Supplementary Table 1. Marine mammal stocks that have had some form of trend analysis completed, the method used to assess population trend, trend (increasing, decreasing, or stable), the latest year that was included in the trend assessment, and the number of years of survey data that are available for the stock. All information was taken from NOAA Fisheries stock assessment reports(SARs).

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| **Stock(s)** | **Method** | **Trend (increasing, decreasing, stable)** | **Latest year included in trend estimate** | **Number of years of survey data** |
| Beluga Whale- Bristol Bay | Annual rate of increase from linear regression; based on aerial survey counts from 1993, 1994, 1999, 2000, 2004, and 2005 | Increasing | 2005 | 5 |
| False killer whale- Main Hawaiian Islands stock | Regression of sightings data from 1993-2003 | Decreasing | 2003 | 5 |
| Blue whale- Eastern North Pacific | Chao model with mark-recapture estimates used to estimate abundance from 1991-2011 and trend estimated from visual examination | Stable or decreasing | 2011 | 6 |
| Sperm whale- California, Oregon, Washington | Bayesian hierarchical modeling  | Stable | 2008 | 6 |
| Cuvier’s Beaked Whale- California, Oregon, Washington | Bayesian hidden process modeling using data from abundance surveys conducted from 1991-2008 | Decreasing | 2008 | 6 |
| Beluga Whale- Beaufort Sea | Visual examination of estimated number of surfaced, visible belugas in 1982, 1984-1985, and 2007-2009  | Stable or increasing | 2009 | 6 |
| Mesoplodont beaked whales- California, Oregon, Washington | Bayesian hidden process modeling using data from abundance surveys conducted from 1991-2008 | Decreasing | 2008 | 6 |
|  |  |  |  |  |
| Fin whale- California-Oregon-Washington | Hierarchical state space modeling with data from 1991-2014 | Increasing | 2014 | 7 |
| Fin whale- Northeast Pacific | Exponential growth model | Increasing | 2010 | 7 |
| Humpback whale- Gulf of Maine | Estimated population growth rate  | Increasing | 2000 | 9 |
| Harbor seal- W. North Atlantic | Annual rate of increase based on uncorrected counts from 1981-2001  | Increasing | 2012 | 9 |
| Harbor seal- Washington Inland waters | Fitted generalized logistic model with data from 1983-1996 | Stable | 1996 | 10 |
| Bottlenose dolphin- California Coastal | Population growth rate; based on abundance estimates from 1987-1989, 1996-1998, and 2004-2005 | Stable | 2005 | 11 |
| Harp seal- W. North Atlantic | Population model using pup production (1952-2008) and annual pregnancy rate data (1954-2012) | Increasing | 2012 | 11 |
| Bowhead whale- Western Arctic | abundance indices were used and an exponential growth model was fitted to the data using generalized least squares with data from 1978-2011 | Increasing | 2011 | 12 |
|  |   |   |   |   |
| Killer Whale- Eastern North Pacific, Alaska resident | Population growth rate from 1990-2005 | Increasing; Prince William Sound and Kenai Fjords, but not A.B. pod; estimates for entire stock unreliable | 2005 | 13 |
| Harbor porpoise- San Francisco, Russian River | Linear regression of natural log of abundance for 1988-1991; visual examination suggested it appeared to be increasing in 1993 but not statistically significant | Stable | 1991 | 13 |
| Harbor porpoise- Morro Bay | Linear regression of estimated abundance from 1988-2007 | Increasing | 2007 | 13 |
| Harbor seal - Oregon/Washington Coast Stock | Generalized logistic growth models with data from 1980-1999 for Washington Coastal and data from 1981-2003 for Oregon  | Increasing | 1999 (Washington Coast), 2003 (Oregon) | 15 (Washington Coast), 20 (Oregon) |
| Gray whale- Western North Pacific | Average annual population growth rate (2002-2012) estimated using a Bayesian modeling approach | Increasing | 2012 | 19 |
| Harbor porpoise- Southeast Alaska | Population growth rate 1991-2012  | Stable or decreasing | 2012 | 20 |
| Humpback whale- California, Oregon, Washington | Estimated population growth rate; rough comparison of population estimates in 1966 vs. 2004-2006 | Increasing | 2006 | 21 (for California-Oregon waters) |
| Northern Fur seal- Eastern Pacific | Trend estimates based on change in pup production from 1980-2014 | Decreasing | 2014 | 23 (St. Paul Island), 17 (St. George Island) |
| Steller sea lion- Western | Used agTrend to estimate annual population growth rate from 2000-2015 with separate estimates based on pup and non-pup counts, though pup count data available beginning in 1989 | Increasing | 2015 | 24 |
|  |   |   |   |   |
| N. Atlantic right whale- Westen stock | Visual examination of several abundance estimates and population growth rate | Decreasing | 2012 | 26 |
| Northern Elephant Seal | Average annual growth rate from 1991-2010 from linear regression  | Increasing | 2010 | 27 |
| Steller sea lion- Eastern | Used agTrend to estimate population growth rate from 1989-2015 | Increasing | 2015 | 30 |
| California sea lion | Regression of natural logarithm of pup counts from 1975-2008 | Increasing | 2008 | 32 |
| Killer Whale- Eastern North Pacific, Northern resident | Average population growth rate from 1974-2010  | Increasing | 2010 | 37 |
| Killer Whale- Southern resident | Population growth rate | Decreasing | 2015 | 42 |
| Killer Whale- AT1 Transient stock | Comparison of population counts in 1989 and 2015 | Decreasing | 2015 | Annually assessed since 1984 |
| Humpback whale- Central N. Pacific | Estimated annual rate of increase in Hawaii from 1991-1993 to 2004-2006; most complete estimate for entire North Pacific is from 1991-1993 SPLASH estimates | Increasing | 2006 | Several data sets covering different geographic regions starting in 1981 with the latest in 2006 |
| Ringed seal- Alaska | Trend analysis based on an ANOVA comparison (1985-1987 vs. 1996-1999) of observed seal densities in the central Beaufort Sea and a Poisson regression model  | Decreasing, however, apparent decline between the mid-1980s and the late-1990s may have been due to a difference in the timing of surveys rather than an actual decline in abundance | 1999 | Several data sets covering different geographic regions starting in 1985 with the latest, most comprehensive survey covering the entire Bering Sea and Sea of Okhotsk in 2012-2013 |
| Humpback whale- Western N. Pacific | Estimated annual rate of increase in Asia from 1991-1993 to 2004-2006  | Increasing | 2006 | Several data sets covering different geographic regions starting in 1991 with the latest in 2006 |
| Hawaiian monk seal | Log-linear regression of estimated abundance from 2005-2014 | Trend decreasing, though recent population growth rates are positive | 2014 | Several data sets covering different geographic regions starting in 1993 with the latest survey being conducted in 2014 |
| Harbor seal - Clarence Strait Stock | Estimates of trend were estimated as the means of the slopes of 1,000 simple linear regressions over the most recent eight annual estimates in each of the 1,000 Markov Chain Monte Carlo (MCMC) samples from the posterior distributions for abundance. | Increasing | 2011 | ~20 years, surveys have been conducted annually state-wide since 1998 |
| Harbor seal - Cook Inlet/Shelikof Strait Stock | Same as Harbor seal stock above | Increasing | 2011 | See above |
| Harbor seal - Dixon/Cape Decision Stock | Same as Harbor seal stock above | Increasing | 2011 | See above |
| Harbor seal - Lynn Canal/Stephens Passage Stock | Same as Harbor seal stock above | Decreasing | 2011 | See above |
| Harbor seal - North Kodiak Stock | Same as Harbor seal stock above | Increasing | 2011 | See above |
| Harbor seal - Sitka/Chatham Strait Stock | Same as Harbor seal stock above | Increasing | 2011 | See above |
| Harbor seal - Glacier Bay/Icy Strait Stock | Same as Harbor seal stock above | Increasing | 2011 | Surveys have been conducted annually state-wide since 1998; earliest estimate from 1973 |
| Harbor seal - Bristol Bay Stock | Same as Harbor seal stock above | Increasing | 2011 | Surveys have been conducted annually state-wide since 1998; earliest estimate from 1975 |
| Harbor seal - South Kodiak Stock | Same as Harbor seal stock above | Decreasing | 2011 | Surveys have been conducted annually state-wide since 1998; the earliest estimate from 1976 |
| Harbor seal - Prince William Sound Stock | Same as Harbor seal stock above | Decreasing | 2011 | Surveys have been conducted annually state-wide since 1998; the earliest estimate from 1984 |
| Harbor seal - Aleutian Islands Stock | Same as Harbor seal stock above | Increasing | 2011 | See above some surveys from 1977-1982 |