Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
X	X	X	**AltitudeM**	number	meters			The altitude of the observation platform (plane, vessel bridge, etc) above sea level	
X	X	X	**Areakm2**	number	km2	Y		The area in km2 over which the survey took place	
	X		**AspectSlope**	number	degrees	Y		Bathymetric slope aspect at location of animal	
		X	**AnimalSpeed**	number	knots	Y		A calculation based on multiple resights, calculating the distance travelled by the time elapsed between sighting events	
X	X	X	**Bearing**	Alpha-numeric	degrees; 1'oclock to 12 o'clock			Relative bearing from the platform to the sighting, where the front of the platform is zero degrees. Formats include clock face, degrees, etc.	
X	X	X	**BearingAbs**	number	degrees	Y		True (not magnetic) bearing to sighting. Calculated from relative bearing and platform bearing.	
X	X	X	**Behavior**	text				Initial behavioral state of the animal or group when first observed. Examples: Travel, Mill, Rest	
X	X	X	**BehaviorEvent**	text				Discrete behavioral event(s) observed during the sighting. Examples: Breach, Tail Slap, Blow	
X	X	X	**BeaufortScale**	number	integer			Beaufort sea state (0-12)	
X	X		**BeaufortScaleLeft**	number	integer			Beaufort sea state on the left (port) side of the platform (0-12)	
X	X		**BeaufortScaleRight**	number	integer			Beaufort sea state on the right (starboard) side of the platform (0-12)	

Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
X			**Biopsy**	Y/N				Was a biopsy attempted for the sighting?	
X	X	X	**Birds**	Y/N				Are birds present?	
X	X	X	**CalvesPresent**	Y/N				Are calves present? Use notes field to indicate number of calves present.	
X	X	X	**CountCalves**	number	count			The number of calves in the sighting	
X	X	X	**CountFemales**	number	count			The number of positively identified females in the sighting	
X	X	X	**CountJuveniles**	number	count			The number of positively identified juveniles in the sightings	
X	X	X	**CountMales**	number	count			The number of positively identified males in the sighting	
X	X	X	**CountNewborns**	number	count			The number of positively identified newborns/pups in the sighting	
X	X	X	**CountTotBest**	number	count			The best estimate of the number of animals in the sighting	
X	X	X	**CountTotMax**	number	count			The highest estimate of the number of animals in the sighting	
X	X	X	**CountTotMin**	number	count			The lowest estimate of the number of animals in the sighting	
X	X	X	**CountVesCargo**	number	count			The number of cargo ships present in the area	
X	X	X	**CountVesFerries**	number	count			The number of ferries present in the area	
X	X	X	**CountVesFishing**	number	count			The number of fishing boats present in the area	

Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
X	X	X	**CountVesMilitary**	number	count			The number of military vessels present in the area	
X	X	X	**CountVesMotorYachts**	number	count			The number of motor yachts present in the area	
X	X	X	**CountVesSailing**	number	count			The number of sailboats present in the area	
X	X	X	**CountVesOther**	number	count			The number of vessels in the area that do not fall into the above categories	
X	X	X	**Cue**	text				The sighting cue that initially drew the observers attention	
X	X	X	**Depth**	number	meters	Y		The depth of the water at sighting location, based on known bathymetry	
X			**DepthSounding**	number	meters			Depth as determined in situ via sounding	
X	X	X	**DispMax**	number	body lengths			The maximum distance between nearest neighbors within a group (in body lengths)	
X	X	X	**DispMin**	number	body lengths			The minimum distance between nearest neighbors within a group (in body lengths)	
X	X	X	**DistSight**	number	meters			The radial distance to the animal	
X	X	X	**DistSightPerp**	number	meters	Y		The perpendicular distance to the animal from the trackline	
X	X	X	**EffortStatus**	text				The effort status of the platform. Options: On-effort (systematic), on-effort (focal follow), on-effort (circling), on-effort (random), off-effort (connector lines), off-effort (transiting), off-effort (other)	Need group feedback to make sure list in def'n is complete

Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
	X		**FlightOfDay**	number	integer			The sequential daily flight identifier (e.g., 1, 2, 3, etc.)	
X	X		**GlareLeft**	number	percent			The amount of glare (0-100%) on the left (port) side of the platform. Refers to glare from 0 to 90 degrees, or viewshed for which observer is responsible.	
X	X		**GlareRight**	number	percent			The amount of glare (0-100%) on the right (starboard) side of the platform. Refers to glare from 270-360 degrees, or viewshed for which observer is responsible.	
X	X	X	**GroupID**	number	integer			Identifier for a particular group within a sighting	
X	X	X	**HeadingAnimal**	number	degrees			Heading of the animal at the time of the initial sighting (in degrees magnetic)	
X	X		**HeadingPlatMagnetic**	number	degrees			Heading of the observation platform relative to magnetic North	
X	X		**HeadingPlatTrue**	number	degrees			Heading of the observation platform relative to true North	
X			**HorizSun**	number	1 o'clock to 12 o'clock			Horizontal glare calculation on NOAA large vessel surveys	
X	X	X	**LatAnimal**	number	decimal degrees	Y		The calculated latitude of the animal at the initial time of the sighting	
X	X	X	**LatPlatform**	number	decimal degrees			The latitude of the platform in decimal degrees	
X	X	X	**LatVessel**	number	decimal degrees	Y		The latitude of the vessel(s) (NOT the survey platform) sighted during a survey	
X	X		**LegID**	text				Letter or number for survey leg/transect	

Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
X	X		**LegNotes**	alpha-numeric				Notes as entered for that particular leg of the survey	
X	X		**LegNumber**	number	integer			A unique identifier for the leg associated with the survey	
		X	**Linearity**	number	integer	Y		A metric describing animal travel, calculated by dividing the distance between the first and last recorded sighting waypoints by the sum total of all distances between waypoints. Values range between 0 and 1, with a number closer to 1 representing a straight line and close to 0 representing no constant direction of the animal."	
X	X	X	**LongAnimal**	number	decimal degrees	Y		The calculated longitude of the animal at the initial time of the sighting	
X	X	X	**LongPlatform**	number	decimal degrees			The Longitude of the platform in decimal degrees	
X	X	X	**LongVessel**	number	decimal degrees	Y		The longitude of the vessel(s) (NOT the survey platform) sighted during a survey	
X			**Mitigation**	Y/N				Was mitigation implemented?	
X			**MitigationType**	text				Type of mitigation implemented	
X	X		**NavyDirectedLeg**	Y/N				Marker identifying whether the platform was directed by the Navy to go to a certain location, fly at a certain altitude, or leave the immediate area	
X	X	X	**Observer**	text				The name of the observer who first sighted the animal	

Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
	X		**ObserverAft**	text				Name of the observer in the aft position	Need to make sure all observer positions are accounted for
X	X		**ObserverCenter**	text				Name of the observer in the center position or belly window of the aircraft	Need to make sure all observer positions are accounted for
X	X		**ObserverForward**	text				Name of the observer in the forward position	Need to make sure all observer positions are accounted for
X	X		**ObserverLeft**	text				Name of the observer on the left (port) side of the platform	Need to make sure all observer positions are accounted for
X	X		**ObserverRight**	text				Name of the observer on the right (starboard) side of the platform	Need to make sure all observer positions are accounted for
	X		**ObserverRearLeft**	text				Name of the observer in the rear left seat of the aircraft	Need to make sure all observer positions are accounted for
	X		**ObserverRearRight**	text				Name of the observer in the rear right seat of the aircraft	Need to make sure all observer positions are accounted for
X	X	X	**Ocean**	text				The ocean where the survey took place (Pacific, Atlantic, Indian, etc.)	
X		X	**OpticsType**	text				Indicates the type of optic used to fix a particular sighting (e.g., bigeyes, handheld binos, theodolite, naked eye). Useful when a platform uses several methods to sight animals	
X			**Ordnance**	Y/N				Was live ordnance in use at the time of the sighting?	

Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
X	X	X	**PercentCloudCover**	number	percent			Cloud cover as represented by a percentage	
X	X		**PercentCloudCoverLeft**	number	percent			Cloud cover on the left (port) side of the platform as represented by a percentage	
X	X		**PercentCloudCoverRight**	number	percent			Cloud cover on the right (starboard) side of the platform as represented by a percentage	
X	X	X	**PhotoFrames**	number range	integer			The photo frames used for the sighting; or total frames taken	
X	X	X	**Photogapher**	text				Name of the photographer	
X	X	X	**Photos**	Y/N				Were photos taken as part of the sighting?	
	X		**PIC**	text				Pilot in command	
X	X		**PlatformDed**	Y/N				Indicates if the survey was a dedicated marine mammal survey, or if data was gathered opportunistically from a platform on a different mission	
X	X		**PlatformModel**	text				Model of a/c or vessel (e.g. Partenavia Observer, RHIB, etc.)	
X	X		**PlatformSpeed**	number	knots			Speed of the platform at the time of the sighting	
X	X	X	**PlatformType**	text				Type of survey platform (e.g., "aerial", "vessel")	
X	X	X	**RangeComplex**	text				The Range complex (or complexes) associated with the survey (JAX, SOCAL, Cherry Point, etc.)	
X	X		**ReactionInit**	text				The type of reaction at the initial time of the sighting relative to the observation platform	

Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
X	X		**ReactionInitCount**	number	count			The general count of animals that initially reacted to the observation platform. May be a number or text (i.e., "whole group")	
X	X		**ReactionLater**	text				Identifies whether a reaction occurred as a response to the survey platform after the initial sighting of the group/individual	
X	X		**ReactionLaterCount**	number	count			The number of animals that reacted to the observation platform after the sighting occurred	
X	X	X	**Recorder**	text				Name of the person recording data	
X	X		**RecorderFocal**	text				Name of the person recording focal follow data	
		X	**ReorientationRate**	number	course changes/minute	Y		A magnitude of course changes along the trackline, calculated by summing all course changes (degrees) along the trackline divided by duration (minutes) of the trackline (Smultea and Wursig, 1995).	
X	X	X	**Resolution**	number	decimal degrees	Y		Bathymetric resolution in arc degrees at sighting position	
	X		**ShoreDist**	number	meters	Y		Distance to nearest shore	
	X		**SIC**	text				Second (pilot) in command	
X	X	X	**DateTime**	Date + Time				Date and Time together in one cell value (LOCAL TIME)	
X	X	X	**DateTimeUTC**	Date + Time				Date and Time together in one cell value (UTC)	
X			**SightingDetectionSensor**	text				Sighting detection method (e.g. MMO, lookout, bridge, acoustic)	

Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
X			**SightingEndLOE**	text				Was Sighting 1. lost, or 2. Passed Beam (Lookout Effectiveness surveys only)	
X	X	X	**SightingMulti**	Y/N				Denotes if there are any additional species within a particular sighting (mixed group)	
X	X	X	**SightingNotes**	text				Notes field to capture information not covered by existing attributes or other information of interest	
X	X	X	**SightingNumber**	number	integer			The sighting number for the particular survey day	
X			**SightingRelMovement**	text				Relative movement of vessel and animal's bearing (e.g. closing, opening, parallel,)	
X	X	X	**SightingTimeEnd**	Date + Time				The time at which the sighting was discontinued	
X			**SightingTrialLOE**	Y/N				Whether sighting was successful Lookout Effectiveness Trial	
	X		**Slope**	number	degrees			Bathymetric slope at sighting location (angle)	
X	X	X	**Sonar**	Y/N				Was sonar active at the time of the sighting?	
X	X	X	**SpcsCode**	text				Species code used in authentic data (e.g., TTUR=*Tursiops truncatus*)	
X	X	X	**SpcsConfidence**	high/medium/low				Confidence level of the observer that he or she identified species correctly	
X	X	X	**SpcsHauledOut**	Y/N				Indicates if a pinniped is hauled out	
X	X	X	**SpcsITIS**	number	integer	?		ITIS numeric species code	

Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
X	X	X	**SpcsNmCom**	text				Common name of the sighted species. Output should be singular (e.g. bottlenose dolphin)	
X	X	X	**SpcsNmSci**	text				Scientific name of the sighted species	
X	X	X	**SurveyID**	text		Y		A survey identifier consisting of data collector, range complex, platform, year, month, and day. **(Data Collector/Source)_(Range Complex)_(Platform Type or Details)_(Year)(Month)(Day) (eg. SES_SOCAL_Aerial_20120417)**	This is now being used as SurveyLink has been used in the past. The definition has changed.
X	X		**SurveyPoint**	number	integer	Y		A waypoint taken along a trackline OR a start/end point for a trackline	
X	X	X	**Swell**	number	ft			Swell height	
X	X	X	**SwellDirection**	text?	0º to 360º, or N/S/E/W			Direction of swell	
X			**Tagging**	Y/N				Was a tag deployment attempted for the sighting?	
		X	**TheoConvHorz**	number	degrees			Horizontal angle value from theodolite converted to a compass bearing	
		X	**TheoConvVert**	number	degrees			Vertical angle value from theodolite converted to a declination angle	
		X	**TheoRawHorz**	number	degrees			Raw horizontal angular value from theodolite	
		X	**TheoRawVert**	number	degrees			Raw vertical angular value from theodolite	
X	X		**TrkDist**	number	meters	Y		Distance between two trackline points, in meters	
X	X	X	**VertAngleOrReticle**	number	degrees			Reticle or declination angle	

Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
X			**VertSun**	number	0,1,2 or 3			Vertical glare calculation on NOAA large vessel surveys	
X	X	X	**VesselSize**	text				0-99 ft = small, 100-300 ft = medium, >301 ft = large	
X	X	X	**VesselType**	text				Type of vessel observed (e.g. frigate, sailboat, submarine)	
X	X	X	**Video**	Y/N				Was video taken during the sighting?	
X	X	X	**Videographer**	text				Name of the videographer	
X	X	X	**Visibility**	number	km			The estimated distance at which an animal could potentially be sighted	Revised definition per MS
X	X		**VisibilityLeft**	number	km			Sighting visibility in KM on the left (port) side of the platform	Suggest survey-specific viewshed be indicated in notes column rather than in attribute field
X	X		**VisibilityRight**	number	km			Sighting visibility in KM on the right (starboard) side of the platform	Suggest survey-specific viewshed be indicated in notes column rather than in attribute field
X	X	X	**WaveHeight**	number	ft			Wave height	
X	X	X	**WindDirection**	text?	0º to 360º, or N/S/E/W			Wind direction relative to true north	
X	X	X	**WindSpeed**	number	knots			Wind speed	
X	X	x	**Aspect**				Y	Body position relative to the platform (OBS)	
X	X	X	**BeaufortClass**	text			Y	The beaufort sea state represented as a class (e.g., "calm", "rough", etc.) at each trackline point (OBS)	
X	X	X	**BehEventNumber**	number	integer		Y	No Description (OBS)	

Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
X	X	X	**BehStateInit**	text				The behavior state that was used in subsequent analyses. May include refinements to the field observations (OBS)	
X	X	X	**BehStateInitFld**	text				The behavior state as it was identified in the field (OBS)	
X	X	X	**BehEventInit**	alpha-numeric				The behavior event that was used in subsequent analyses. May include refinements to the field observations (OBS)	
X	X	X	**BehEventInitFld**	text				The behavior event as it was identified in the field (OBS)	
X	X	X	**Binoculars**	Y/N			Y	Were binoculars used to sight the animal? OBS	
			CalvesPercent	Y/N			Y	Obsolete - Typographical error in data standard version 1	
	X		**Circling**	Y/N				Was the sighting circled (e.g. for photo ID or detailed data collection)? (OBS)	Now covered by EffortStatus
X	X	X	**Contract**	alpha-numeric			Y	The contract under which the survey was performed (OBS)	
X	X	X	**DayPeriod**	text			Y	The time of day represented as a general timeframe (e.g., "early morning", "late afternoon", etc.) for each trackline point (OBS)	
	X		**DeclAngle**	0º to 90º			Y	The angle from the horizon at which the animal was sighted (aerial surveys only) (OBS)	
X	X	X	**DispCohesion**	number	meters		Y	Generally how close are the individuals to one another? (OBS)	

Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
X	X	X	**DistLateral**	meters			Y	The estimated distance (for vessels) to the animal. The calculated distance (for aerial) the animal based on the measured declination angle. Does not acount for curvature of the earth. (OBS)	
X	X	X	**EffortObs**	On/Off			Y	Whether the observers were actively looking for animals	
X	X		**EffortSystematic**	On/Off			Y	Whether observer was observing following strict line-transect protocol	
X	X		**EffortTransect**	Y/N or On/Off Need to check			Y	Indicates anytime observers were observing following strict line-transect protocol (OBS)	
	X		**FlightStatusGPS**	text			Y	The flight status (e.g., "InFlight", "WheelsUp", "WheelsDown", etc.) for each trackline point (OBS)	
X	X	X	**Focal**	Y/N				Was sighting used for a focal follow? (OBS)	Now covered by EffortStatus
X	X	X	**Glare**	text			Y	The overall glare represented textually (e.g., "very little", "much", etc.) at each trackline point (OBS)	
X	X	X	**GlareMaxAngle**	0º to 360º			Y	The angle of the maximum glare relative to magnetic north (OBS)	
X	X	X	**GlareMinAngle**	0º to 360º			Y	The angle of the minimum glare relative to magnetic north (OBS)	
X	X	X	**GlareScale**	number	integer		Y	The overall glare (from 0 to 90 degrees R observer, and 270 to 360 degrees for L observer) on a scale of 0-5; 0 = no glare, 1 = diffused, 2 = 1-10% glare, 3 = 10-50%, 4 = 51-75%, 5 = 76-100% (OBS)	Made OBS per JB and MS

Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
X	X		**GPSSource**	alpha-numeric			Y	The type of GPS unit used to gather trackline points (OBS)	
X	X	X	**LatPlatformEnd**	decimal degrees			Y	The latitude of the observation platform at the end time of the sighting (OBS)	
X	X		**LegTime**	hh:mm:ss			Y	The time it took to travel from one point to another on that particular leg (OBS)	
X	X		**LegType**	text			Y	The effort status of the platform for that survey leg (e.g., "circling", "transiting", "systematic", etc.)	
X	X		**LegTypeField**	text			Y	The status of the platform for that leg (e.g., "circling", "transiting", "systematic", etc.) (OBS)	
X	X		**LegTypeGIS**	text			Y	The status of the platform for that leg (e.g., "circling", "transiting", "systematic", etc.) as corrected during analysis (OBS)	
X	X	X	**LongPlatformEnd**	decimal degrees			Y	The longitude of the observation platform at the end time of the sighting (OBS)	
X	X	X	**pcTime**	hh:mm:ss			Y	The time stamp from the data recording computer. May be different than the "TimeSighting" due to timezone differences (OBS)	
X			**Reticle**	number			Y	Reticle reading for calculation of sighting distance (vessel only) OBS	
X	X	X	**Sightability**	text			Y	The ability to see animals at the time of the sighting (poor, moderate, good, excellent) (OBS)	
X	X	X	**SightingDate**	Date			Y	The date of the sighting (OBS)	

Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
X			SightingMethod	text				Radial distance method with which sighting was recorded (reticle, inclinometer, theodolite, etc.). Blank = "naked eye" (OBS)	Redundant with OpticsType
X	X	X	SightingMultiSpcs	text			Y	List the species that are within a mixed group. (OBS)	
X	X	X	SightingMultiSpcsCount	number			Y	Number of the species (OBS)	
X	X	X	SightingMultiSpcsPrcnt	percent			Y	Percentage of a given species present in a mixed spp group (OBS)	
X	X	X	SightingTime	hh:mm:ss			Y	The time of the sighting, adjusted for local time (OBS)	
X	X	X	SpcsBW	Y/blank			Y	Indicates whether the sighting should be grouped with other beaked whales (OBS)	
X	X	X	SpcsCertaintyInit	percent			Y	The initial certainty of the species identified in the field expressed in percentages (OBS?)	Covered by SpcsConfidence
X	X	X	SpcsCertaintyFinal	number	percent		Y	The final certainty of the species identity expressed in percentages	Covered by SpcsConfidence
X	X	X	SpcsNmSciInit	text			Y	The species in the sighting as it appears in the original data (OBS)	
X	X	X	SpcsPossResight	Y/blank			Y	Indicates possible resightings. If "Y", then the record should not be included in total numbers, or on maps OBS--PUT IN NOTES FIELD	
X	X		Speed	number	knots	?		Platform speed (OBS)	Redundant with PlatformSpeed
X	X	X	Subgroups	Y/N			Y	Were subgroups present during the sightings? (OBS)	
X	X	X	SurveyArea	text			Y	The general location of the survey (i.e., SouthOfXX, NorthOfYY)	Made obsolete per JB

Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
X	X	X	**SurveyCat**	text			Y	The survey category for the survey platform (i.e., LOE [LookOutEffectiveness], USWEX, UNDET, etc) if applicable (OBS)	
X	X	X	**SurveyDates**	Date Range			Y	The date range of the Survey (e.g., "(2010) Sep 23-28"). The parentheses around the data help with sorting (OBS)	
X	X	X	**SurveyIDReport**	number			Y	The individual ID for the associated survey record from the MSAccess metadata file. (OBS)	
X	X	X	**SurveyLink**	alpha-numeric			Y	A survey identifier consisting of the SurveyID and the date (in YYYYMMMDD format) of the sighting **(Data Owner/Source)_(Range Complex)_(Platform Type)_(Year)(Month or Range of Months)_(Day of Month) (eg. HDR_SOCAL_Aerial_20120414**). Needs to be the same as the SurveyILink for Tracklines. (OBS)	
X	X	X	**SurveyNumber**	alpha-numeric			Y	The survey number for the individual survey, if applicable. (OBS)	
X	X	X	**SurveySegmentID**	alpha-numeric			Y	Unique ID for the survey segment associated with the sighting (OBS)	
X	X	X	**SurveyType**	text			Y	What type of survey was being followed at the time of the sighting (e.g. line transect, focal follow, etc)	Now covered by EffortStatus

Vessel	Aerial	Shore-Based	Standardized Headers	Format	Units	Processed	Obsolete	Definition	Notes
X	X	X	**SurveyTypeID**	alpha-numeric			Y	ID associated with the type of survey at the time of the sighting. For instance, if a Focal survey was initiated, there might be a specific ID no. associated with that survey. (OBS)	
X	X	X	**SwellWaveHeight**	number	ft		Y	Should be just WaveHeight, made OBS	
X	X		**TracklineDate**	Date			Y	The date associated with each trackline point (OBS)	
X	X		**TracklineDateTime**	Date + Time			Y	Date and time together in one cell value (LOCAL TIME) (OBS)	
X	X		**TracklineDateTimeUTC**	Date + Time			Y	Date and time together in one cell value (UTC) (OBS)	
X	X		**TracklineTime**	hh:mm:ss			Y	The time associated with each trackline point, adjusted for local time (OBS)	
X	X		**WaterSeason**	text			Y	The general water temperature (e.g., "warm", "cold") during the survey (OBS)	
X	X	X	**Weather**	text			Y	The overall weather at each trackline point (OBS)	