

Animal Field ID \_\_\_\_\_ Date \_\_\_\_\_ Initials \_\_\_\_\_

**BELUGA NECROPSY REPORT**

ID Number: \_\_\_\_\_  
 Location: \_\_\_\_\_ (Lat;Long) \_\_\_\_\_  
 Reported by: \_\_\_\_\_ Contact info: \_\_\_\_\_  
 Date found: \_\_\_\_\_ Date recovered: \_\_\_\_\_ Necropsy Date: \_\_\_\_\_  
 Species: *beluga (D. leucas)* \_\_\_\_\_ Age: \_\_\_\_\_ Sex: *M F Unknown*  
 Prosectors: \_\_\_\_\_ Contact info: \_\_\_\_\_  
 Weather info: \_\_\_\_\_  
 Human Interaction Forms? \_\_; Chain of custody forms: \_\_; Level A forms filled out: \_\_

**BRIEF HISTORY:**

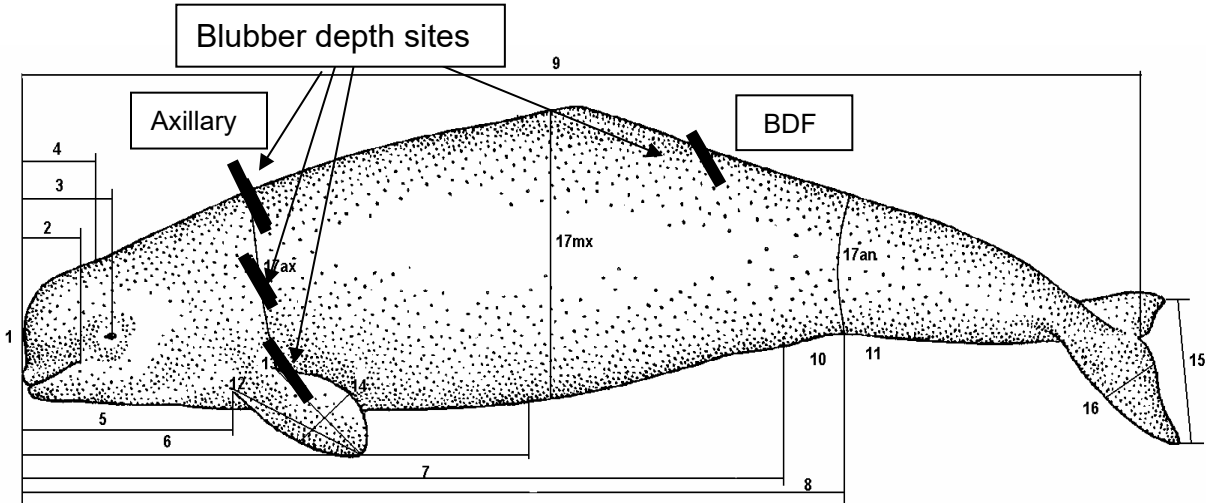
**GROSS DIAGNOSIS:**

**MEASUREMENTS** (cm unless indicated)

Tooth count: Total \_\_\_\_\_ UpL \_\_\_\_\_ Up R \_\_\_\_\_ Low L \_\_\_\_\_ Low R \_\_\_\_\_

Diameter / length largest tooth

Basic Measurements	Value	Basic Measurements*	Value
Total length (9)		Skin thickness	
snout to center of blowhole (4)		Blubber thickness, dorsal bdf ( <b>w/o skin</b> ) straight down from caudal end of dorsal ridge, 45° from spine.	
Center of BH to Dorsal ridge (18)		Blubber thickness, dorsal midline Axillary ( <b>w/o skin</b> )	
Girth, anus (17an)		Blubber thickness, ventral midline Axillary ( <b>w/o skin</b> )	
Girth at axilla (17ax)		Blubber thickness, lateral Axillary, ( <b>w/o skin</b> )	
Fluke width (15)		Weight of the Epaxial L1-12	



**EXTERNAL EXAMINATION (CIRCLE)**

**CARCASS CLASSIFICATION:**

Code 2 Fresh
Code 2.5 mild decomposition
Code 3 moderate (decomposed organs intact)
Code 4 Poor (advance decomposition)
Code 5 Mummified

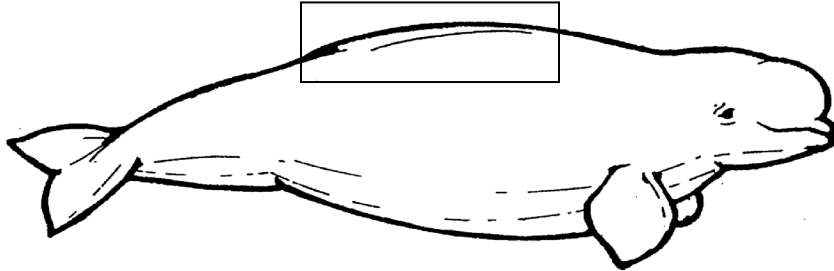
**BODY CONDITION:**

1 Robust
<u>2 Good</u>
<u>3 Average</u>
4 Poor
5 Emaciated

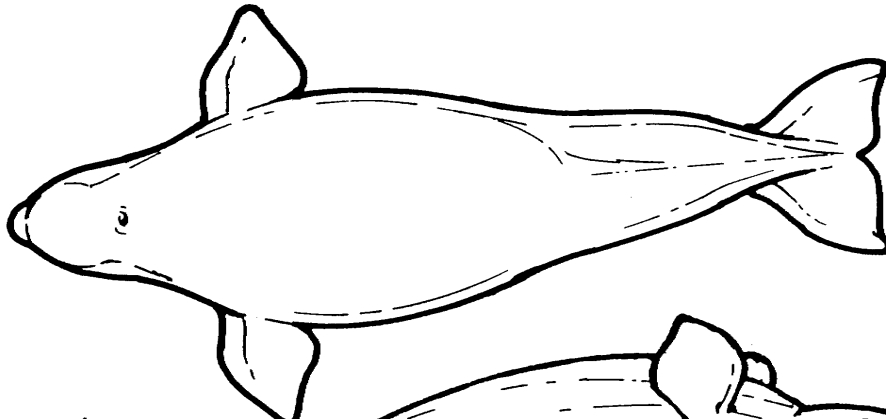
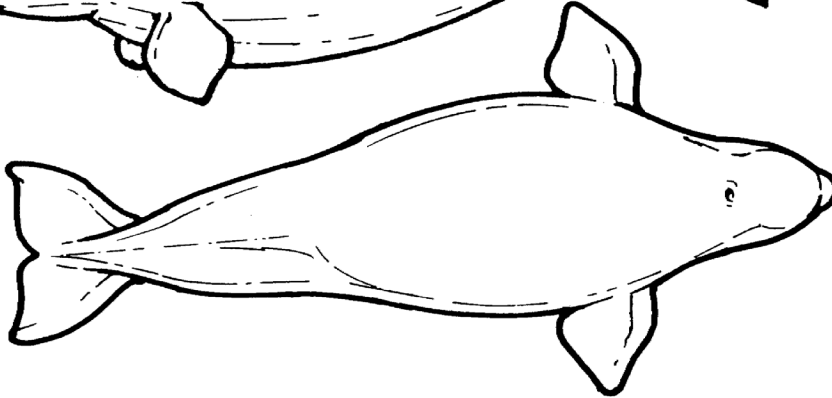
**GROSS NECROPSY FINDINGS:**

**PHYSICAL EXAM** (general condition, lesions, deformities, appearance, color):

PHOTO of Overall Left lateral \_\_\_\_\_ Right lateral \_\_\_\_\_ Dorsal \_\_\_\_\_ Ventral \_\_\_\_\_  
Dorsal Ridge \_\_\_\_\_ Flank fullness \_\_\_\_\_ Cd-R Tail shot" \_\_\_\_\_ Fluke shot \_\_\_\_\_  
Open mouth shot \_\_\_\_\_ genital area(s) \_\_\_\_\_ if abnormal Grey Scale standard  
\_\_\_\_\_



Dorsal ridge  
collection



SQ:

**MUSCULOSKELETAL** (color of muscle, appearance of joint fluid:

**Weight of L1-L12 epaxial muscle** \_\_\_\_\_

**BODY CAVITIES:**

Peritoneal Cavity (Abdomen): FLUID?

Pleural (Chest) cavity: FLUID?

**RESPIRATORY** (foam, fluid, texture and color of lungs, parasites? – don't forget the sinuses and blowhole). Is the fat band at the back of the lungs thick?

**If young, check to see if the lung Floats.**

Lung Right: \_\_\_\_\_g Left: \_\_\_\_\_g

**CARDIOVASCULAR:**

Whole Heart Mass \_\_\_\_\_g; RV mass \_\_\_\_\_g; LV/ IVS mass \_\_\_\_\_g  
RAV \_\_\_\_\_cm; PA \_\_\_\_\_cm; LAV \_\_\_\_\_cm; AoV \_\_\_\_\_cm;  
RV \_\_\_\_\_cm; IVS \_\_\_\_\_cm; LV \_\_\_\_\_cm

**ENDOCRINE:**

**Adrenals:** Right : \_\_\_\_\_g Left : \_\_\_\_\_g

**Thyroid:** Right : \_\_\_\_\_g Left : \_\_\_\_\_g

**URINARY:** is there fat around the kidneys? Location of live worms: \_\_\_\_\_

**Kidney Right:** \_\_\_\_\_g # of Nodules \_\_\_\_\_ weight of nodules \_\_\_\_\_g

**Left:** \_\_\_\_\_g # of Nodules \_\_\_\_\_ weight of nodules \_\_\_\_\_g

Animal Field ID \_\_\_\_\_ Date \_\_\_\_\_ Initials \_\_\_\_\_

<b>LIVER:</b> (bile, parasites, color, texture) Liver _____g
<b>DIGESTIVE:</b> (serosal surface, content, mucosal surface, parasites): TEETH PHOTO
<b>REPRODUCTIVE:</b> (measure (weight and LXD <sub>X</sub> H) ovaries, uterine horns, placenta if present), check for body wall abnormality (photos and sample if so)  Left uterine horn: _____x_____x_____; Right uterine horn: _____x_____x_____; Right ovary: _____x_____x_____; _____g; left ovary _____x_____x_____; _____g Weight of testes and epididymus: _____g Placenta _____g _____x_____x_____cm
<b>NERVOUS:</b>

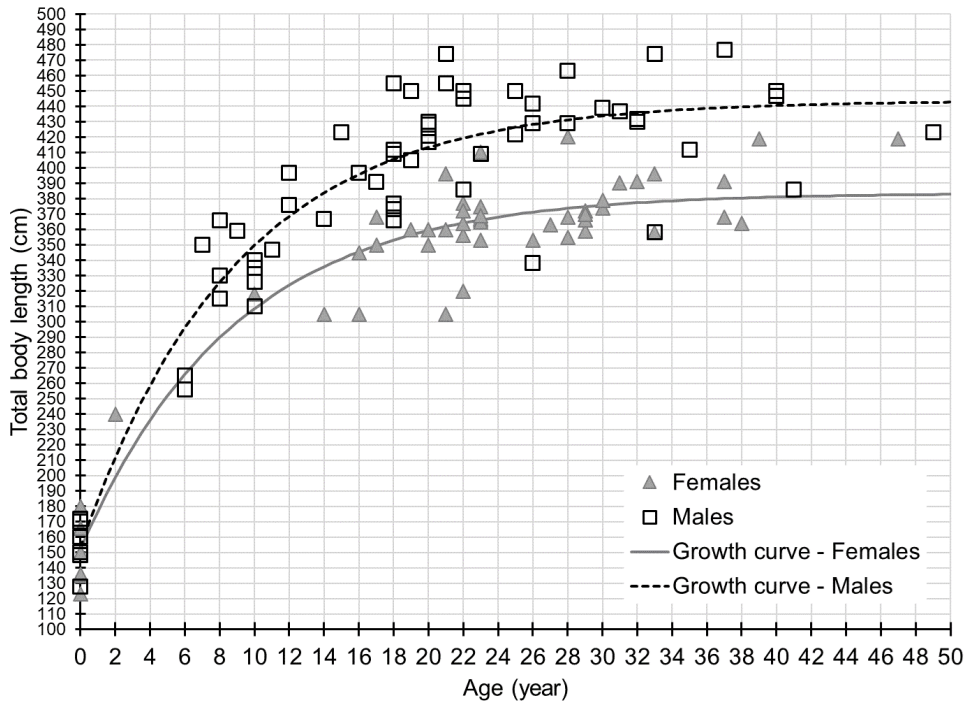
**CARCASS DISPOSITION:**

**COMMENTS (CAUSE OF DEATH, INTERPRETATIONS):**

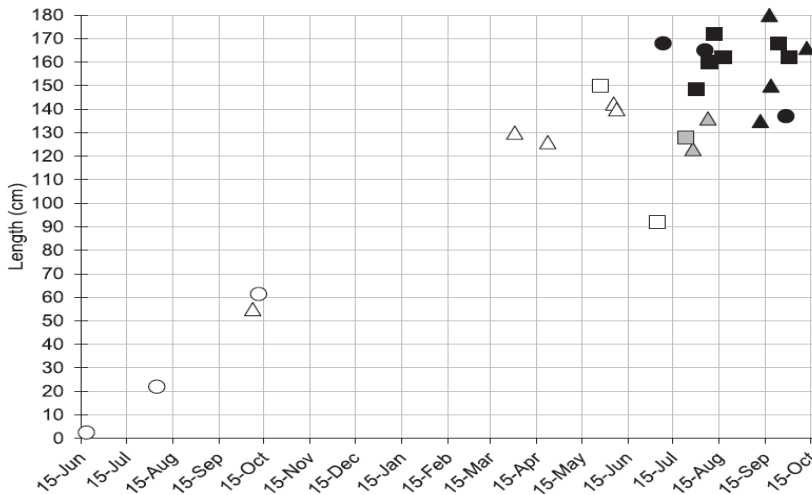
**HOW DID YOU TAKE YOUR TOXICOLOGY SAMPLES?:**

Circle: Ziplocs / Foil / Acetone -cleaned Foil / Teflon / Whirlpak / I-Chem jars  
Type of gloves (circle): Nitrile, latex, other Powder free / powdered.

**ESTIMATE THE AGE BY LENGTH:** From Vos 2019 (updated 2022) females with an estimated age of less than seven years and males with an estimated age of less than eight years were coded as juvenile



**FIGURE 6** Age vs. length plot with best-fit Gompertz growth curves for male (squares and dashed line) and female (triangles and solid line) Cook Inlet belugas.



**FIGURE 2** Length (straight length in centimeters) and date of collection of beluga whale fetuses (white symbols,  $n = 10$ ), neonates (gray symbols,  $n = 3$ ), and calves-of-the-year (black symbols,  $n = 13$ ) from Cook Inlet, Alaska. Males = squares, females = triangles, unknown sex = circles.

predicted range of conception dates (based on Robeck et al. (2015) estimates of accuracy) fell within the period of March–May (Figure 3a, Table S2). Axillary girth measurements were obtained from 16 of the 26 whales. Applying the formula for TC, 69% ( $n = 11$ ) of the conception dates (94% ( $n = 15$ ) when including predicted variation) were

from Sheldon et al. 2019 Breeding and calving seasonality in CIB Fetus vs neonates vs YOY

Animal Field ID \_\_\_\_\_ Date \_\_\_\_\_ Initials \_\_\_\_\_

AKR age class	Level A Age class	Standard Length*	Tooth Age (if known)	Coloration/ other characteristics
Fetus	calf	Usually < ~150 cm & stillborn	unerupted	Dark gray skin color, fetal folds present, dark ring around each eye, unerupted teeth, curled flukes, stranded before mid-July, lungs do not float/meconium in airway,
Calf (includes yearlings)	calf	Usually <245 cm	< 3 years	Light uniform gray skin color (sometimes looks to be peeling), umbilicus partially or fully healed, immature reproductive tract, milk in stomach?
Juvenile	Juvenile/ Subadult	246- 300 cm (F) 246- 350 cm (M)	3 yrs - 9 yrs	Light gray to gray-white skin color, immature reproductive tract,
Juvenile/ Adult	Adult	300-305 cm (F) 350-360 cm (M)	10 - 13 yrs	White skin color, no examination of reproductive tract, unknown tooth age or length <b>Unknown sex, &gt;360 cm</b>
Adult	Adult	> 305 cm (F) > 360 cm (M)	> 13 yrs	White skin color, mature reproductive tract (corpora, sperm, fetus, lactating, flaccid uterus)

**Age Classes as updated from Mandy Keogh 1/5/2023**

Animal Field ID \_\_\_\_\_ Date \_\_\_\_\_ Initials \_\_\_\_\_

latex vinyl powder-free nitrile



# Marine Forensics & Protected Resources Program Chain of Custody Form



Sample description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Case #/Seized Property #: \_\_\_\_\_

Origin of sample: \_\_\_\_\_

Name of sample collector/agent: \_\_\_\_\_

Address of sample collector/agent: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone Number: \_\_\_\_\_

Date collected/seized: \_\_\_\_\_

Collector's Signature: \_\_\_\_\_

Collector's Release signature: \_\_\_\_\_

Release date: \_\_\_\_\_ Method of transfer: \_\_\_\_\_

Every person subsequently in possession of the sample must complete a receipt/release box on the back of this form. (Each person must sign and date the form twice, once for receipt of the sample, and once for release).



Receipt signature: \_\_\_\_\_ Receipt date: \_\_\_\_\_  
Print name/agency: \_\_\_\_\_  
Release signature: \_\_\_\_\_ Release date: \_\_\_\_\_  
Method of transfer to next person: \_\_\_\_\_

Receipt signature: \_\_\_\_\_ Receipt date: \_\_\_\_\_  
Print name/agency: \_\_\_\_\_  
Release signature: \_\_\_\_\_ Release date: \_\_\_\_\_  
Method of transfer to next person: \_\_\_\_\_

Receipt signature: \_\_\_\_\_ Receipt date: \_\_\_\_\_  
Print name/agency: \_\_\_\_\_  
Release signature: \_\_\_\_\_ Release date: \_\_\_\_\_  
Method of transfer to next person: \_\_\_\_\_

Receipt signature: \_\_\_\_\_ Receipt date: \_\_\_\_\_  
Print name/agency: \_\_\_\_\_  
Release signature: \_\_\_\_\_ Release date: \_\_\_\_\_  
Method of transfer to next person: \_\_\_\_\_

Receipt signature: \_\_\_\_\_ Receipt date: \_\_\_\_\_  
Print name/agency: \_\_\_\_\_  
Release signature: \_\_\_\_\_ Release date: \_\_\_\_\_  
Method of transfer to next person: \_\_\_\_\_

Receipt signature: \_\_\_\_\_ Receipt date: \_\_\_\_\_  
Print name/agency: \_\_\_\_\_  
Release signature: \_\_\_\_\_ Release date: \_\_\_\_\_  
Method of transfer to next person: \_\_\_\_\_

Receipt signature: \_\_\_\_\_ Receipt date: \_\_\_\_\_  
Print name/agency: \_\_\_\_\_  
Release signature: \_\_\_\_\_ Release date: \_\_\_\_\_  
Method of transfer to next person: \_\_\_\_\_

Receipt signature: \_\_\_\_\_ Receipt date: \_\_\_\_\_  
Print name/agency: \_\_\_\_\_  
Release signature: \_\_\_\_\_ Release date: \_\_\_\_\_  
Method of transfer to next person: \_\_\_\_\_

Receipt signature: \_\_\_\_\_ Receipt date: \_\_\_\_\_  
Print name/agency: \_\_\_\_\_  
Release signature: \_\_\_\_\_ Release date: \_\_\_\_\_  
Method of transfer to next person: \_\_\_\_\_