**Guide to “Quick and Dirty” Field Necropsy of Alaska Killer 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. Ship struck whales 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*) ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*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 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_dorsal patch (behind the dorsal fin) photo-ID \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*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 (3 sites along the axillary girth, dorsal, lateral, ventral) only. Otherwise, complete the morphometrics form.

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

**\*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, just the skin, no blubber; About 2 inches square. Put the whole section in a ziplock bag. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**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.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***\*Muscle samples:*** *Take a fist sized piece of the muscle from the body, tongue and if you can, heart and place in a quart ziplock.*

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

*Cut parallel lines into blubber 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.*

*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)**?:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**\*Open stomachs**. If there is a lot of food, use a bucket to collect and sieve and put hard parts from sieve in 3 Gallon ziplocks, fluid in 3 conical vials, Describe\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**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 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Repro tract: Collect entire tract if possible from ovaries to the genital slit. If too large:**  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, put 3 inch cube of each in ziplock: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

**KILLER WHALE NECROPSY AND DISEASE TESTING PROTOCOL**

**APPENDIX III: MORPHOMETRIC ANALYSIS OF STRANDED KILLER WHALES**

**(Leger, 2004)**

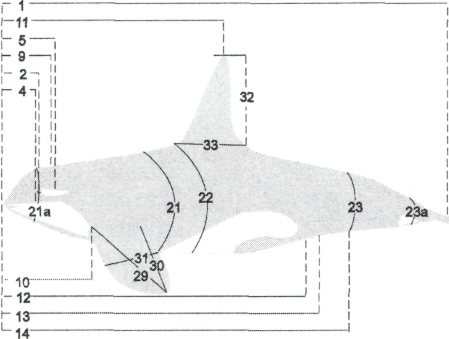
Observer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Identification \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Gender \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Weight MEASUREMENTS, BODY (specify units of measure used

MEASUREMENTS, APPENDAGES (specify units of measurement

|  |  |  |
| --- | --- | --- |
| 1 | Total length, snout to notch |  |
| 17 | Blubber thickness, ventral axilla |  |
| 18 | Blubber thickness, lateral axilla |  |
| 19 | Blubber thickness, Dorsal axilla |  |
| 21 | Girth at axilla |  |
| 22 | Girth at leading edge of dorsal findorsal.. |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 29 | Flipper length (ant) (left) |  |  | 33 | Length of dorsal fin base |  |
| 30 | Flipper length (post) (left) |  |  | 34 | Width of flukes |  |
| 31 | Maximum width of flipper (left).. |  |  | 35 | Length of flukes (left) |  |
| 32 | Height of dorsal fin |  |  |  |  |  |

19

18 17