Delta Smelt LCME output

Brian Mahardja

2023-09-18

## New names:  
## Joining with `by = join\_by(Year)`  
## • `` -> `...1`

Table 1. Predicted population growth rate (lambda) for each cohort year by alternatives.

| Year | Alt1 | Alt2v1wTUCP | Alt2v1woTUCP | Alt2v2noTUCP | Alt2v3noTUCP | Alt4 | EXP1 | EXP3 | NAA | Sacramento Valley Water Year Index |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1995 | 1.63 | 1.78 | 1.79 | 1.80 | 1.78 | 1.85 | 4.59 | 4.40 | 1.86 | Wet |
| 1996 | 0.66 | 0.64 | 0.64 | 0.65 | 0.65 | 0.65 | 1.21 | 1.46 | 0.73 | Wet |
| 1997 | 0.38 | 0.56 | 0.57 | 0.57 | 0.57 | 0.59 | 0.60 | 1.02 | 0.60 | Wet |
| 1998 | 1.75 | 1.70 | 1.67 | 1.68 | 1.68 | 1.73 | 5.21 | 5.02 | 1.82 | Wet |
| 1999 | 0.56 | 0.69 | 0.70 | 0.68 | 0.70 | 0.68 | 1.06 | 1.39 | 0.77 | Wet |
| 2000 | 0.45 | 0.85 | 0.85 | 0.91 | 0.92 | 0.81 | 0.79 | 1.19 | 0.93 | Above Normal |
| 2001 | 0.12 | 0.31 | 0.31 | 0.33 | 0.35 | 0.30 | 0.33 | 0.53 | 0.31 | Dry |
| 2002 | 0.68 | 0.94 | 0.96 | 1.04 | 1.03 | 0.93 | 0.74 | 1.27 | 0.92 | Dry |
| 2003 | 0.71 | 1.45 | 1.46 | 1.54 | 1.54 | 1.45 | 1.50 | 2.35 | 1.50 | Above Normal |
| 2004 | 0.46 | 0.84 | 0.84 | 0.87 | 0.87 | 0.84 | 0.56 | 0.95 | 0.87 | Below Normal |
| 2005 | 1.04 | 1.27 | 1.27 | 1.34 | 1.36 | 1.28 | 2.70 | 2.91 | 1.30 | Above Normal |
| 2006 | 2.44 | 2.42 | 2.45 | 2.50 | 2.55 | 2.36 | 2.95 | 3.24 | 2.51 | Wet |
| 2007 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.32 | 0.57 | 0.54 | Dry |
| 2008 | 1.17 | 1.19 | 1.18 | 1.20 | 1.21 | 1.18 | 0.65 | 1.04 | 1.17 | Critically Dry |
| 2009 | 0.66 | 0.67 | 0.67 | 0.66 | 0.66 | 0.67 | 0.48 | 0.93 | 0.67 | Dry |
| 2010 | 1.36 | 1.43 | 1.43 | 1.42 | 1.38 | 1.44 | 1.62 | 1.68 | 1.43 | Below Normal |
| 2011 | 3.13 | 3.21 | 3.18 | 3.18 | 3.18 | 3.24 | 5.04 | 4.99 | 3.20 | Wet |
| 2012 | 1.07 | 1.07 | 1.08 | 1.08 | 1.07 | 1.08 | 0.58 | 0.97 | 1.11 | Below Normal |
| 2013 | 0.89 | 0.88 | 0.89 | 0.87 | 0.86 | 0.87 | 0.49 | 0.81 | 0.88 | Dry |
| 2014 | 0.51 | 0.48 | 0.53 | 0.51 | 0.52 | 0.48 | 0.32 | 0.49 | 0.48 | Critically Dry |

## Joining with `by = join\_by(Year)`  
## `summarise()` has grouped output by 'wet\_vs\_dry'. You can override using the  
## `.groups` argument.  
## `summarise()` has grouped output by 'TimePeriod'. You can override using the  
## `.groups` argument.

Table 2. Geometric mean of population growth rate (lambda) for each alternative.

| Category | Alt1 | Alt2v1woTUCP | Alt2v1wTUCP | Alt2v2noTUCP | Alt2v3noTUCP | Alt4 | EXP1 | EXP3 | NAA |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Overall | 0.80 | 0.98 | 0.98 | 1.00 | 1.00 | 0.98 | 1.03 | 1.43 | 1.01 |
| Below Normal, Dry, or Critically Dry years | 0.63 | 0.77 | 0.76 | 0.79 | 0.78 | 0.76 | 0.54 | 0.86 | 0.77 |
| Wet and Above Normal years | 1.00 | 1.25 | 1.25 | 1.28 | 1.28 | 1.25 | 1.97 | 2.38 | 1.32 |
| 1995-2004 | 0.59 | 0.86 | 0.86 | 0.89 | 0.90 | 0.86 | 1.11 | 1.55 | 0.91 |
| 2005-2014 | 1.08 | 1.12 | 1.11 | 1.12 | 1.12 | 1.11 | 0.95 | 1.32 | 1.12 |

