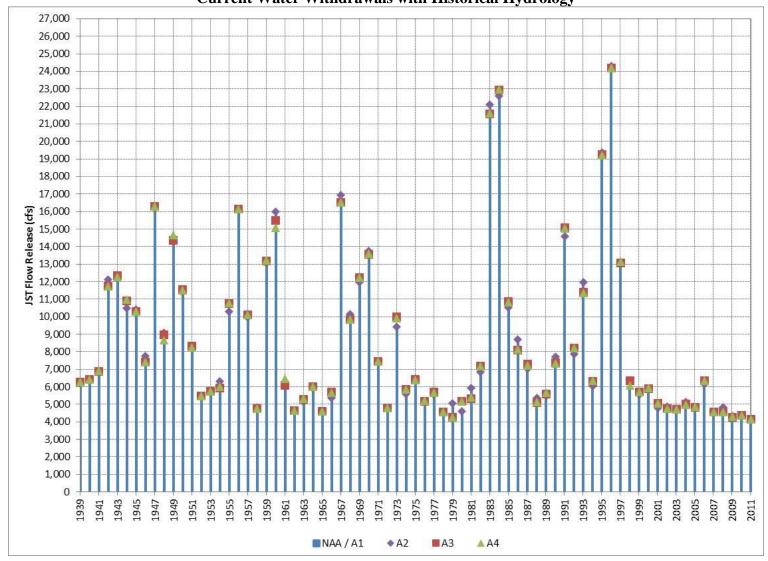


Figure O-18 Mean August JST Lake Flow Release **Current Water Withdrawals with Historical Hydrology** 22,000 21,000 20,000 19,000 18,000 17,000 A 16,000 15,000 14,000 72 House 13,000 10,000 10,000 9,000 10,000 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 1951 1953 1955 1957 1959 1963 1965 1967 1983 1989 1991 1993 1995 1997 1999 2001 2005 2007 2009 2011 1961 1969 1981 1977 NAA / A1 ♠ A2 **■** A3 ▲ A4

Appendix O-18

**Current Water Withdrawals with Historical Hydrology** 24,000 23,000 22,000 21,000 20,000 19,000 18,000 17,000 16,000 15,000 Release (ds) 14,000 12,000 11,000 9,000 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 1957 1959 1965 1967 1969 1973 1975 1979 1983 1985 1987 1993 1995 1997 2001 1971 1977 1981 NAA / A1 ◆ A2 ■A3 ▲ A4

Figure O-19 Mean September JST Lake Flow Release

Figure O-20 Mean October JST Lake Flow Release **Current Water Withdrawals with Historical Hydrology** 27,000 26,000 25,000 24,000 23,000 22,000 21,000 20,000 19,000 18,000 17,000 15,000 15,000 14,000 12,000 12,000 11,000 10,000 9,000 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 1959 1985 1987 1947 1953 1955 1957 1961 1963 1965 1967 1969 1971 1973 1975 1979 1981 1991 1993 1995 1997 1999 2001 NAA / A1 ◆ A2 ▲ A4 ■A3

Appendix O-20

Figure O-21 Mean November JST Lake Flow Release **Current Water Withdrawals with Historical Hydrology** 20,000 19,000 18,000 17,000 16,000 15,000 14,000 13,000 72 How Release (ds) 11,000 10,000 9,000 8,000 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 1955 1957 1959 2003 2005 2007 2009 2011 1949 1951 1953 1963 1965 1979 1981 1985 1987 1991 1993 1995 1961 1967 1969 1971 1973 1975 1977 1997 1999 NAA / A1 ◆ A2 ■ A3 ▲ A4

Appendix O-21

Figure O-22 Mean December JST Lake Flow Release **Current Water Withdrawals with Historical Hydrology** 24,000 23,000 22,000 21,000 20,000 19,000 18,000 17,000 16,000 15,000 12,000 13,000 11,000 11,000 10,000 9,000 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 1959 1985 1987 1947 1953 1955 1957 1961 1963 1965 1967 1969 1973 1975 1979 1991 1993 1995 1997 1999 2001 NAA / A1 ◆ A2 **■**A3 ▲ A4

Appendix O-22

Figure O-23 Mean January JST Lake Flow Release Future Water Withdrawals with Climate change Hydrology 24,000 23,000 22,000 21,000 20,000 19,000 18,000 17,000 16,000 15,000 13,000 11,000 11,000 10,000 9,000 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 1953 1957 1959 1963 1965 1969 1973 1975 1985 1987 1989 1993 1995 1999 2003 1947 1951 1961 1967 1981 1991 1997 2001 1971 ▲ A4 ■ NAA / A1 ◆ A2 ■ A3

Appendix O-23

Figure O-24 Mean February JST Lake Flow Release Future Water Withdrawals with Climate change Hydrology 25,000 24,000 23,000 22,000 21,000 20,000 19,000 18,000 17,000 16,000 TE 15,000 14,000 13,000 11,000 11,000 10,000 A 9,000 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 1955 1989 1995 1957 1961 1971 1975 1981 1987 1993 1997 1999 2001 1963 1967 1969 1973 1977 NAA / A1 ♦ A2 ■ A3

Appendix O-24

Figure O-25 Mean March JST Lake Flow Release Future Water Withdrawals with Climate change Hydrology 28,000 27,000 26,000 25,000 24,000 23,000 22,000 21,000 20,000 19,000 18,000 25 17,000 16,000 15,000 12,000 13,000 11,000 11,000 11,000 10,000 9,000 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 0

1973

◆ A2

1971

NAA / A1

1979

1981

▲ A4

1977

■A3

1983

1987

1991

1997

1999

2003 2005 2007 2009 2011

1953 1955 1957 1961 1963 1965 1965

1951

1947

Figure O-26 Mean April JST Lake Flow Release Future Water Withdrawals with Climate change Hydrology

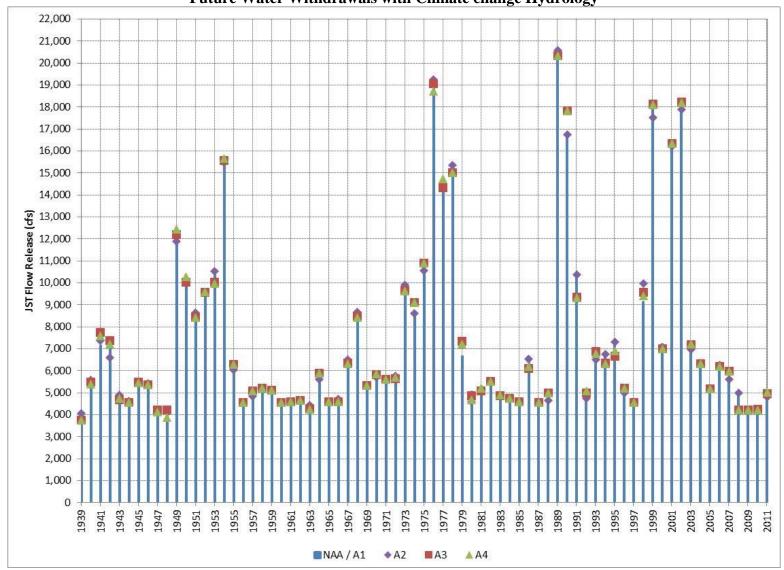


Figure O-27 Mean May JST Lake Flow Release Future Water Withdrawals with Climate change Hydrology 27,000 26,000 25,000 24,000 23,000 22,000 21,000 20,000 19,000 18,000 17,000 27 H 2000 15,000 14,000 12,000 12,000 11,000 10,000 9,000 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 1951 1953 1957 1959 1961 1963 1965 1967 1969 1971 1973 1975 1977 1979 1981 1983 1985 1987 1989 1991 1993 1995 1997 2001 2003 2002

Appendix O-27

◆ A2

■A3

▲ A4

NAA / A1

Figure O-28 Mean June JST Lake Flow Release Future Water Withdrawals with Climate change Hydrology 22,000 A 21,000 20,000 19,000 18,000 17,000 16,000 15,000 14,000 13,000 Pele as (45) 13,000 Pele as (45) 13,000 Pele as (45) 13,000 Pele as (45) Pel 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 1959 1953 1963 1965 1969 1983 1985 1989 1995 2003 1951 1957 1961 1967 1971 1973 1975 1977 1979 1981 1987 1991 1993 1997 2001 NAA / A1 ◆ A2 A3

Figure O-29 Mean July JST Lake Flow Release Future Water Withdrawals with Climate change Hydrology

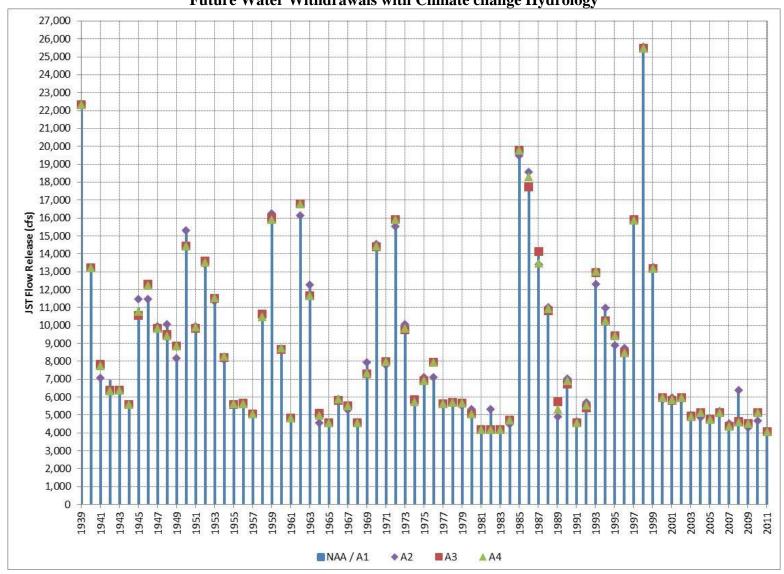
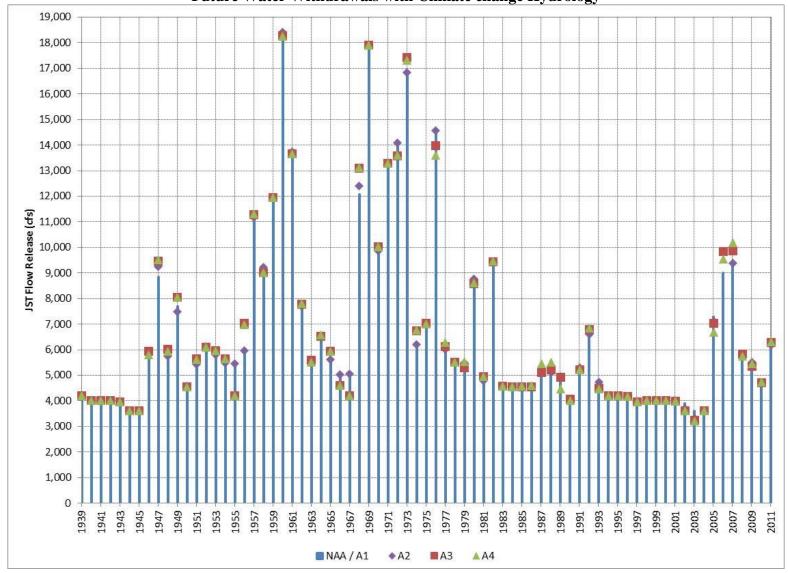


Figure O-30 Mean August JST Lake Flow Release Future Water Withdrawals with Climate change Hydrology



Future Water Withdrawals with Climate change Hydrology 25,000 24,000 23,000 22,000 21,000 20,000 19,000 18,000 17,000 16,000 TST 15,000 14,000 10,000 10,000 9,000 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 1955 1989 1995 1957 1961 1971 1981 1987 1993 1997 1999 2001 1963 1967 1969 1977 NAA / A1 ♦ A2 ■ A3

Figure O-31 Mean September JST Lake Flow Release

Future Water Withdrawals with Climate change Hydrology 25,000 24,000 23,000 22,000 21,000 20,000 19,000 18,000 17,000 16,000 9,000 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 1953 1959 1963 1979 1985 1993 1955 1957 1961 1965 1967 1969 1971 1973 1975 1981 1987 1991 1995 1997 1999 NAA / A1 ■A3 ♠ A2 ▲ A4

Figure O-32 Mean October JST Lake Flow Release

Future Water Withdrawals with Climate change Hydrology 18,000 17,000 16,000 15,000 14,000 13,000 12,000 11,000 Release (ds) 10,000 9,000 8,000 7,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 1953 1955 1957 1959 1961 1963 1965 1979 1985 1987 1993 1967 1969 1971 1973 1975 1981 1991 1995 1997 1999 NAA / A1 ◆ A2 ■A3 ▲ A4

Figure O-33 Mean November JST Lake Flow Release

Future Water Withdrawals with Climate change Hydrology 21,000 20,000 19,000 18,000 17,000 16,000 + 15,000 14,000 13,000 12,000 Release (ds) 12,000 9,000 9,000 9,000 8,000 7,000 6,000 5,000 4,000 3,000 2,000 1,000 1955 1959 1963 1983 1985 1989 1995 1999 2003 1951 1953 1957 1961 1965 1967 1969 1971 1973 1975 1979 1981 1987 1991 1993 1997 2001 NAA / A1 ◆ A2 ■ A3 ▲ A4

Figure O-34 Mean December JST Lake Flow Release