	Parameter	Region	Estimate	Uncertainty	Hyper-dist'n	Description	Method	Source
BASIC PARAMETERS	s1	AT	0.791	(.650, .885)	logit-normal	First-yr survival	{based on US, proportional to adult survival}	Runge et al. 2004
		US	0.810	(.727, .873)			CMR, known age	Langtimm et al. 2004
		NW	0.807	(.673, .895)			{based on US, proportional to adult survival}	Runge et al. 2004
		SW	0.765	(.616, .869)			{based on US, proportional to adult survival}	Runge et al. 2004
	s2	AT	0.893	(.712, .966)	logit-normal	Second -yr survival	{based on US, proportional to adult survival}	Runge et al. 2004
		US	0.915	(.827, .960)			CMR, known age	Langtimm et al. 2004
		NW	0.911	(.751, .972)			{based on US, proportional to adult survival}	Runge et al. 2004
		SW	0.864	(.654, .955)			{based on US, proportional to adult survival}	Runge et al. 2004
	s3 = s4	AT	0.936	(.923, .949)	logit-normal	Subadult survival	{based on US, equal to adult survival}	Runge et al. 2004
		US	0.961	(.915, .983)			CMR, known age	Langtimm et al. 2004
		NW	0.956	(.943, .969)			{based on US, equal to adult survival}	Runge et al. 2004
		SW	0.906	(.867, .944)			{based on US, equal to adult survival}	Runge et al. 2004
	sP = sA	AT	0.936	(.923, .949)	logit-normal	Adult survival	CMR, photo ID	Langtimm et al. 2004
		US	0.960	(.937, .982)			CMR, known age	Langtimm et al. 2004
		NW	0.956	(.943, .969)			CMR, photo ID	Langtimm et al. 2004
		SW	0.906	(.867, .944)			CMR, photo ID	Langtimm et al. 2004
	g4	AT	0.000	(.0, .3)	logit-normal	Breeding propensity for 4-yr olds	{by comparison to NW}	Runge et al. 2004
		US	0.208	(.071, .422)	(note: force g4<gP)		binomial proportion, known-age breeders	Runge et al. 2004
		NW	0.000	(.000, .285)			binomial proportion, known-age breeders	Runge et al. 2004
		SW	0.000	(.0, .3)			{by comparison to NW}	Runge et al. 2004
	gP	AT	0.304	(.132, .529)	logit-normal	Breeding propensity for females > 4 that have not previously bred	{by comparison to SW}	Runge et al. 2004
		US	0.610	(.505, .709)			binomial proportion, known nonbreeders	Runge et al. 2004
		NW	0.381	(.181, .616)			binomial proportion, known nonbreeders	Runge et al. 2004
		SW	0.304	(.132, .529)			binomial proportion, presumed nonbreeders	Runge et al. 2004
	gB	AT	0.381	(.292, .470)	logit-normal	Breeding propensity for established breeders	CMR, photo ID	Kendall et al. 2004
		US	0.610	(.505, .709)			binomial proportion, known breeders	Runge et al. 2004
		NW	0.429	(.217, .541)			CMR, photo ID	Kendall et al. 2004
		SW	0.595	(.421, .752)			binomial proportion, known breeders, Sarasota Bay	Runge et al. 2004

	Parameter	Region	Estimate	Uncertainty	Hyper-dist'n	Description	Method	Source
TEMPORAL VARIANCE	sigma(s1)	AT	0.104	(.000, .417)	2-phase uniform	Temporal variance of first-yr survival, on the logit-scale	{based on adult variance; CV ~2x that for adults}	Runge (2003)
		US	0.000	(.000, .263)			{based on adult variance; CV ~2x that for adults}	Runge (2003)
		NW	0.128	(.000, .518)			{based on adult variance; CV ~2x that for adults}	Runge (2003)
		SW	0.106	(.000, .851)			{based on adult variance; CV ~2x that for adults}	Runge (2003)
	sigma(s2)	AT	0.233	(.000, .935)	2-phase uniform	Temporal variance of second-yr survival, on the logit-scale	{based on adult variance; CV ~2x that for adults}	Runge (2003)
		US	0.000	(.000, .589)			{based on adult variance; CV ~2x that for adults}	Runge (2003)
		NW	0.281	(.000, 1.124)			{based on adult variance; CV ~2x that for adults}	Runge (2003)
		SW	0.184	(.000, 1.472)			{based on adult variance; CV ~2x that for adults}	Runge (2003)
	sigma(sA)	AT	0.000	(.000, .039)	~chi2	Temporal variance of adult survial, on the nominal scale	Burnham et al. (1987) method for estimating temporal variance; based on CMR	Langtimm et al. (2004)
		US	0.000	--			Burnham et al. (1987) method for estimating temporal variance; based on CMR	Langtimm et al. (2004)
		NW	0.018	(.000, .048)			Burnham et al. (1987) method for estimating temporal variance; based on CMR	Langtimm et al. (2004)
		SW	0.000	(.000, .082)			Burnham et al. (1987) method for estimating temporal variance; based on CMR	Langtimm et al. (2004)
	sigma(g4)	AT	0.000	--	~chi2	Temporal variance of breeding propensity of 4-yr-olds	Expert judgement	Runge (2003)
		US	0.000	--			Expert judgement	Runge (2003)
		NW	0.000	--			Expert judgement	Runge (2003)
		SW	0.000	--			Expert judgement	Runge (2003)
	sigma(gP, gA)	AT	0.000	(.000, .062)	~chi2	Temporal variance of breeding propensity for older animals	Burnham et al. (1987) method for estimating temporal variance; based on CMR	Runge (2003)
		US	0.000	--			Expert judgement	Runge (2003)
		NW	0.076	(.000, .213)			Burnham et al. (1987) method for estimating temporal variance; based on CMR	Runge (2003)
		SW	0.076	(.000, .213)			{by comparison to NW}	
	rho(ss)	all	1	--	None	Temporal correlation among survival rates	Assumption	Runge (2003)
	rho(bb)	all	1	--	None	Temporal correlation among breeding rates	Assumption	Runge (2003)
	rho(sb)	all	0.5	--	None	Temporal correlation between survival and breeding rates	Assumption	Runge (2003)

	Parameter	Region	Estimate	Uncertainty	Hyper-dist'n	Description	Method	Source
CATASTROPHES	C1F	all	0.01	--	None	Frequency of Type 1 catastrophes (Emergent disease)	Expert judgement based on review of marine mammal literature	FMRI (2002)
	C1S	all	0.25	--	None	Magnitude of effect of Type 1 catastrophe on survival rates	Expert judgement based on review of marine mammal literature	FMRI (2002)
	C1B	all	0.20	--	None	Magnitude of effect of Type 1 catastrophe on breeding rates	Expert judgement based on review of marine mammal literature	FMRI (2002)
	C2F	AT	0	--	None	Frequency of Type 2 catastrophes (Red tide)	Red-tide not observed	FMRI (2002)
		US	0	--			Red-tide not observed	FMRI (2002)
		NW	0.018	--			by comparison to SW (half the frequency)	FMRI (2002)
		SW	0.036	--			Binomial estimate (1 in 28 yrs)	FMRI (2002)
	C2S	AT	--	--	None	Magnitude of effect of Type 2 catastrophe on survival rates	NA	FMRI (2002)
		US	--	--			NA	FMRI (2002)
		NW	0.05	--			No justification given	FMRI (2002)
		SW	0.10	--			Rough guidance from 1996 event	FMRI (2002)
	C2B	AT	--	--	None	Magnitude of effect of Type 2 catastrophe on breeding rates	NA	FMRI (2002)
		US	--	--			NA	FMRI (2002)
		NW	0.05	--			Expert judgement	FMRI (2002)
		SW	0.05	--			Expert judgement	FMRI (2002)
COLD-STRESS MORTALITY	Mca	all	0.5	(.30, .75)	2-phase uniform	Additional mortality for adults outside refugia in cold years	Expert panel consensus	Runge (2003)
	Mcj	all	1.0	(.90, 1.0)	2-phase uniform	Additional mortality for juveniles (1,2 yr) outside refugia in cold years	Expert panel consensus	Runge (2003)
	Mna	all	0.01	--	2-phase uniform	Additional mortality for adults outside refugia in normal years	Expert panel consensus	Runge (2003)
	Mnj	all	0.05	(.025, .10)	2-phase uniform	Additional mortality for juveniles outside refugia in normal years	Expert panel consensus	Runge (2003)
DENSITY-DEPENDENCE	alpha	all	0.25	(.15, .50)	2-phase uniform	Decline in reproductive rates as density approaches carrying capacity	Reference to general literature values	FMRI (2002)
	beta	all	2	(1, 4)	2-phase uniform	Shape parameter affecting how close density needs to be to capacity before density-dependent effects are apparent	Exploration of values that produce plausible dynamics	Runge (2003)

	Parameter	Region	Estimate	Uncertainty	Hyper-dist'n	Description	Method	Source
CARRYING CAPACITY	a	AT	3	--	None	Year (beyond current) that logistic decline begins	Expert panel consensus	Runge (2003)
	b	AT	50	--	None	Year (beyond current) that logistic decline ends	Expert panel consensus	Runge (2003)
	k1	AT	2000	(1200, 5000)	2-phase triangle	Current carrying capacity	Expert panel consensus	Update of Runge (2003)
	k0	AT	750	(600, 2000)	2-phase uniform, r = 0.9 correlation with k1	Long-term carrying capacity	Expert panel consensus	Update of Runge (2003)
	c	AT	15	(10, 20)	2-phase uniform	Years until mid-point of drop	Expert panel consensus	Runge (2003)
	m	AT	1	(0, 5)	2-phase uniform	Slope of logistic drop (0 = linear from a to b; 5 = near instantaneous drop)	Expert panel consensus	Runge (2003)
	k1	US	325	(150, 500)	2-phase uniform	Current carrying capacity	Expert panel consensus	Runge (2003)
	k0	US	0.71	(0.33, 0.89)	2-phase uniform	Long-term carrying capacity (as a fraction of the current capacity)	Expert panel consensus, derive from SJWMD UWWL	Update of Runge (2003)
	thalf	US	20	(15, 30)	2-phase uniform	Half-life of exponential decline	Expert panel consensus	Runge (2003)
	k1	NW	1200	(750, 3000)	2-phase uniform	Current carrying capacity	Expert panel consensus	Runge (2003)
	k0	NW	0.7	(0.4, 0.85)	2-phase uniform	Long-term carrying capacity (as a fraction of the current capacity)	Expert panel consensus	Update of Runge (2003)
	thalf	NW	20	(10, 40)	2-phase uniform	Half-life of exponential decline	Expert panel consensus	Runge (2003)
	a	SW	3	--	None	Year (beyond current) that exponential decline begins	Expert panel consensus	Runge (2003)
	b	SW	40	--	None	Year (beyond current) that exponential decline ends	Expert panel consensus	Update of Runge (2003)
	kX	SW	600	(200, 800)	2-phase uniform	Other anthropogenic capacity that will be lost over time	Expert panel consensus	Update of Runge (2003)
	k0	SW	850	(500, 1100)	2-phase uniform	Long-term carrying capacity	Expert panel consensus	Runge (2003)
	kM	SW	450	(400, 500)	2-phase uniform	Ft. Myers Plant carrying capacity	Expert panel consensus	Runge (2003)
	kT	SW	540	(480, 600)	2-phase uniform	TECO Big Bend carrying capacity	Expert panel consensus	Update of Runge (2003)
	cM	SW	25	(20, 30)	2-phase uniform	Years until loss of Ft. Myers	Expert panel consensus	Runge (2003)
	cT	SW	30	(10, 40)	2-phase uniform	Years until loss of TECO	Expert panel consensus	Update of Runge (2003)
	m	SW	0.05	(0, 0.1)	2-phase uniform	Exponential rate of loss of other anthropogenic capacity	Expert panel consensus	Runge (2003)
	{k1}	SW	2440	(1580, 3000)	{derived}	current carrying capacity	Calculation from other components	Update of Runge (2003)
INITIAL POPULATION SIZE	N	AT	1447	--	None	2001 population size, when needed	Synoptic survey, Jan 5-6, 2001	FWRI, pers. Comm. 10/21/05, Fonnesbeck & Edwards
		US	141	--	None		Seasonal total of unique individuals seen	Wayne Hartley, pers. comm.
		NW	377	--	None		Synoptic survey, Jan 5-6, 2001	FMRI (2001)
		SW	1364	--	None		Synoptic survey, Jan 5-6, 2001	FWRI, pers. Comm. 10/21/05, Fonnesbeck & Edwards