

—Readme—

Surveillance Optimization Project for Chronic Wasting Disease dataset for Virginia, US, 2001-2021

Open Data from the Virginia
Department of Wildlife Resources

Cornell Wildlife Health Lab
Animal Health Diagnostic Center
College of Veterinary Medicine
Cornell University
Ithaca, New York, USA

Name of the Data

Surveillance Optimization Project for Chronic Wasting Disease dataset for Virginia, US, 2001-2021

Source Facility of the Data

Virginia Department of Wildlife Resources
7870 Villa Park Drive, Suite 400
Henrico, Virginia, 23228, USA
(804) 367-1000
<https://dwr.virginia.gov/about/offices/>

Co-author at Source Facility

Megan Kirchgessner, DVM, Wildlife Veterinarian

Name of the Project at Cornell University

Surveillance Optimization Project for Chronic Wasting Disease (SOP4CWD), 2019-

Location of the Project at Cornell University

Wildlife Health Lab
Animal Health Diagnostic Center
College of Veterinary Medicine
240 Farrier Road
Ithaca, New York, USA 14850

(607) 253-3900
<https://cwhl.vet.cornell.edu/>

Species Described by the Data

White-tailed deer (*Odocoileus virginianus*)

Dates Contained in the Data

2001-2021

Overview of the Data

This dataset contains four files containing data from the Virginia Department of Wildlife Resources shared with the Cornell Wildlife Health Lab (CWHL) at Cornell University for the purpose of the Surveillance Optimization Project for Chronic Wasting Disease (SOP4CWD). Professionals at the source facility have provided written permission for professionals at the CWHL to post this open data to this persistent eCommons repository.

VDWR_WTD_surveillance_2020.csv

This datafile constitutes records in standardized form depicting the results of chronic wasting disease (CWD) testing of white-tailed deer (*Odocoileus virginianus*) in Virginia, US for hunting seasons from 2000-01 to 2020-21, as completed by wildlife health diagnosticians at (or in partnership with) the Virginia Department of Wildlife Resources.

VDWR_WTD_harvest_2021.csv

This data constitutes the total number of white-tailed deer (*Odocoileus virginianus*) legally harvested by hunters by county in Virginia, US for hunting seasons from 2015-16 to 2020-21, as recorded by the Virginia Department of Wildlife Resources.

VDWR_processors_2021.csv

This data constitutes the total number wild cervid meat processors and taxidermists by county in Virginia, US for the year 2021, as recorded by the Virginia Department of Wildlife Resources.

VDWR_cervid_facilities_2020.csv

This data constitutes the total number of captive cervid facilities by county in Virginia, US for the year 2020, as recorded by the Virginia Department of Wildlife Resources.

Acknowledgements

We thank W. Kozlowski and J. Peaslee of Cornell University and Chelsey Faller of Virginia Department of Wildlife Resources. Data collection was funded by federal aid from the Pittman-Robertson Wildlife Restoration Act. The SOP4CWD project was funded by Multistate Conservation Grant Program # F21AP00722-01; Michigan Disease Initiative # RC109358; Alabama Department of Conservation and Natural Resources; Florida Fish and Wildlife

Conservation Commission; Tennessee Wildlife Resources Agency; New York State Department of Environmental Conservation; and Virginia Department of Natural Resources.

Technical Details of the Data

The data are on comma separated variable (CSV) spreadsheets from Microsoft Excel for Microsoft 365 MSO (16.0.13530.20368) 64-bit.

License

This dataset is shared under a Creative Commons Attribution 4.0 International license (CC BY 4.0, <https://creativecommons.org/licenses/by/4.0/>); the data are openly available to share and adapt, but appropriate credit to the original data creators is required upon reuse. The data herein was transferred to Cornell from the source facility. All inquiries regarding records should be directed to the source facility.

Abbreviations Used in the Data

Table 1 contains abbreviations used in the file named VDWR_WTD_surveillance_2020.csv. Table 2 contains abbreviations in VDWR_WTD_harvest_2021.csv. Table 3 contains abbreviations in VDWR_processors_2021.csv. Table 4 contains abbreviations in VDWR_cervid_facilities_2020.csv.

Metadata

VDWR_WTD_surveillance_2020.csv includes all white-tailed deer tested for chronic wasting disease, in the state of Virginia, between the dates of 01/02/2001 and 10/13/2020.

CWD data are collected in order to track the apparent prevalence and distribution of disease across the landscape in known infected areas and to conduct CWD surveillance in areas not confirmed to be affected by CWD. Data are collected by the Virginia Department of Wildlife Resources (formerly Department of Game & Inland Fisheries) staff, volunteers, trained taxidermists and processors participating in the surveillance and monitoring effort.

Limitations of this dataset

Location information

A 1-mile grid system is utilized to note location of death in counties included within a Disease Management Area (DMA).

For deer sampled outside of a DMA, the county of death is recorded, at minimum.

Age information:

While ages are estimated by assessing teeth wear on deer tested from within a DMA, most deer that are tested for CWD outside of a DMA are not aged. Cooperating taxidermists record number of antler points rather than estimate age. Antler points are not included in the data submitted here as they simply help a hunter keep track of samples but are not representative of anything else.

Suggested Citation for the Re-Use of this Data

Virginia Department of Wildlife Resources [VDWR]. 2024. Surveillance Optimization Project for Chronic Wasting Disease dataset for Virginia, US, 2001-2021. Henrico, Virginia, US [Dataset]. Cornell University Library eCommons Repository. doi: <https://doi.org/10.7298/bcfs-ze92>

Table 1. Abbreviations used in the file named VDWR_WTD_surveillance_2020.csv.

| Variable Name | Description | Format | Values |
|------------------------------|------------------------------------|-------------|--|
| State_id | Unique identifier for each sample. | Text | (Varies) |
| Species | Cervid species. | Text | white-tailed deer |
| Species_numeric | Cervid species. | Categorical | 1: white-tailed deer |
| Age_group | Age of deer when harvested. | Text | No Age: unknown or unrecorded Fawn: age < 1.5 year Yearling: age ≥ 1.5 through < 2.5 years Adult: age ≥ 2.5 years |
| Age_group_numeric | Age of deer when harvested. | Categorical | 0: No Age 1: Fawn 2: Yearling 3: Adult |
| Sex | Sex of deer. | Text | Female Male Unknown |
| Sex_numeric | Sex of deer. | Categorical | 0: Female 1: Male 2: Unknown |
| Date_harvested | Date deer was harvested. | Date | MM/DD/YYYY No data: unknown or unrecorded |
| Date_sampled | Date sample was collected. | Date | No data: Unknown or unrecorded |
| Sample_tissue | Tissue type sampled and tested. | Text | Obex Lymph Node Obex and Lymph Node No data: Unknown or unrecorded |
| Sample_tissue_numeric | Tissue type sampled and tested. | Categorical | 1: Obex 2: Lymph Node 3: Obex and Lymph Node No data: Unknown or unrecorded |

| Variable Name | Description | Format | Values |
|---|--|---------------|--|
| Sample_ source | Source of deer for sampling. | Text | Hunter harvest Captive cervid facility Clinical Suspect Roadkill Unknown |
| Sample_ source_ numeric | Source of deer for sampling. | Categorical | 0: Unknown 1: Hunter harvest 2: Captive cervid facility, Clinical Suspect, or Roadkill |
| Sample_ source_ Sample_ opt_model | Source of deer for sampling. | Text | Hunter: Hunter harvest Other: Captive cervid facility, Clinical Suspect, Roadkill, or Unknown |
| Sample_ source_ Sample_ opt_model_ numeric | Source of deer for sampling. | Categorical | 1: Hunter 2: Other |
| Sample_ collection_ program | Program under which sample was collected. | Text | No data: unknown or unrecorded |
| Sample_ collection_ method | Method of sample collection. | Text | Checkstation Dropbox Processor or Taxidermist Other No data: unknown or unrecorded |
| Season_ year | Hunting season in which deer harvest occurred, defined as July 1, YYYY through June 30 of following year YY. | Text | YYYY-YY No data: unknown or unrecorded |
| Season_ type | Hunting season type in which deer was harvested. | Text | No data: unknown or unrecorded |
| County | County in which deer was harvested. | Text | County name No data: unknown or unrecorded |
| County FIPS | Federal Information Processing Standards Code for the county in which deer was harvested. | Text | XXXXX No data: unknown or unrecorded |
| State | US Postal System two-letter abbreviation for state in which deer was harvested. | Text | VA: Virginia, USA |
| Country | Country in which deer was harvested. | Text | US: USA |

| Variable Name | Description | Format | Values |
|--|---|---------------|---|
| Agency_ management_ unit | Agency-defined location in which deer was harvested. | Text | No data: unknown or unrecorded |
| Disease_ management_ area | Agency-defined location in which deer was harvested. | Text | No data: unknown or unrecorded |
| Grid_ cell | Agency-defined location in which deer was harvested. | Text | Integer No data: unknown or unrecorded |
| Latitude | Latitude in decimal degrees at which deer was harvested. | Numeric | No data: unknown or unrecorded |
| Longitude | Longitude in decimal degrees at which deer was harvested. | Numeric | No data: unknown or unrecorded |
| Geolocation_ source | Method of geolocation determination. | Text | No data: unknown or unrecorded |
| Geolocation_ precision | Precision of geolocation determination. | Text | 1-mile grid No data: unknown or unrecorded |
| Sample_ status | Current status of CWD testing of sample. | Text | No data: unknown or unrecorded |
| Test_ type | Type of CWD test performed on sample. | Text | ELISA: enzyme-linked immunosorbent assay IHC: immunohistochemistry test No data: unknown or unrecorded |
| Test_ result | Laboratory-determined CWD test result of sample. | Text | Not Detected: CWD prion not detected Detected: CWD prion detected Inconclusive: invalid test result Pending: test result not yet available Not tested: sample not tested No data: unknown or unrecorded |
| Test_ result_ numeric | Laboratory-determined CWD test result of sample. | Categorical | 0: Not Detected, Inconclusive 1: Detected No data: Pending, Not tested, unknown or unrecorded |
| Surveillance_ type | Type of surveillance. | Text | Active: animals killed or harvested for reasons not related to CWD and sampled for CWD because they fulfill a specific criterion (sex, location of death, etc.) Targeted: high-risk animals specifically sought out for CWD sampling |

| Variable Name | Description | Format | Values |
|-----------------------|---|---------------|--------------------------------|
| PLSS_township | Public land survey system township in which deer was harvested. | Text | No data: unknown or unrecorded |
| PLSS_section | Public land survey system section in which deer was harvested. | Text | No data: unknown or unrecorded |
| PLSS_range | Public land survey system range in which deer was harvested. | Text | No data: unknown or unrecorded |
| PLSS_direction | Public land survey system direction in which deer was harvested. | Text | No data: unknown or unrecorded |
| PLSS_quarter | Public land survey system quarter in which deer was harvested. | Text | No data: unknown or unrecorded |
| PLSS_forty | Public land survey system forty in which deer was harvested. | Text | No data: unknown or unrecorded |
| PLSS_DTRS | Public land survey system direction-township-range-section in which deer was harvested. | Text | No data: unknown or unrecorded |
| UTM_X | Universal Transverse Mercator X coordinate at which deer was harvested. | Numeric | No data: unknown or unrecorded |
| UTM_Y | Universal Transverse Mercator Y coordinate at which deer was harvested. | Numeric | No data: unknown or unrecorded |

Table 2. Abbreviations used in the file named VDWR_WTD_harvest_2021.csv.

| Variable Name | Description | Format | Values |
|----------------------|--|---------------|-------------------|
| State | US Postal System two-letter abbreviation for state in which deer harvest occurred. | Text | VA: Virginia, USA |
| County | County in which deer harvest occurred. | Text | County name |
| County FIPS | Federal Information Processing Standards Code for the county in which deer harvest occurred. | Text | XXXXX |
| Season_year | Hunting season in which deer harvest occurred, defined as July 1, YYYY through June 30 of following year YY. | Text | YYYY-YY |
| Buck_harvest | Count of male deer harvested in county. | Numeric | Integer |
| Doe_harvest | Count of female deer harvested in county. | Numeric | Integer |
| Total_harvest | Count of all deer harvested in county. | Numeric | Integer |

Table 3. Abbreviations used in the file named VDWR_processors_2021.csv.

| Variable Name | Description | Format | Values |
|----------------------|---|---------------|-------------------|
| State | US Postal System two-letter abbreviation for state in which taxidermists and meat processors are located. | Text | VA: Virginia, USA |
| County | County in which taxidermists and meat processors are located. | Text | County name |
| County FIPS | Federal Information Processing Standards Code for the county in which taxidermists and meat processors are located. | Text | XXXXX |
| Taxidermists | Count of taxidermists in county. | Numeric | Integer |
| Processors | Count of cervid meat processors in county. | Numeric | Integer |

Table 4. Abbreviations used in the file named VDWR_cervid_facilities_2020.csv.

| Variable Name | Description | Format | Values |
|---------------------------|--|---------------|-------------------|
| State | US Postal System two-letter abbreviation for state in which cervid facilities are located. | Text | VA: Virginia, USA |
| County | County in which cervid facilities are located. | Text | County name |
| County FIPS | Federal Information Processing Standards Code for the county in which cervid facilities are located. | Text | XXXXX |
| Cervid_ facilities | Count of cervid facilities in county. | Numeric | Integer |