

Vessel	Aerial	Shore-Based	Required*	Standardized Headers	Format	Units	Definition
X	X	X	Y	AltitudeM	number	meters	The altitude, in meters, of the observation platform (plane, vessel bridge, etc) above sea level
X	X	X		AnimalSpeed	number	knots	A calculation based on multiple resights, calculating the distance travelled by the time elapsed between sighting events
X	X	X	Y	Bearing	Alpha-numeric	degrees	Relative bearing from the platform to the sighting, where the front of the platform is zero degrees. Format standardized to degrees in July 2017.
X	X	X	Y	BeaufortScale	number	integer	Beaufort sea state (0-12)
	X			BeaufortScaleLeft	number	integer	Beaufort sea state on the left (port) side of the platform (0-12)
	X			BeaufortScaleRight	number	integer	Beaufort sea state on the right (starboard) side of the platform (0-12)
X	X	X		Behavior	text	N/A	Initial behavioral state of the animal or group when first observed. Examples: Travel, Mill, Rest
X	X	X		BehaviorEvent	text	N/A	Discrete behavioral event(s) observed during the sighting. Examples: Breach, Tail Slap, Blow
X				Biopsy	Y/N	N/A	Was a biopsy attempted for the sighting?
X				BiopsyAnimalFrames	Alpha-numeric		Photo frames of biopsies individual
X				BiopsyHit	Y/N		Did dart hit animal?
X				BiopsyNotes	text		Notes field to capture relevant biopsy information not covered by existing attributes or other information of interest
X				BiopsyNumOthersPresent	number		Number of animals surfacing with targeted biopsy individual
X				BiopsyNumOthersReacting	number		Number of individuals present in area of biopsied individual that exhibit a reaction to biopsy attempt
X				BiopsyOtherReactionType	text		Reaction level of other individuals near sampled individual during tag attempt (No reaction, Low-level reaction, Moderate reaction, Strong reaction)
X				BiopsyOthersReactionEvent	text		Reaction event of other individuals near sampled individual during tag attempt (shallow dive, flinch, tail slap, upwards tail sweep, banana arch, fast dive, rapid travel/acceleration, breach, etc.)
X				BiopsyReactionEvent	text	integer	Reaction event of sampled individual (shallow dive, flinch, tail slap, upwards tail sweep, banana arch, fast dive, rapid travel/acceleration, breach, etc.)
X				BiopsyReactionType	text		Reaction level of sampled individual (No reaction, Low-level reaction, Moderate reaction, Strong reaction)
X				BiopsySample	text		Did dart collect full, partial, or no sample?
X				BiopsySampleLocation	text		Location on animal of collected sample (below dorsal right, below dorsal left, left peduncle, right peduncle, fluke, etc.)
X				BiopsySampleName	Alpha-numeric		Name of stored sample
X				BiopsyShooter	text		Name of shooter
X	X	X		Birds	Y/N	N/A	Are birds present?
X	X	X		CalvesPresent	Y/N	N/A	Are calves present?
X	X	X		Channelln500	Y/N		Was sighted animal within 500 m of a Shipping Channel?
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	Y	CountTotBest	number	count	The best estimate of the number of animals in the sighting
X	X	X	Y	CountTotMax	number	count	The highest estimate of the number of animals in the sighting
X	X	X	Y	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
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		CountVesOther	number	count	The number of vessels in the area that do not fall into the above categories
X	X	X		CountVesSailing	number	count	The number of sailboats present in the area
X	X	X		Cue	text	N/A	The sighting cue that initially drew the observers attention
X	X	X	Y	DateTime	Date + Time	N/A	Date and Time together in one cell value (LOCAL TIME)
X	X	X		DateTimeUTC	Date + Time	N/A	Date and Time together in one cell value (UTC)
X	X	X		Depth	number	meters	The depth of the water at sighting location, based on known bathymetry
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	Y	DistSight	number	meters	The radial distance to the sighting
X	X	X	Y	DistSightType	text		Type of distance estimation (estimated, range-finder, reticle calculation, declination calculation)
X	X	X	Y	EffortStatus	text	N/A	Indication of whether the survey team was actively searching with all designated observers focused on searching for marine mammal sighting cues. Options: On, Off, Compormised
X	X	X		EffortSystematic	text		Whether observer was observing following strict line-transect protocol (search effort was on one on the pre-determined transect lines [= systematic]). Options: on or off

	X			FlightOfDay	number	integer	The sequential daily flight identifier (e.g., 1, 2, 3, etc.)
	X			GlareLeft	number	percent	The amount of glare (0-100%) on the left (port) side of the platform
	X			GlareRight	number	percent	The amount of glare (0-100%) on the right (starboard) side of the platform
X	X	X		GroupID	number	integer	Identifier for a particular group within a sighting
X	X	X		HeadingAnimal	number	degrees	Heading of the animal (sighting) at the time of the initial sighting (in degrees magnetic)
X	X		Y (OR MAG)	HeadingPlatMagnetic	number	degrees	Heading of the observation platform relative to magnetic North
X	X		Y (OR TRUE)	HeadingPlatTrue	number	degrees	Heading of the observation platform relative to true North
X	X	X		LatAnimal	number	decimal degrees	The calculated latitude of the animal at the initial time of the sighting
X	X	X	Y	LatPlatform	number	decimal degrees	The latitude of the platform in decimal degrees
X	X			LegID	text	N/A	Letter or number for survey leg/transect
X	X			LegNotes	alpha-numeric	N/A	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	X			LegType	text		The effort status of the platform for that survey leg (e.g., "circling", "transiting", "systematic", etc.)
X	X	X		LongAnimal	number	decimal degrees	The calculated longitude of the animal (sighting) at the initial time of the sighting
X	X	X	Y	LongPlatform	number	decimal degrees	The Longitude of the platform in decimal degrees
X				Mitigation	Y/N	N/A	Was mitigation implemented?
X				MitigationType	text	N/A	Type of mitigation implemented
X	X			NavyDirectedLeg	Y/N	N/A	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	Y	Observer	text	N/A	The name of the observer who first sighted the animal
	X			ObserverAft	text	N/A	Name of the observer in the aft position
X	X			ObserverCenter	text	N/A	Name of the observer in the center position or belly window of the aircraft
	X			ObserverForward	text	N/A	Name of the observer in the forward position
X	X			ObserverLeft	text	N/A	Name of the observer on the left (port) side of the platform
	X			ObserverRearLeft	text	N/A	Name of the observer in the rear left seat of the aircraft
	X			ObserverRearRight	text	N/A	Name of the observer in the rear right seat of the aircraft
X	X			ObserverRight	text	N/A	Name of the observer on the right (starboard) side of the platform
X	X	X		Ocean	text	N/A	The ocean where the survey took place (Pacific, Atlantic, Indian, etc.)
X	X	X	Y	OpticsType	text	N/A	Indicates the type of optic used to fix a particular sighting (e.g., bigeyes, handheld binos, theodolite, naked eye).
X	X			Ordnance	Y/N	N/A	Was live ordnance in use at the time of the sighting?
X	X	X		PercentCloudCover	number	percent	Cloud cover as represented by a percentage
	X			PercentCloudCoverLeft	number	percent	Cloud cover on the left (port) side of the platform as represented by a percentage
	X			PercentCloudCoverRight	number	percent	Cloud cover on the right (starboard) side of the platform as represented by a percentage
X	X	X		PhotoCamera	Alpha-numeric		Camera identifier (model or number)
X	X	X		PhotoFrames	number range	integer	The photo frames used for the sighting; or total frames taken
X	X	X		Photographer	text	N/A	Name of the photographer
X	X	X		Photos	Y/N	N/A	Were photos taken as part of the sighting?
	X			PIC	text	N/A	Pilot in command
X	X	X	Y	PlatformDed	Y/N	N/A	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	N/A	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	Y	PlatformType	text	N/A	Type of survey platform (e.g., "aerial", "vessel")
X	X	X		RangeComplex	text	N/A	The Range complex (or complexes) associated with the survey (JAX, SOCAL, Cherry Point, etc.)
X	X	X		ReactionInit	text	N/A	The type of reaction at the initial time of the sighting relative to the observation platform
X	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	X		ReactionLater	text	N/A	Identifies whether a reaction occurred as a response to the survey platform after the initial sighting of the group/individual
X	X	X		ReactionLaterCount	number	count	The number of animals that reacted to the observation platform after the sighting occurred
X	X	X		Recorder	text	N/A	Name of the person recording data
X	X	X		RecorderFocal	text	N/A	Name of the person recording focal follow data
X	X	X		ShipIn500Cargo	Y/N	N/A	Was sighted animal within 500 m of a Cargo Ship?
X	X	X		ShipIn500FishRec	Y/N	N/A	Was sighted animal within 500 m of a recreational boat?
X	X	X		ShipIn500Navy	Y/N	N/A	Was sighted animal within 500 m of a Navy Ship?
	X			SIC	text	N/A	Second (pilot) in command
X				SightingDetectionSensor	text	N/A	Sighting detection method (e.g. MMO, lookout, bridge, acoustic)
X				SightingEndLOE	text	N/A	Was Sighting 1. lost, or 2. Passed Beam (Lookout Effectiveness surveys only)
X	X	X		SightingMulti	Y/N	N/A	Denotes if there are any additional species within a particular sighting (mixed group)

X	X	X		SightingNotes	text	N/A	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	N/A	Relative movement of vessel and animal's bearing (e.g. closing, opening, parallel)
X	X	X		SightingTimeEnd	Date + Time	N/A	The time at which the sighting was discontinued
X				SightingTrialLOE	Y/N	N/A	Whether sighting was successful Lookout Effectiveness Trial
X	X	X		Sonar	Y/N	N/A	Was sonar active at the time of the sighting?
X	X	X		SpcsConfidence	text	high/medium/low	Confidence level of the observer that he or she identified species correctly
X	X	X		SpcsHauledOut	Y/N	N/A	Indicates if a pinniped is hauled out
X	X	X	Y	SpcsNmCom	text	N/A	Common name of the sighted species. Output should be singular (e.g. bottlenose dolphin)
X	X	X	Y	SpcsNmSci	text	N/A	Scientific name of the sighted species
X				SST	number	degrees F	Sea Surface Temperature
X	X	X		SurveyID	text	N/A	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)
X	X	X	Y	SurveyMode	text		Indication of survey mode for a particular survey leg (e.g. line-transect, transit, circle, shoreline scan, ship-follow, over-flight) Options: Systematic, Connector line, Transit, Focal follow, Verify/Circle, Ship follow, Shoreline search, Other
X	X	X	Y	SurveyType	text		Indication of the overall approach used to satisfy the main objective of the survey (e.g. density estimation or other); Options: Line transect, Strip Transect, Point transect, Non-systematic search, Platform of opportunity, Shore station, Other
X	X	X		Swell	number	ft	Swell height
X				Tagging	Y/N	N/A	Was a tag deployment attempted for the sighting?
X				TaggingHit	Y/N		Did tag hit animal?
X				TaggingNotes	text		Notes field to capture relevant tagging information not covered by existing attributes or other information of interest
X				TaggingNumOthersPresent	number	integer	Number of other individuals near sampled individual during tag attempt
X				TaggingOtherReactionType	text		Reaction level of other individuals near sampled individual during tag attempt (No reaction, Low-level reaction, Moderate reaction, Strong reaction)
X				TaggingOthersReactionEvent	text		Reaction event of other individuals near sampled individual during tag attempt (shallow dive, flinch, tail slap, upwards tail sweep, banana arch, fast dive, rapid travel/acceleration, breach, etc.)
X				TaggingReactionEvent	text		Reaction event of tagged individual (shallow dive, flinch, tail slap, upwards tail sweep, banana arch, fast dive, rapid travel/acceleration, breach, etc.)
X				TaggingReactionType	text		Reaction level of tagged individual (No reaction, Low-level reaction, Moderate reaction, Strong reaction)
X				TaggingShooter	text		Name of tag shooter
X				TaggingTaggedAnimalFrames	Alpha-numeric		Photo frames of tagged individual
X				TaggingTagNumber	Alpha-numeric		Assigned tag number
X				TaggingTagType	Alpha-numeric		Type of tag used
		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	X		VertAngleOrReticle	number	degrees	Reticle or declination angle
X	X	X		VesselSize	text	N/A	0-99 ft = small, 100-300 ft = medium, >301 ft = large
X	X	X		VesselType	text	N/A	Type of vessel observed (e.g. frigate, sailboat, submarine)
X	X	X		Video	Y/N	N/A	Was video taken during the sighting?
X	X	X		VideoCamera	Alpha-numeric		Videocamera identifier (model or number)
X	X	X		Videographer	text	N/A	Name of the videographer
X	X	X		Visibility	number	km	The estimated distance at which an animal could potentially be sighted
		X		VisibilityLeft	number	km	Sighting visibility in km on the left (port) side of the platform
		X		VisibilityRight	number	km	Sighting visibility in km on the right (starboard) side of the platform
X	X	X		WaveHeight	number	ft	Wave height
X	X	X		WindDirection	text	deg, or N/S/E/W	Wind direction relative to true north
X	X	X		WindSpeed	number	knots	Wind speed

\* The 'Required' fields will be the minimum completion needed prior to any data delivery for projects supporting the U.S. Navy MSM program