**Guide to “Quick and Dirty” Field Necropsy of Alaska Toothed Whales**

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_Animal ID:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Age class: \_\_\_\_\_Sex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_Location:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Names of person completing form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ prosector(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

If a potential legal case, ensure Chain of Custody is maintained and form (at end of this one) completed.

Keep samples cool (not frozen) until sub-sampling at lab, note on the blank lines if samples are collected

**History prior to necropsy:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*-Have there been reports of vessel strike in the past week? -What active fisheries are present in the area, and what gear type is used? Where on the whale’s body could this interaction have occurred? This will help focus necropsy efforts (i.e. if the ship was reported to have struck an animal on the left side, necropsy should begin from the left side) Ship struck cetaceans have had fractures of the caudal skull and mandible, scapula, vertebrae; line entanglement marks observed at the insertion of the pectoral flippers, peduncle and flukes.*

**Collect any entangling gear, line, after photographing:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Any external marks (***note on drawing below*) ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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*Look at the whole body, especially flipper insertions, skull, dorsum, peduncle. If there areas of discolored skin or exposed blubber or constriction, focus dissection here initially. If blood near eyes, check back of skull*

**Photos: \*It is worth your time to get good photos\*** *label photos with animal ID#, date, include a ruler for scale. Take multiple shots of each side from multiple angles; cross-hatching marks from gill nets are sometimes only visible in a certain light, and sometimes only noted in photos after the necropsy*.

-Photograph each side of the body \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Fluke / saddle patch photo-ID \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-Take photos of any previous tag sites \_\_\_\_\_\_\_\_\_\_ Abnormalities\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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*For all abnormalities, include an in situ photo of the lesion in the body, followed by, if necessary, a close-up of the lesion by itself on a clean background. Remove as much blood as possible.*

**Measurements** *(give unit cms or ins):*

With limited time, collect length and blubber depths (4 sites along the axillary (arm pit) girth, dorsal (DAX), lateral (LAX), ventral (VAX) and behind the dorsal fin (BDF)) only. Otherwise, complete the morphometrics form.

Length:\_\_\_\_\_\_\_\_\_\_\_\_\_Ventral blubber depth at axillary girth;\_\_\_\_\_\_\_\_\_\_\_\_\_\_Lateral depth\_\_\_\_\_\_\_\_\_Dorsal\_\_\_\_\_\_\_\_\_

**Fluid sampling:**

Use a clean 16g needle and 20cc syringe to collect each fluid type and squirt into plastic conical vial.

Aqueous humor (eye fluid, angle needle in behind the cornea and suck gently). Note which eye and time of collection \_\_\_\_\_\_\_\_\_\_

Whole blood \_\_\_\_\_\_ *Blood sites are heart, ventral peduncle, penis after amputating tip.*

Urine \_\_\_\_\_\_ *Take directly from bladder, or if larger whale, cut penis to obtain uring*

Feces \_\_\_\_\_ *If obvious, collect, but usually obtained by cutting into intestines after abdomen is open*.

**Skin sampling:** If there is any skin lesion or a site of previous tag, photograph it. Then take a section of the lesion full thickness from the skin, blubber to underlying muscle about 6 ins diameter and include the edge of the lesion and adjacent normal tissue. Put the whole section in a ziplock bag. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**external parasites**: Pick a few off and place in a zip lock or collect the whole section of skin with parasite attached. bag\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**eye**: If spare person available, collect eye while second person flenses body. Place eye in ziplocks\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Internal exam and tissue sampling:**

**Skin, Blubber**: Collect a chunk (6 in cubed) of full-thickness skin and blubber down to the muscle. Axillary girth is ideal, but any other spot is acceptable. Place in ziplock bag.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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*Start at back of head area, avoid opening abdomen or guts will make work hard.*

*Cut parallel lines into blubber 6- 12 inches apart around the body to depth of muscle underneath and peel blubber back.*

*Look for any areas of discolored blubber or difference in texture, if found, focus on this area.*

*If adult female, check mouth for fetal remains, with decomposition 2 bloated females have had ruptured uterus and fetal bones around tongue or body cavity.*

*Remove blubber in strips, as they are cut away, drag away from whale with gaff to make space to work. Observe muscle under blubber. If any is darker color, or more mushy, or liquid, dissect below here to look for broken bones. Aim to remove all blubber before opening abdomen.*

*Once abdomen is opened, pull guts away from body. Can get at chest via diaphragm.*

**Describe internal fat (mediastianal, omental, perirenal, cardiac)**?:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Open stomachs**. Tie off and collect the ENTIRE STOMACH. Describe \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

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**Intestinal contents** describe\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Put feces in ziplock\_\_\_\_\_\_\_\_

**Internal parasites**: Put in ziplock with sea water. Describe\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Liver, Spleen, Kidney**: describe, Put 6 ins cube of each in ziplock, 1 WP or cryo of kidney worms \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Repro tract** **IF POSSIBLE**: Collect the entire female reproductive tract from ovaries to the skin around the genital slit and put into a garbage bag. If too big: describe, put 3 ins piece of testis, penis, uterus, whole ovary, in ziplock. Collect entire cervix and vagina if possible, or, photograph: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Lung, Heart, Esophagus, Trachea, Lymph node:** Describe, **IF POSSIBLE**, collect the whole “pluck” (heart, lungs, esophagus, trachea and larynx) and put into a garbage back: Chill. If too big,

put 3 inch cube of each in ziplock: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Bacterial cultures:** *If any unusual fluid, organ or pus observed, rub the tip of a bacterial culturette in the fluid, replace in plastic tube, keep cool. Also collect a 3 ins cube of the organ, or some fluid, in a ziplock or vial.* Describe collection site:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**broken bones:** *Photograph, collect in bag.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

**SUB-SAMPLING (*asap upon return* OR chill and Ship ASAP to Anchorage for SUBSAMPLING):** Keep all samples cool not frozen, subsample into clean containers.

Once sub-sampled and repackaged, label each container with ***Animal ID #; date; sample type***,

**Fluids**: Aqueous humor: Place 1ml aliquots in cryovials.

Blood: Centrifuge whole blood from 2 tubes, separate serum, place in 1 ml aliquots in cryovials

Urine: Place 5+ mls in clean conical plastic tubes

Feces: Place in clean whirlpacs in 100g aliquots. Freeze all fluids -70 C if possible, otherwise -20 C

**Tissues**: Skin: 1 piece 1 cm cube into DMSO vial (for genetics)

Lesions, skin, lung, heart, kidney, spleen, liver, tongue, intestine, lymph nodes , repro tract, muscle:

-1 cm cube in 10% formalin (all in 1 jar, ensure 10 times as much formalin as total tissue)

-1 cm cube in whirlpac frozen at -70 C ideal, -20 C OK

 Bones: Freeze large pieces at -20 C. Small splinters add to formalin jar above

 Blubber: Cut clean cube 4 ins wide from internal sample, wrap in foil, place in ziplock, freeze -20 C

 Parasites: Place in 70 % ethanol, Store at room temp.