Washington Department of FISH and WILDLIFE

Washington White-tailed Deer Project (WWP)

Antlerless White-tailed Deer Organ Sample Collection

The body condition of whitetail does, which is strongly related to body fat levels and habitat conditions, can affect their ability to successfully reproduce. The Washington Department of Fish and Wildlife (WDFW) is currently estimating seasonal fat levels of **yearling and older whitetail does** in several northeast Washington Game Management Units (GMUs) by measuring fat deposits around the heart and kidneys of hunter-killed deer.

Hunters can help by allowing WDFW biologists to examine the heart and kidneys of harvested deer from GMUs 117, 121, or 124. Because fat levels on the heart and kidneys are essential to this assessment, these organs must be collected with all attached fat.

Researchers also want to look at the reproductive tract of harvested does, a liver sample to examine mineral levels, and a tooth from harvested deer to determine age.

In addition, information about whether a doe has nursed a fawn the summer before being harvested is important to interpreting fat levels. Hunters submitting samples from a harvested doe are asked to note if the animal's udder is **dry**, contains **clear fluid**, or **true milk**. Fluid can be expressed from a wet udder by firmly pulling on it.

Directions and diagrams are provided below to help hunters retrieve the necessary samples.

Place samples in a recloseable plastic bag and submit as soon as possible, with a completed data form, at one of three 24-7 sample deposit barrel locations listed below*. Data forms, along with extra sample collection directions and plastic bags, are available at these locations and at weekend hunting check stations in the area (also listed below). The data forms include hunter name, date of harvest, GMU and nearest geographic feature (road, drainage, mountain, etc.) where the deer was harvested (including a GPS location if available), and udder condition.

Hunter assistance is greatly appreciated and very important to the success of this study. Hunters who provide complete sets of useable samples will be entered into a drawing for $100 gift cards from local retail sporting goods stores.

More information about this study, and the overall Washington White-tailed Deer Project (WWP) is available from WDFW Wildlife Biologist Woody Myers, 509-892-1001 ext 325, Woodrow.Myers@dfw.wa.gov.

Questions? Call (509) 892-1001 ext 325

Sample Collection Directions

Optimal sample submission includes six items:

1) Heart with fat attached
2) Kidney one with fat attached
3) Kidney two with fat attached
4) Ovaries or whole reproductive tract with fat attached
5) Liver sample
6) Incisor teeth

Heart

There is fat associated both with the **heart and the pericardium** (membrane around the heart). **Both** of these fat deposits are important for assessing body condition. Remove the heart (with intact pericardium) by cutting the large vessels near the top of the heart. **Do not separate the pericardium from the heart or remove any of the associated fat from the heart**. Hearts damaged during harvest can often still provide useful information.

Heart with pericardium

Kidneys

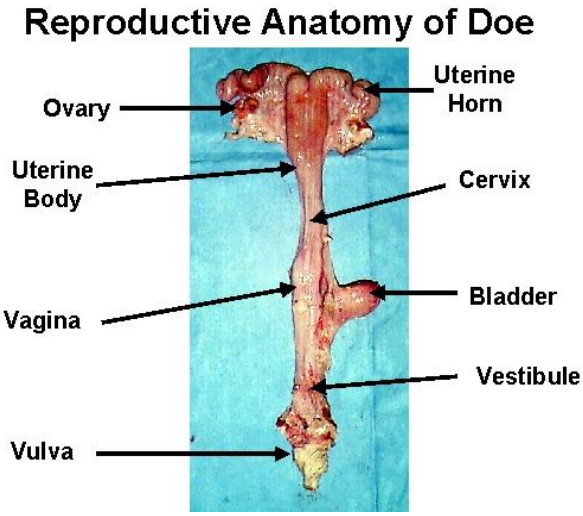
A deer has two (2) kidneys, which are relatively firm, oblong organs approximately 3-5" in length and often covered with globular fat deposits. The amount of fat covering the kidney is extremely useful to interpreting body condition in elk. The kidneys are located in the back of the body cavity, behind the liver, rumen, and intestines. Remove **both** kidneys. To avoid losing any of the fatty tissue, lift the kidney slightly and cut the membranous tissue surrounding it several inches beyond the actual border of the kidney. **Do not clean the kidneys of any of the fatty covering surrounding them; this fat is essential**.

Kidneys with fat

Ovaries or whole Reproductive Tract

The reproductive tract is located in the lower abdomen of the deer near the bladder and descending colon. The ovaries are small round structures found on each side of the reproductive tract above the uterus. Either cut the ovaries from the uterine body or cervix, or simply cut away the entire tract below the bladder and above the vulva. (see diagram and photos below).

Reproductive tract

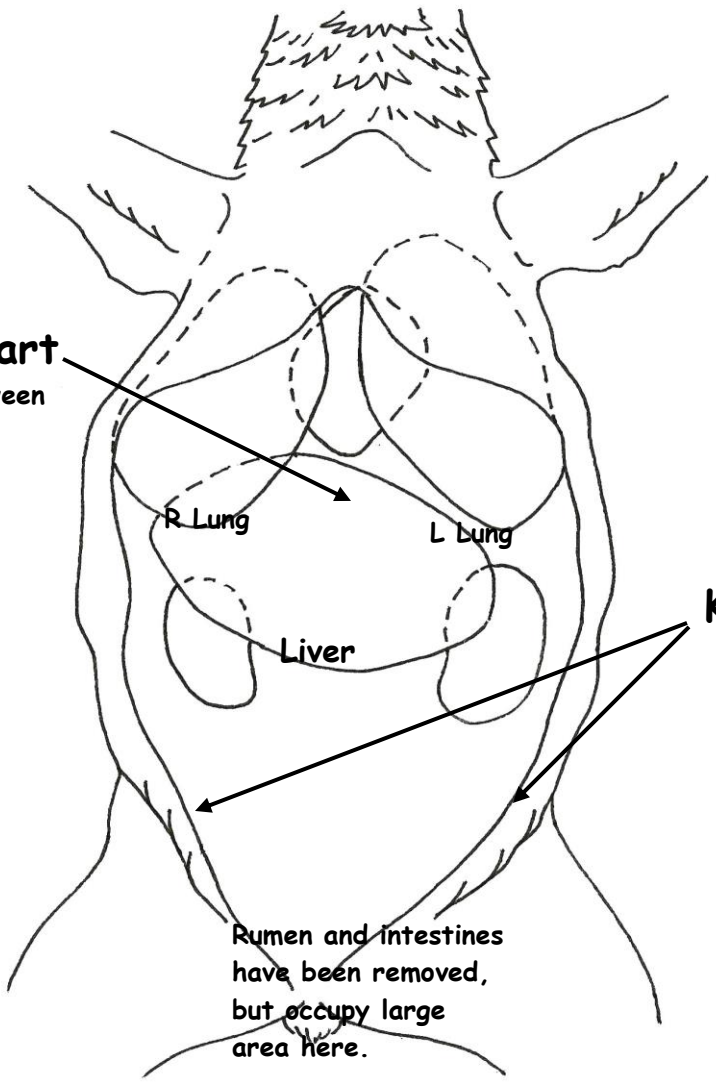


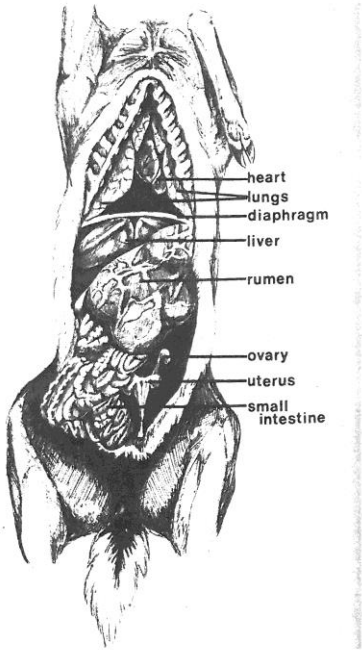
Liver Sample

The liver is the large grayish/purple organ located behind the rumen and intestines. The entire liver is not needed to obtain baseline mineral level data. Cut just a small (large thumb size) piece of the liver.

Tooth Samples

Deer can be aged precisely by examining sections of the roots of the **middle 2 incisors** (front teeth). First, cut down through the gum tissue on either side of the root with a thin-bladed sharp knife. Then, carefully grasp the top of the tooth with pliers and pull it out intact with a firm, twisting motion. It is important not to cut into the root itself, but to only loosen the soft tissue that holds the root in place.


Heart
Located between the 2 lungs
R Lung
L Lung
Liver
Kidneys
Located behind the liver, rumen, and intestines. Oblong organs approx. 3-5 inches long.
Rumen and intestines have been removed, but occupy large area here.



*Sample Deposit Locations

- **WDFW Eastern Regional office lab/shop building (backside of office) at 2315 N. Discovery Place, Spokane Valley**

- **WDFW Colville district office (behind the U.S. Forest Service office) at 755 S. Main St., Colville**

- **Little Pend Oreille National Wildlife Refuge headquarters at 1310 Bear Creek Rd., east of Colville**

Samples can also be deposited at WDFW hunting check stations, which are conducted at the truck weigh stations on Highway 395 north of Deer Park and Highway 2 south of Chattaroy on most Saturdays or Sundays from Oct. 12 through Nov. 17.

Questions? Call (509) 892-1001 ext 325