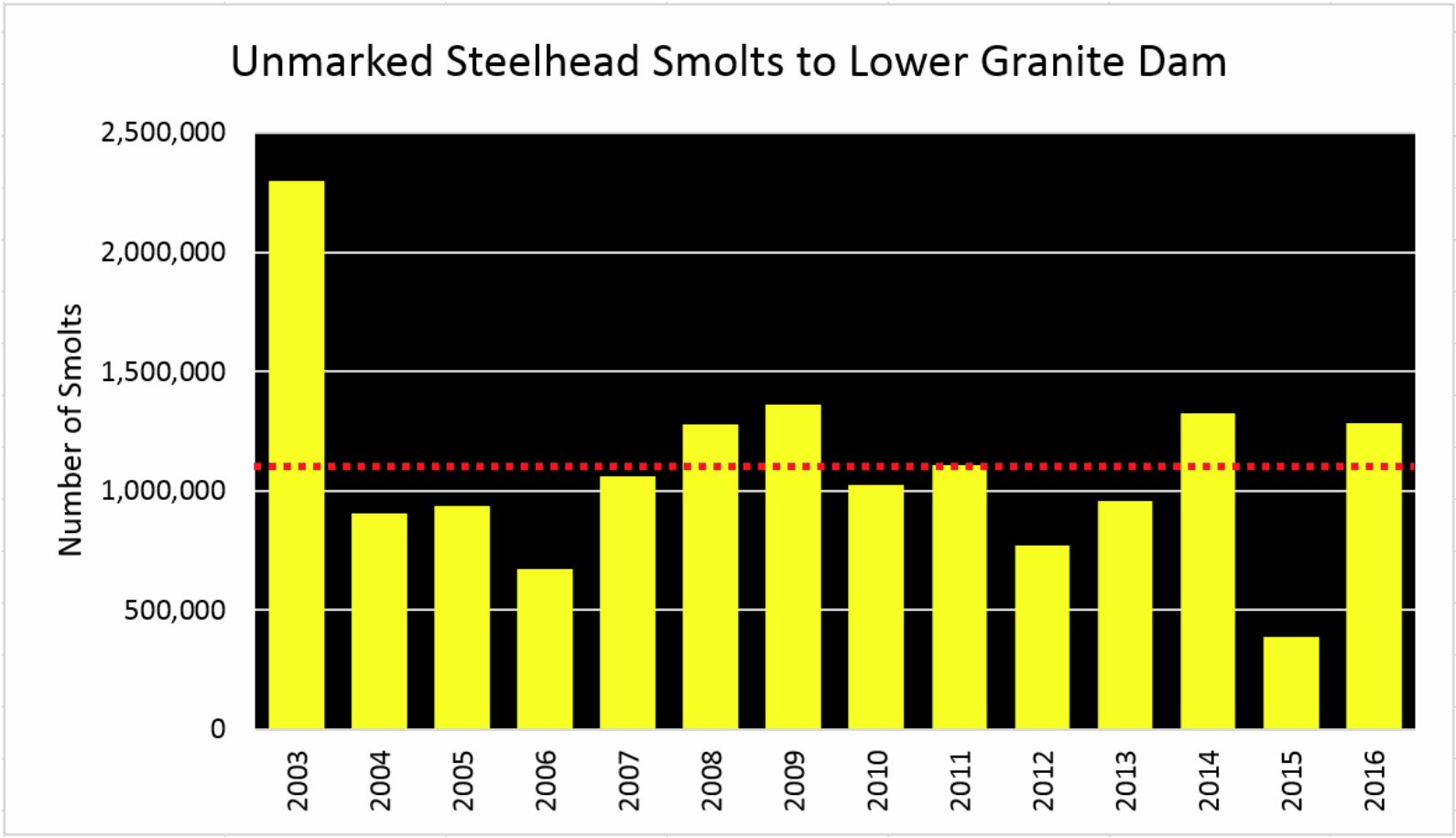
IDFG Public & Policy Communication

- We rely on sibling forecasts- what happens when these fail?
- Blog posts
  - https://idfg.idaho.gov/blog/2017/08/why-are-idahos-steelhead-runs-so-low
  - https://idfg.idaho.gov/press/despite-down-year-salmon-early-signs-point-improvement
- Presentation to Commission

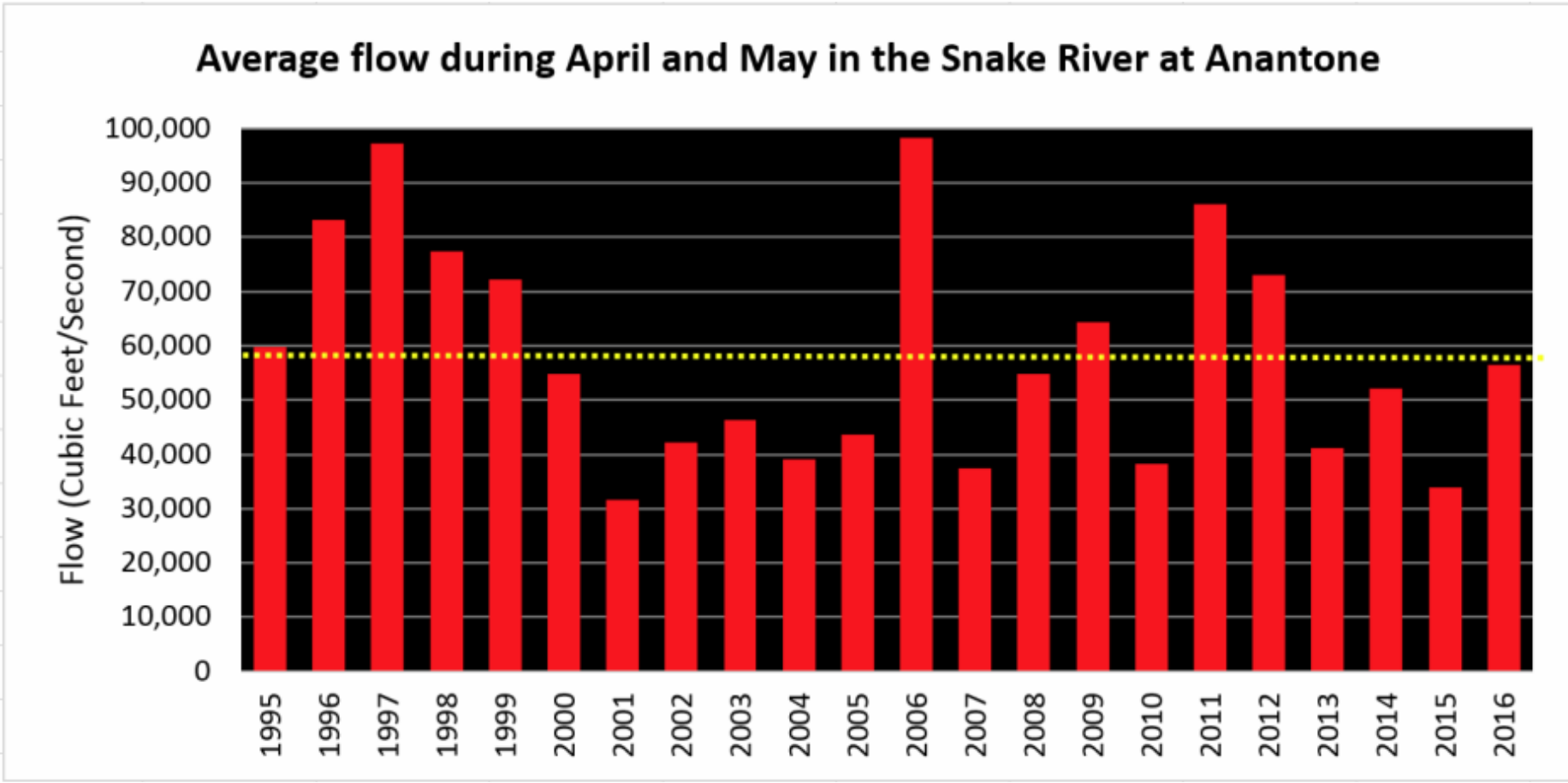
Why the low A-Run Steelhead Return?

- Number of smolts outmigrating in 2016?



Why the low A-Run Steelhead Return?

- Outmigration conditions in 2016?

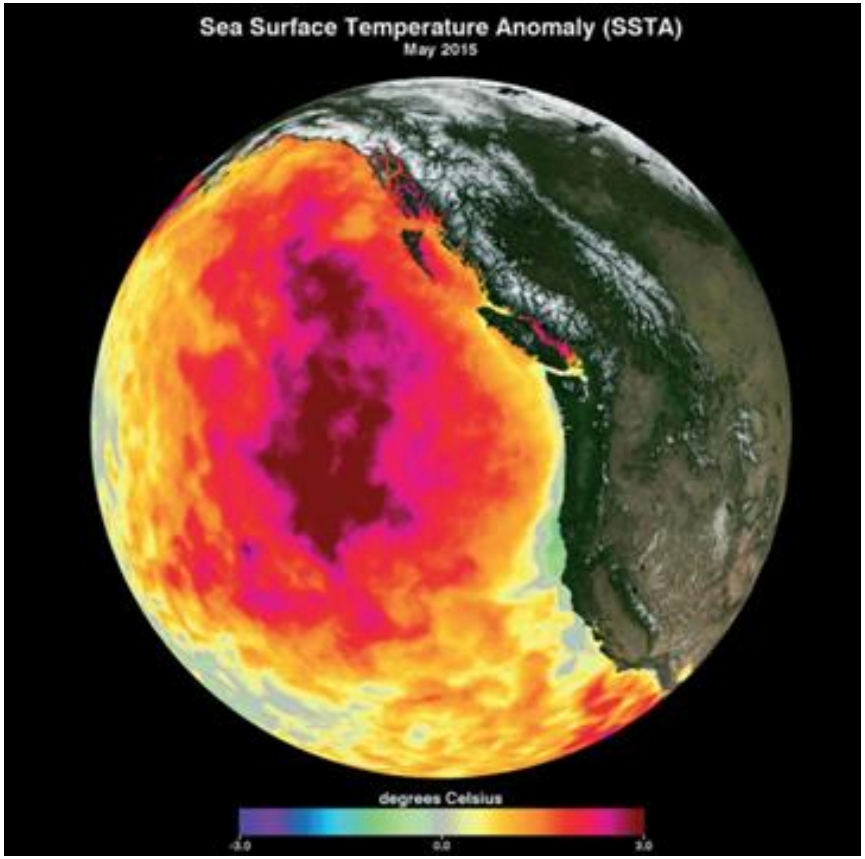


Why the low A-Run Steelhead Return?

- Ocean Conditions

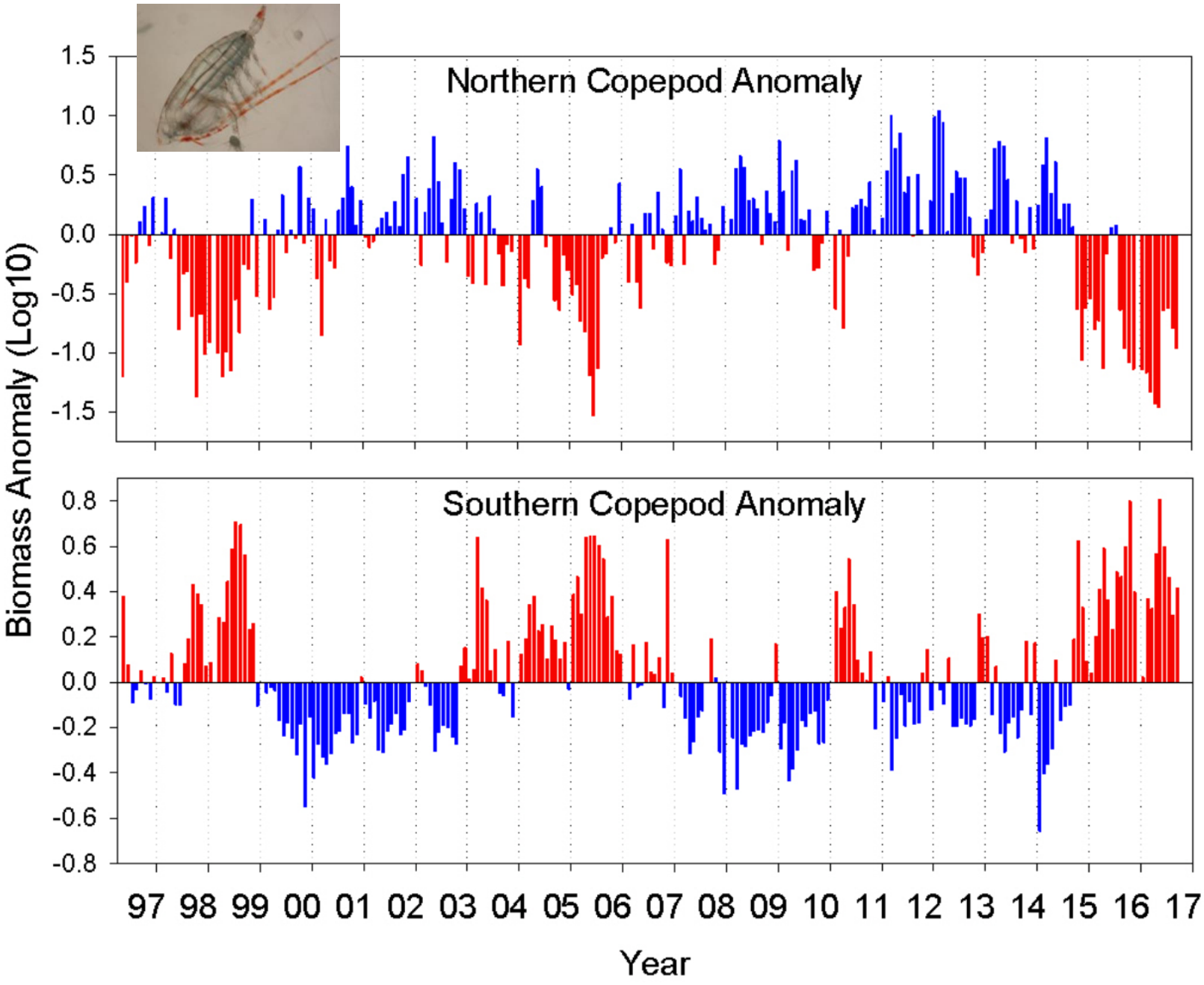
What is “the Blob”?

- Massive area of unusually warm water (3.5 million square miles)
- Lack of upwelling, fewer nutrients, low abundance of zooplankton
- Unprecedented – peaked in 2015 (but from 2014-2016)
- Warm water species showing up in northern latitudes
- Die offs of sea lions, sea birds, fish



NOAA Stoplight Chart

	Year																		
Ecosystem Indicators	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*
PDO (Sum Dec-March)	16	6	3	12	7	18	11	15	13	9	5	1	14	4	2	8	10	19	17
PDO (Sum May-Sept)	10	4	6	5	11	15	14	16	12	13	2	9	7	3	1	8	17	19	18
ONI (Average Jan-June)	18	1	1	6	12	14	13	15	8	11	3	10	16	4	5	7	9	17	19
46050 SST (°C; May-Sept)	15	8	3	4	1	7	19	14	5	16	2	9	6	10	11	12	13	18	17
Upper 20 m T (°C; Nov-Mar)	18	11	8	10	6	14	15	12	13	5	1	9	16	4	3	7	2	19	17
Upper 20 m T (°C; May-Sept)	15	11	13	4	1	3	19	17	7	8	2	5	12	10	6	16	18	9	14
Deep temperature (°C; May-Sept)	19	6	8	4	1	10	12	16	11	5	2	7	14	9	3	15	18	17	13
Deep salinity (May-Sept)	18	3	8	4	5	15	16	9	6	1	2	13	17	12	11	10	19	14	7
Copepod richness anom. (no. species; May-Sept)	17	2	1	7	6	13	12	16	14	10	8	9	15	4	5	3	11	18	19
N. copepod biomass anom. (mg C m^{-3}; May-Sept)	17	13	9	10	3	15	12	18	14	11	6	8	7	1	2	4	5	16	19
S. copepod biomass anom. (mg C m^{-3}; May-Sept)	19	2	5	4	3	13	14	18	12	10	1	7	15	9	8	6	11	16	17
Biological transition (day of year)	17	11	6	7	8	12	10	16	15	3	1	2	14	4	9	5	13	19	19
Ichthyoplankton biomass (log (mg C 1000 m^{-3}); Jan-Mar)	19	10	2	6	8	17	16	12	15	14	1	11	3	13	9	7	18	4	5
Ichthyoplankton community index (PCO axis 1 scores; Jan-Mar)	9	13	1	6	4	10	18	16	3	12	2	14	15	11	5	7	8	17	19
Chinook salmon juvenile catches (no. km^{-1}; June)	18	4	5	16	10	13	17	19	12	8	1	6	7	15	3	2	9	14	11
Coho salmon juvenile catches (no. km^{-1}; June)	18	7	12	5	6	2	15	19	16	3	4	9	10	14	17	1	11	8	13
Mean of ranks	16.4	7.0	5.7	6.9	5.8	11.9	14.6	15.5	11.0	8.7	2.7	8.1	11.8	7.9	6.3	7.4	12.0	15.3	15.3
Rank of the mean rank	19	6	2	5	3	13	15	18	11	10	1	9	12	8	4	7	14	16	16


Northern Copepod Anomaly
Southern Copepod Anomaly
Biomass Anomaly (Log10)
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
-0.6
-0.8
97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17
Year

Looking Forward

- Breakdown of the blob, better ocean conditions
- Good outmigration conditions in 2017
- Steelhead spawners are made up of multiple age classes
- We will continue to monitor the run and consider restrictions/ opportunity as needed