

AGENDA

Board of Wildlife Resources
7870 Villa Park Drive
Henrico, Virginia 23228

October 23, 2025
9:00 am

Call to Order and Welcome –

1. Recognition of Employees and Others
2. Approval of the August 21, 2025, Board Meeting Minutes
3. Public Comments – Non-Agenda Items
4. Committee Meeting Reports:

Final Action

Wildlife and Boat Committee:

- Turkey Regulation Proposal
- Blue Catfish Regulation Proposal
- Regulatory Reform Proposals
- Mange Management Plan

Final Action

Final Action

Final Action

Final Action

Finance, Audit & Compliance Committee:

Law Enforcement Committee:

Education, Planning, and Outreach Committee:

- Governance Manual, Code of Ethics and Conduct and Committee Charter Updates
Mr. Aaron Proctor **Action**

5. Director's Report
6. Chairman's Report
7. Additional Business/Comments
8. Next Meeting Date: Thursday, January 22, 2026
9. Closed Session
10. Adjournment

Draft Board Meeting Minutes

Board of Wildlife Resources
7870 Villa Park Drive
Henrico, VA 23228

August 21, 2025
9:00 am

Present: Mr. George Terwilliger, **Chair;** Mr. Michael Formica, **Vice Chair;** **Board Members:** Mr. Lynwood Broaddus, Mr. Will Wampler, Mr. Jon Cooper, Mr. James Edmunds, Mr. Parker Slaybaugh, Ms. Marlee Dance, Ms. Laura Walters, Mr. Woody Woodall, Mr. James Maclin; **Executive Director:** Mr. Ryan J. Brown; **Deputy Directors:** Ms. Becky Gwynn and Mr. Darin Moore; **Director's Working Group:** Dr. Mike Bednarski, Mr. Bob Smet, Mr. George Braxton, Mr. Michael Lipford, Ms. Stacey Brown, Ms. Rebecca Lane, Ms. Shelby Crouch, Mr. Paul Kugelman

The Chair called the meeting to order at 9:00 am. The Chair welcomed everyone to the meeting. The Chair noted for the record that a quorum was present.

The Chair welcomed the 3 new Board Members, Ms. Marlee Dance, Mr. Parker Slaybaugh, and Mr. James Maclin to their first Board meeting.

The Chair led the Pledge to the Flag.

Ms. Kelci Block, Assistant Attorney General attended the Board meeting. (Virtual)

Recognition of Employees and Others: The Chair called on Mr. Ryan Brown for recognitions.

Director Brown called on Colonel John Cobb to present Senior Officer Tim Bostic the 2024 Boating Officer of the Year award.

Approval of the May 22, 2025, Board Meeting Minutes:

The minutes of the May 22, 2025, Board meeting minutes have been distributed and posted to website for review. The Chair called for a motion to approve the minutes. Mr. Slaybaugh made a motion to approve the May 22, 2025, Board Meeting minutes. It was seconded by Mr. Formica. Ayes: Terwilliger, Formica, Slaybaugh, Woodall, Edmunds, Cooper, Maclin, Walters, Wampler, Broaddus, Dance

Public Comments – Non-Agenda Items: The Chair called for speakers on Non-Agenda Items.

- Mr. Ray Carter spoke regarding the Budget
- Mr. Gary Kimberlin spoke regarding hound hunting
- Mr. Greg Austin spoke regarding hound hunting
- Mr. Taylor Cuevas spoke regarding bear
- Mr. Judge Charlton spoke regarding hound hunting (v)

Committee Reports:

Wildlife and Boat Committee:

The Chair called on Mr. Jon Cooper for an update of the Wildlife and Boat Committee meeting.

Mr. Cooper gave a report on the Wildlife and Boat Committee meeting from August 20, 2025.

- Turkey Regulation Proposal – Mr. Cooper gave the Turkey Regulation Proposal.

Mr. Cooper called for a motion. Mr. Wampler made a motion. Mr. Chair, I move that the Board of Wildlife Resources propose the amendment to the wild turkey bag limit regulation as presented by staff. It was seconded by Mr. Edmunds.

Ayes: Terwilliger, Formica, Slaybaugh, Woodall, Edmunds, Cooper, Maclin, Walters, Wampler, Broadus, Dance

- Blue Catfish Regulation Proposal - Mr. Cooper gave the Blue Catfish Regulation Proposal

Mr. Cooper made a motion, I move that the Board of Department of Wildlife Resources put forward staff's regulatory recommendations on blue catfish. It was seconded by Mr. Edmunds.

Ayes: Terwilliger, Formica, Slaybaugh, Woodall, Edmunds, Cooper, Maclin, Walters, Wampler, Broadus, Dance

- Regulatory Reform Proposals - Mr. Cooper gave the Regulatory Reform Proposals

Mr. Cooper made a motion. I move that the Board of Department of Wildlife Resources approve the staff recommendations to meet the Agency's goal of 25% regulatory reduction per Executive Order 19, and that they are put forward for public comment.

Ayes: Terwilliger, Formica, Slaybaugh, Woodall, Edmunds, Cooper, Maclin, Walters, Wampler, Broadus, Dance

- Regulation Schedule - Mr. Cooper presented the Regulation Schedule.

Mr. Cooper made a motion, I move that the Board of Wildlife Resources adopt the proposed meeting schedule as presented by staff. It was seconded by Mr. Formica.

Ayes: Terwilliger, Formica, Slaybaugh, Woodall, Edmunds, Cooper, Maclin, Walters, Wampler, Broaddus, Dance

- Mr. Cooper presented the Wildlife Action Plan Revision.

Mr. Cooper made a motion; I move that the Board of Wildlife Resources adopt the 2025 VA Wildlife Action Plan as presented by staff. It was seconded by Mr. Formica.

Ayes: Terwilliger, Formica, Slaybaugh, Woodall, Edmunds, Cooper, Maclin, Walters, Wampler, Broaddus, Dance

Mr. Cooper presented the Mange Management Plan and Response Protocol.

- Mr. Taylor Cuevas spoke regarding bears.

Other business at the August 20, 2025, Wildlife and Boat Committee was:

Mr. Michael Lipford gave an Update on the Wildlife Division, Dr. Mike Bednarski gave an update on Aquatic Division, Ms. Stacey Brown gave an update on the Boating Division, Ms. Amy Martin gave an update on the Nongame Division.

The Chair thanked Mr. Cooper for his report of the Wildlife and Boat Committee meeting of August 20, 2025.

Finance, Audit, & Compliance Committee Report:

The Chair called on Mr. Woody Woodall for an update on the Finance, Audit, and Compliance Committee meeting from August 20, 2025.

Mr. Woodall gave an update on the Finance, Audit and Compliance Committee meeting of May 20, 2025, that covered the DWR FY 25 Budget to Actual and the FY 25 Capital Outlay Expenditures.

The Chair thanked Mr. Woodall for his report of the Finance, Audit and Compliance Committee meeting of August 20, 2025.

Law Enforcement Committee Report:

The Chair called on Mr. Will Wampler for an update on the Law Enforcement Committee meeting of August 20, 2025.

Mr. Wampler gave an update on the Law Enforcement Committee meeting of August 20, 2025.

Mr. Wampler reported on:

- W3 Natural Resources Training Academy – Progress Report
- VLEPSC State Re-Accreditation (First Term)
- Current Basic Academy – Graduation September 12, 2025
- Current Recruitment Effort for 15th Basic Academy

The Chair thanked Mr. Wampler for his update.

Education, Planning, and Outreach Committee Report:

The Chair called on Ms. Laura Walters for an update on the Education, Planning, and Outreach Committee meeting of August 20, 2025.

Ms. Walters gave an update on the Education, Planning, and Outreach Committee Report of August 20, 2025.

Ms. Walters reported on:

- Sponsorship and Partnership Program Overview
- Triple Crossing Falcon Cam Collaboration
- Governance Manual, Code of Ethics and Conduct and Committee Charter Reviews
- Association for conservation Information Convention – Outreach staff received 6 Awards
- Outreach Division welcomed Mr. David Moore as the Hunter, and Landowner Engagement Coordinator

- Ms. Walters had 1 Action Item – Governance Manual, Code of Ethics and Conduct and Committee Charter Reviews

Mr. Wampler made a motion to Defer the Governance Manual, Code of Ethics and Conduct and Committee Charter Reviews to the October 23, 2025, meeting agenda, it was seconded by Mr. Edmunds. Ayes: Terwilliger, Formica, Slaybaugh, Woodall, Edmunds, Cooper, Maclin, Walters, Wampler, Broaddus, Dance

The Chair thanked Ms. Walters for her update.

Director's Report: The Chair called on Director Ryan Brown for his report.

- Law Graduation is September 12, 2025
- Commended all the skills that the Board bring to the table
- Thanked the Farm Bureau for the support they have given this agency over the years
- Welcomed the 3 new Board members to their first meeting
- Thanked Cale Godfrey for the meeting in Charlottesville

Chairman's Report: The Chair, thanked the Board Members for giving him the opportunity to serve as the Board Chair and is looking forward to working with them this year. The Chair thanked Ryan Brown, our Executive Director for all the work and time he puts in to make this agency a better place.

Additional Business/Comments: The Chair asked if any additional business or comments.

Mr. Wampler, made a motion, concerning the meeting times of the Committee meetings. After discussion, Mr. Terwilliger made a substitute motion, The next committee meeting can begin upon adjournment of the prior committee at the discretion of the Chair. It was seconded by Mr. Formica.

Ayes: Terwilliger, Formica, Slaybaugh, Woodall, Edmunds, Cooper, Maclin, Walters, Wampler, Broaddus, Dance

Ms. Becky Gwynn gave an update on Ragged Island, with the \$8 million grant from NOAA and \$44.5 million EPA grant for Wetland Restoration and, and how the work is progressing, announcing it is 50% complete.

Next Meeting Date: The Chair announced that the next meeting date will be Thursday, October 23, 2025.

Closed Session: The Chair announced the Board would go into Close Session at 10:45 am.

Mr. Wampler read the Close Session Motion; it was seconded by Mr. Edmunds.

Ayes: Terwilliger, Formica, Slaybaugh, Woodall, Edmunds, Cooper, Maclin, Walters, Wampler, Broaddus, Dance

Closed Meeting Motion, August 21, 2025

Mr. Chairman,

I move that the Board go into a closed meeting:

Pursuant to Section 2.2-3711.A.1 of the Code of Virginia for discussion or consideration of employment, assignment, appointment, promotion, performance, demotion, salaries, disciplining, or resignation of specific public officers, appointees, or employees of the Department of Wildlife Resources, specifically regarding the performance of the Director.

This closed meeting will be attended only by members of the Board. However, pursuant to Section 2.2-3712(F), the Board requests the Department Director to also attend this meeting, as it believes his presence will reasonably aid the Board in its consideration of topics that are the subject of the meeting.

The Board reconvened from Closed Session at 12:35 pm

The Chair called on Mr. Wampler to read the Certification of Closed Meeting. It was seconded by Mr. Cooper.

Certification of Closed Meeting

August 21, 2025

WHEREAS, the Board of Wildlife Resources conducted a closed meeting on this date pursuant to an affirmative recorded vote and in accordance with the provisions of the Virginia Freedom Information Act; and

WHEREAS, Section 2.2-3712.D of the Code requires a certification by this Board that such closed meeting was conducted in conformity with Virginia law;

NOW, THEREFORE, BE IT RESOLVED that the Board of Wildlife Resources hereby certifies that, to the best of each member's knowledge, only public business matters lawfully exempted from open meeting requirements by Virginia law were discussed in the closed meeting to which this certification resolution applies, and only such public business matters as were identified in the motion convening the closed meeting were heard, discussed or considered by the Board.

The Board Secretary took a roll call vote: Ayes: Terwilliger, Formica, Slaybaugh, Woodall, Edmunds, Cooper, Maclin, Walters, Wampler, Broaddus

Ms. Dance had departed.

The Chair asked if anyone had any further comments, hearing none, he adjourned the Board meeting at 12:35 pm

Respectfully submitted,
/s/ Frances Boswell

4VAC15-240-70.
Game: Turkey: Bag limit.

Summary:

The recommendation is to modify the annual bag limit to eliminate the restriction that no more than two turkeys may be taken during the fall seasons and allow for the take of only one beardless turkey during the license year.

Recommended language of amendment:

The bag limit for hunting turkeys shall be one a day, three a license year, no more than ~~two~~ **one** of which may be ~~taken in the fall~~ **beardless**.

Staff Final Recommendation – Staff recommends adoption of the amendments as final in the form they were proposed.

Rationale:

Public concerns over lower than desired turkey populations in some regions of the state prompted members of the DWR Board of Wildlife Resources to request a reduction in the harvest of beardless turkeys. The proposed reduction in the bag limit for beardless turkeys is intended to protect additional females from harvest, thereby enhancing their potential reproductive output and potentially increasing turkey population. Additionally, this regulation amendment will expand the fall hunting bag limit, enabling fall hunters to take all three of their annual bag limit for turkeys in the fall season, if desired.

Regulation Reduction – Final Amendments

October 22-23, 2025 Board of Wildlife Resources

4VAC15-20-100. Prohibited use of vehicles on department-owned lands.

It shall be unlawful on department-owned lands to drive through or around gates designed to prevent entry with any type of motorized vehicle or to use such vehicles to travel anywhere on such lands except on roads open to vehicular traffic. ~~Any motor-driven vehicle shall conform with all state laws for highway travel; provided, that this requirement shall not apply to the operation of motor vehicles for administrative purposes by department authorized personnel on department-owned lands.~~ Nothing in this section shall be construed to prohibit the use of Class one or Class two electric power-assisted bicycles as defined in § [46.2-100](#) of the Code of Virginia where traditional bicycles are allowed. Class three electric power-assisted bicycles as defined in § [46.2-100](#) are prohibited. Nothing in this section shall be construed to prohibit the department from allowing the use of wheelchairs or other power-driven mobility devices by individuals with mobility disabilities in accordance with the federal Americans with Disabilities Act of 1990 (P.L. 101-336, 104 Stat. 327).

For the purposes of this section, the term "wheelchair" means a manually operated or power-driven device designed primarily for use by an individual with a mobility disability for the main purpose of indoor, or of both indoor and outdoor, locomotion. "Other power-driven mobility device" means any mobility device powered by batteries, fuel, or other engines, whether or not designed primarily for use by individuals with mobility disabilities, that is used by individuals with mobility disabilities for the purpose of locomotion, including golf cars, electronic personal assistive mobility devices, or any mobility device designed to operate in areas without defined pedestrian routes, but that is not a wheelchair within the meaning of this section.

Rationale: This is an unnecessary mandate that would be covered by DOT regulations for vehicular operation and standards on state/public roads.

~~4VAC15-20-110. Refusal to surrender licenses, permits, stamps, or records to department representatives.~~ (REPEAL)

~~No agent, or any other person for him, in possession of issued or unissued hunting, fishing or trapping licenses, permits, stamps, or records pertaining to them, shall refuse to surrender upon demand such licenses, permits, stamps or records to department representatives authorized by the director to take such licenses, permits, stamps, and records into custody.~~

Rationale: With paper licenses and records no longer issued, this is an unnecessary section that can be repealed and reduces our regulatory burden by one mandate. The official licensing system used by DWR is all online.

4VAC15-20-155. Camping on Wildlife Management Areas and other department-owned or department-managed lands.

~~A. Temporary dispersed camping, with no amenities provided, may only be performed on Wildlife Management Areas (WMAs) and other department-owned or managed lands when occupants are engaged in authorized activities and in strict compliance with established terms and conditions, including those listed in this section. Camping may be prohibited on certain portions or entire parcels of department-owned or managed lands, including certain WMAs.~~

B. Authorization. It shall be unlawful to camp without ~~written authorization from the department.~~ an approved camping authorization form. ~~Written authorization to camp is required in addition to any and all other licenses, permits or authorizations that may otherwise be required. Written authorization is obtained by completing and submitting a Camping Authorization Form. Only an individual 18 years of age or older who is a member of and accepts responsibility for the camp and camping group may be issued a camping authorization.~~

C. Camping periods. Unless otherwise posted or authorized, it shall be unlawful to camp for more than 14 consecutive nights, or more than 14 nights in a 28-day period on department-owned or controlled lands. ~~At the end of the authorized camping period, all personal property and any refuse must be removed.~~

D. Prohibited locations. Camping is allowed only at previously cleared and established sites. No vegetation may be cut, damaged, or removed to establish a camp site. It shall be unlawful to camp within 300 feet of any department-owned lake, boat ramp or other facility. It shall be unlawful to camp at other specific locations as posted. This section shall not prohibit active angling at night along shorelines where permitted.

E. Removal of personal property and refuse. Any person who establishes or occupies a camp shall be responsible for the complete removal of all personal property and refuse when the camping authorization has expired. Any personal property or refuse that remains after the camping authorization has expired shall be considered litter and punishable pursuant to § 33.2-802 of the Code of Virginia.

F. It shall be unlawful when camping on department-owned or managed lands to store or leave unattended any food (including food for pets and livestock), refuse, bear attractant, or other wildlife attractant unless it is (i) in a bear-resistant container; (ii) in a trunk of a vehicle or in a closed, locked, hard-sided motor vehicle with a solid top; (iii) in a closed, locked, hard-body trailer; or (iv) suspended at least 10 feet clear of the ground at all points and at least four feet horizontally from the supporting tree or pole and any other tree or pole. It shall be unlawful to discard, bury, or abandon any food, refuse, bear attractant, or other wildlife attractant unless it is disposed of by placing it inside an animal-resistant trash receptacle provided by the department.

G. Any violation of this section or other posted rules shall be punishable as a Class III misdemeanor, and the camping permit shall become null and void. The permittee shall be required to immediately vacate the property upon summons or notification. A second or subsequent offense may result in the loss of camping privileges on department-owned or managed properties.

Rationale: The striking of subsection A lends to regulatory simplification and reduction of unnecessary oversight. Subsection B now references the correct form required to camp and also removes unnecessary mandates regarding the administrative process of obtaining a camping form. The portion struck from subsection C is duplicative of language in subsection E regarding removal of personal property and refuse.

4VAC15-20-160. Nuisance species designated.

A. The board hereby designates the following species as nuisance species pursuant to § [29.1-100](#) of the Code of Virginia.

1. Mammals.

- a. House mouse (*Mus musculus*);
- b. Norway rat (*Rattus norvegicus*);
- c. Black rat (*Rattus rattus*);
- d. Coyote (*Canis latrans*);
- e. Feral hog (*Sus scrofa*; any swine that are wild or for which no proof of ownership can be made);
- f. Nutria (*Myocastor coypus*); and
- g. Woodchuck (*Marmota monax*).

2. Birds.

- a. European starling (*Sturnus vulgaris*);
- b. English (house) sparrow (*Passer domesticus*); and
- c. Pigeon (Rock Dove) (*Columba livia*).
- d. Other nonnative species as defined in the Migratory Bird Treaty Reform Act of 2004 and regulated under 50 CFR 10.13.

~~B. It shall be unlawful to take, possess, transport, or sell all other wildlife species not classified as game, furbearer or nuisance, or otherwise specifically permitted by law or regulation.~~

Rationale: §29.1-520(10) covers what subsection B is saying, so it can be stricken.

4VAC15-20-210. Definitions; nonindigenous aquatic nuisance species.

A. In addition to the species already listed in § 29.1-571 of the Code of Virginia, the board hereby designates the following species as nonindigenous aquatic nuisance species pursuant to § 29.1-100 of the Code of Virginia.

1. Fish.
 - a. Black carp (*Mylopharyngodon piceus*)
2. Invertebrates.
 - a. New Zealand mudsnail (*Potamopyrgus antipodarum*)
 - b. Rusty crayfish (*Orconectes rusticus*)
 - c. Chinese mitten crab (*Eriocheir sinensis*)
 - d. Marbled crayfish (*Marmorkrebs* – genus *Procambarus*)

~~B. It shall be unlawful to take, possess, transport, import, sell, or offer for sale within the Commonwealth any nonindigenous aquatic nuisance species except as authorized by law or regulation.~~

Rationale: §29.1-574(A) covers what subsection B is saying, so it can be stricken.

~~4VAC15-30-10. Possession, importation, sale, etc., of wild animals. (REPEAL)~~

~~Under the authority of §§ 29.1-103 and 29.1-521 of the Code of Virginia it shall be unlawful to take, possess, conduct research, import, cause to be imported, export, cause to be exported, buy, sell, offer for sale, or liberate within the Commonwealth any wild animal unless otherwise specifically permitted by law or regulation. Unless otherwise stated, for the purposes of identifying species regulated by the board, when both the scientific and common names are listed, the scientific reference to genus and species will take precedence over common names.~~

Rationale: Entire section is covered by Code, §29.1-103 sets up authority of the Board, §29.1-521(10) covers this portion of authority, specifically relating to possession and transportation, which drive all of the prohibited activities outlined in the stricken regulatory language. §29.1-521(11) address sale of wild animals and parts.

4VAC15-30-40. Importation requirements, possession, and sale of nonnative (exotic) animals.

[ONLY AFFECTED LANGUAGE DISPLAYED FOR DOCUMENT LENGTH CONSIDERATIONS]

~~F. Exception for snakehead fish. Anglers may legally harvest snakehead fish of the family Channidae, provided that they immediately kill such fish and that they notify the department, as soon as practicable, of such actions. (NOTE: blue highlight is a reg reduction already approved in May 2025 and will be effective on 9/1; yellow is a new change)~~

Rationale: Subsection F was amended by the DWR Board in May of this year to strike the mandatory reporting mandate. This change will become effective (law) on 9/1/2025. However, further review of this section reveals that the whole subsection F is unnecessary as it duplicates §29.1-574(B).

4VAC15-35-80. Permit procedures.

A. ~~Required general information.~~ A permit application must ~~contain the following information:~~ be completed and submitted to the department.

~~1. Applicant's full name and address, telephone number, and, if available, fax number and email address;~~

~~a. If the applicant resides or is located outside of the Commonwealth of Virginia, the name and address of an agent located in the Commonwealth of Virginia; and~~

~~b. If the applicant is an entity, a description of the type of entity and the name and title of an individual who will be responsible for the permit;~~

~~2. Location of the regulated activity;~~

~~3. Certification in the following language: "I hereby certify that the information submitted in this application is complete and accurate to the best of my knowledge and belief";~~

~~4. Desired effective date of the permit except where issuance date is fixed by the sector-specific plan under which the permit is issued;~~

~~5. Desired duration of the permit, if less than the default term for the sector-specific plan under which the general or individual incidental take permit is requested;~~

~~6. Date of application;~~

~~7. Signature or electronic signature of the applicant; and~~

~~8. Such other information or documentation as may be required by the applicable sector-specific plan.~~

B. Administrative procedures.

1. The department shall determine the completeness of an application and shall notify the applicant of any determination within 45 calendar days of receipt. Where available to the applicant, electronic communication may be considered communication in writing.

a. If, within those 45 calendar days, the application is deemed to be incomplete, the applicant shall be notified in writing of the reasons the application is deemed incomplete. If the application is resubmitted, all deadlines in this section shall apply from the date of receipt of the resubmitted application.

b. If a determination of completeness is made and the associated sector-specific plan does not require additional department review, the application is deemed approved and the applicant will be notified in writing.

c. If a determination of completeness is not made and communicated to the applicant within 45 calendar days of receipt, the application shall be deemed complete on the 46th day after receipt.

d. If the application is complete and the associated sector-specific plan requires additional department review, the department will take no more than 120 days to review. Bundled projects subject to prior approval of biennial standards and specifications as described in [4VAC15-35-90](#) may take up to 180 days. If, at the end of the designated review period, the department has not taken final action on the application or notified the applicant in writing of the need for an additional 60 days for review, the application shall be deemed approved.

2. During the review period, the application shall be approved or disapproved, and the decision communicated in writing to the applicant. If the application is not approved, the reasons for not approving the application shall be provided in writing. Approval or denial shall be based on the application's compliance with the requirements of this chapter and the applicable sector-specific plan.

a. If the application is not approved, the applicant shall have 45 calendar days to revise the permit application to bring it into compliance with the appropriate sector-specific plan or to appeal the decision to the director of the department under the department's dispute resolution and administrative appeals procedure. The applicant may request, in writing, an extension of the timeframe in which to submit a revised application, not to exceed an additional 60 calendar days. If the revised application is not submitted within the defined timeframe, the department will administratively close the application.

b. Upon submission of a revised application after denial, the department shall have 120 days to review and make a determination. If the application is denied again, the applicant will have 45 days after denial to appeal the decision to the director of the department under the department's dispute resolution and administrative appeal procedure. Any new revisions to the permit must be submitted as a new application.

3. Upon approval of an application for an individual incidental take permit, the department will provide the applicant with a permit, including terms and conditions. The applicant shall have 30 calendar days to appeal terms and conditions to the department director under the department's dispute resolution and administrative appeals procedures.

C. Permit issuance.

1. Denial. The department shall not issue a permit if:

- a. The applicant has one or more of the disqualifying factors included in subdivision 2 of this subsection;
- b. The applicant has failed to disclose material information or has made false statements as to any material fact in connection with the application; or
- c. The department determines that the application fails to comply with the applicable sector-specific plan or any other applicable wildlife law, regulation, or ordinance.

2. Disqualifying factors. The department will provide written notice of any known disqualifying factors to the applicant. Any one of the following will disqualify an applicant from receiving or exercising a permit:

- a. A conviction of, or entry of a plea of guilty or nolo contendere by, the applicant or a representative of the applicant for a violation of the Lacey Act (16 USC § 3371 et seq.); the federal Migratory Bird Treaty Act (16 USC § 668 et seq.); the federal Bald and Golden Eagle Protection Act (16 USC § 668 et seq.); the federal Endangered Species Act (16 USC § 1531 et seq.); the Virginia Endangered Species Act (§ [29.1-563](#) et seq. of the Code of Virginia); or this chapter within the five-year period preceding the application, unless such disqualification has been expressly waived by the department in response to a request by the applicant.

- b. The failure to pay any required fees.

- c. The suspension of any other incidental take permit. The applicant is disqualified from receiving any additional incidental take permits as long as the suspension exists.

3. Fees. An application fee of \$50 and a permit fee of \$50 per year shall be due for each permit. ~~The application fee shall be due at the time of application submittal, and no~~ No application shall be processed until the fee is received. ~~The full amount of the permit fee shall be based on the default duration of the permit and is due at the time of certification if no approval is required. If the department's approval is required, the full amount of the permit fee is due upon approval or issuance of a permit. The fees will be deposited into the Nongame Cash Fund and used for the conservation and management of regulated bird species consistent with § 58.1-344.3 of the Code of Virginia. No refund of any fees paid shall be made if a permit application is denied or if a permit is terminated prior to the expiration date.~~

4. Permit renewal. Applications for renewal shall meet and comply with all requirements for permit application and be submitted at least 90 calendar days prior to the expiration of an existing permit.

5. Modifications to permits. Permits may be modified with the department's approval in accordance with the following:

a. Applicant's request. Where circumstances have changed so that an applicant desires to have any condition of the permit modified, the applicant must submit a full written justification and supporting information to the department in conformity with the terms and conditions under which the permit was issued.

b. Department determination. The department may amend any permit during its term where circumstances have changed such that amendments to the permit are deemed necessary by the department. In such instances, the department will notify the applicant in writing 60 calendar days in advance of the effective date of any amendment. The applicant shall have 30 calendar days to appeal the decision to the department director under the department's dispute resolution and administrative appeals procedures.

6. Transfer of permits and scope of permit authorization.

~~a. Except as otherwise provided for in this subsection, permits issued under this part are not transferable or assignable.~~

b. Permits may be transferred in whole or in part through a joint submission by the applicant and the proposed transferee, or, in the case of a deceased applicant, the deceased applicant's legal representative and the proposed transferee. The department will review the submission and approve the transfer provided that:

(1) The proposed transferee meets all of the qualifications under this part for holding a permit;

(2) The proposed transferee has provided adequate written assurances that it will implement the relevant terms and conditions of the permit; ~~and~~

~~(3) The proposed transferee has provided other information that the department determines is relevant to the processing of the submission.~~

c. Except as otherwise stated on the face of the permit, any person who is under the direct control of the applicant or who is employed by or under contract to the applicant for purposes authorized by the permit may carry out the activity authorized by the permit. However, the applicant will remain responsible for ensuring compliance with all aspects of the permit.

7. Discontinuance of permit activity. When an applicant discontinues activities authorized by a permit, the applicant shall within 30 calendar days of the discontinuance notify the department of permit termination.

8. Permit inspections. The department shall have the right to perform inspections of a permitted activity to ensure compliance with permit conditions. Written, including electronic, or verbal notice of such inspection shall be given on a business day, and the inspection shall not occur no less than one and no more than five business days from the date of the notice, except when the department determines that an emergency inspection is necessary.

9. Permit suspension and revocation.

a. Criteria for suspension. The privileges of exercising some or all of the permit authority may be suspended at any time if the applicant is not in compliance with the conditions of the permit, the sector-specific plan, or any applicable laws or regulations governing the conduct of the regulated activity. Such suspension shall remain in effect until the department determines that the applicant has corrected the deficiencies.

b. Criteria for revocation. A permit may be revoked for any of the following reasons:

(1) The applicant willfully violates any provision of the Virginia Endangered Species Act (§ [29.1-563](#) et seq. of the Code of Virginia); the federal Migratory Bird Treaty Act (16 USC § 703 et seq.); the federal Bald and Golden Eagle Protection Act (16 USC § 668 et seq.); the federal Endangered Species Act (16 USC § 1531 et seq.); or the conditions or a permit issued under those acts or this chapter; or

(2) The applicant fails within 60 calendar days to correct deficiencies that were the cause of a permit suspension.

c. Procedure for suspension and revocation.

(1) The applicant shall be notified in writing of the suspension or revocation by certified or registered mail. This notice shall identify the permit to be suspended, the reasons for such suspension, and the actions necessary to correct the deficiencies and inform the applicant of the right to appeal the suspension. The department may amend any notice of suspension or revocation at any time.

(2) The applicant shall be provided with an opportunity to appeal the suspension or revocation within 30 calendar days of mailing the suspension or revocation notice. Appeal may be requested by filing a written objection specifying the reasons the applicant objects to the suspension or revocation and may include supporting documentation. Amendment of a notice of suspension or revocation will allow the applicant another 30 calendar days to appeal the decision from the date of mailing notice of the amendment if they have not already initiated an appeal.

(3) If at the end of 30 calendar days no appeal has been received by the department, a final order shall be issued suspending or revoking the permit.

(4) If the applicant timely submits an appeal, an informal fact-finding proceeding will be held within 30 calendar days, or at the option of the department or the applicant, a formal hearing may be scheduled as soon as may be practicable.

(5) Following an informal fact-finding proceeding or formal hearing, a final decision shall be made by the director within 30 calendar days of the informal fact-finding proceeding or receipt of a recommendation by any hearing officer.

Rationale: Amendments applied are for regulatory reduction purposes to remove unnecessary requirements and do not change the desired outcomes of the regulation's intent.

4VAC15-40-200. Restricted use of above ground body-gripping traps in excess of five inches.

It shall be unlawful to set above the ground any body-gripping trap with a jaw spread in excess of five inches when using any bait, lure, or scent; provided, that baited body gripping traps with a jaw spread up to 7-1/2 inches may be used when the trap is within an enclosure with openings no greater than 60 square inches and the trap trigger is recessed at least 12 inches from all openings; provided further that such traps must be staked to prevent them from turning over and may ~~only be used on private lands with written permission of the landowner.~~ not be used on public lands.

Rationale: The amended language simplifies the regulation by removing two mandates and replacing with one mandate (*not to be used* on public lands).

4VAC15-40-260. Sunday hunting on controlled shooting areas.

A. Except as otherwise provided in the sections appearing in this chapter, it shall be lawful to hunt pen-raised game birds seven days a week as provided by § 29.1-514 of the Code of Virginia. The length of the hunting season on such preserves and the size of the bag limit shall be in accordance with rules of the board. For the purpose of this chapter, controlled shooting areas shall be defined as licensed shooting preserves.

~~B. It shall be unlawful to hunt pen-raised game birds on Sunday on controlled shooting areas in Augusta County or in any county or city which prohibits Sunday operation by ordinance.~~

Rationale: Sunday hunting is now legal. Any local ordinances a locality places on hunters regarding the use of firearms or time-of-day noise rules are outside the scope of this regulation section.

4VAC15-40-280. Department-owned, controlled, or managed lands; annual permit for hunting on lands managed by the department.

A. The open seasons for hunting and trapping, as well as hours, methods of taking, and bag limits for department-owned or department-controlled lands, or lands managed by the department under cooperative agreement, shall conform to the regulations of the board unless excepted by posted rules established by the director or his designee. Such posted rules shall be displayed at each recognized entrance to the land where the posted rules are in effect.

B. Department-owned lands shall be open to the public for wildlife observation and for hunting, fishing, trapping, and boating (as prescribed by 4VAC15-320-100) under the regulations of the board. Other activities deemed appropriate by the director or his designee may be allowed by posted rules, by written authorization from the director or his designee, or by special permit.

C. No person shall hunt on lands managed by the department through a lease agreement or other similar memorandum of agreement where the department issues an annual hunting

permit without having purchased a valid annual hunting permit. The ~~annual hunting permit shall be in addition to the required licenses to hunt, and the~~ cost of such permit shall be the same as the cost of the annual state resident hunting license in § 29.1-303 of the Code of Virginia.

D. Activities that are not generally or specifically authorized in accordance with subsections A through C of this section are prohibited and shall constitute a violation of this regulation.

Rationale: Stricken language in subsection C is unnecessary. Hunters who utilize Public Access Lands for Sportsmen (PALS) need to obtain such permit to do so in addition to having their other annual or lifetime hunting licenses and big game tags; remaining language reflects this requirement.

4VAC15-90-280. Sale of cervid parts and cervid mounts.

~~Provided that no extraneous muscle tissue is attached, it~~ It shall be lawful to purchase or sell the hair, hide, tail, sinew, skull, antlers, bones, and feet of a legally possessed cervid carcass or cervid carcass part, any products made from these deer parts, and cervid mounts.

Rationale: Regulatory language is unnecessary and implied in that muscle tissue is not listed as a lawful part for purchase or sale.

4VAC15-200-60. Disposal of wild rabbit parts.

~~No wild rabbit carcasses or carcass parts may be discarded or disposed of directly on the ground.~~ All ~~such~~ wild rabbit carcasses or carcass parts must be buried at least two feet below ground, incinerated, or securely bagged and discarded in household trash for ultimate disposal in a permitted landfill.

Rationale: Amendments simplify regulation by using one mandate instead of two.

4VAC15-275-10. Application.

This chapter applies to any person who has never obtained a license to hunt in any state or country or any person who is younger than 16 years of age, unless such a person presents to the Department of Wildlife Resources or one of its authorized license vendors a certificate proof of completion in hunter education issued or authorized by the director or the director's representative under the hunter education program or proof that he holds the equivalent certificate obtained from an authorized agency or association of another state or country.

Rationale: The word “proof” is proposed to be added to allow flexibility for those who can show proof of completion rather than needing to show the actual certificate itself. This tracks with our move to online records keeping within a customer’s Go Outdoors account.

4VAC15-275-20. Definitions.

The following words and terms when used in this chapter shall have the following meanings

unless the context clearly requires a different meaning:

"Accompanied and directly supervised" means, in the case of an apprentice hunter, that a licensed person older than 18 years of age maintains a close visual and verbal contact with, provides adequate direction to, and can immediately assume control of the firearm from the apprentice hunter. In the case of a hunter 12 years of age or younger, the term means that the licensed adult is within sight of the person the age of younger than 12 years of age.

"Adult" means the parent or legal guardian of the person age younger than 12 years of age, or such person the age of older than 18 years of age designated by the parent or legal guardian.

"Approved course provider" is any individual, business, or organization that makes available to the hunting public a hunter education course that is approved by the International Hunter Education Association – United States (IHEA-USA) and is accepted by the department. An approved course provider shall have executed and have on file a valid cooperative agreement with the department. The department will make information regarding such approved courses and providers readily available for public access.

"Board" means the Board of Wildlife Resources.

"Department" means the Department of Wildlife Resources.

"Hunter education course" means a course offered in the classroom, through the Internet, or through an electronic format that provides course content and test questions that at a minimum meet the International Hunter Education Association-USA Education Standards, ~~May 2, 2014,~~ set forth by the International Hunter Education Association-USA (IHEA-USA) and are accepted by the department. ~~A hunter education course shall include no less than 50 test questions, which shall include at least eight test questions specific to Virginia hunting laws.~~

"IHEA-USA" means the International Hunter Education Association-USA.

"Virginia Hunter Education Card" means a card authorized for issuance by the department to a person who has met the minimum standard of hunter education course competency. This card may be issued as an original or a replacement hunter education course card.

Rationale: The International Hunter Education Association – USA Standards have been updated in 2024, with tentative plans to update bi-annually. By removing the May 2, 2014 date, we are able to maintain current standards without regard to the obsolete date of 2014. Removing “A hunter education course shall include no less than 50 test questions, which shall include at least eight test questions specific to Virginia hunting laws” allows us to follow IHEA-USA Standards should they deviate from the 2014 Standard of a minimum of 50 test questions.

4VAC15-275-30. Provisions for compliance and minimum standards for hunter education course competency.

A. A person shall be considered in compliance with the requirements for hunter education if

he meets one or more of the following provisions pursuant to § [29.1-300.2](#) of the Code of Virginia:

1. Completes and passes a hunter education course that is accepted by the department including a fully online course;
2. Is 16 years of age or older and has previously held a license to hunt in any state or country;
3. Is under the age of 12 years and is accompanied and directly supervised by an adult who holds a valid Virginia hunting license; or
4. Holds a Virginia apprentice hunting license and is accompanied and directly supervised by a licensed adult hunter.

B. The minimum standards for hunter education course competency required by the department are: a passing score of 80% on a closed-book written test upon completion of an in-person classrooms course or a passing score of 90% on a self-administered test in conjunction with the course material of a hunting safety education course delivered through the internet.

~~1. Successful completion of a classroom-based hunter education course or through another format as determined by the department with a passing score of at least 80% on a written test administered closed book at the conclusion of the course by the designated course instructor or other designated course assistant as determined appropriate by the department; and~~

~~2. Successful completion of an Internet hunter education course that is approved by the department with a passing score of at least 90% on an open-book test administered during the online course.~~

Rationale: Cleaned up language and streamlined content. This change does not alter the content, only the expression of the content.

4VAC15-275-40. Hunter education course provider requirements.

~~A. To be an approved course provider, any individual, business, or organization that instructs or provides a hunter education course shall execute and have on file a cooperative agreement with the department. It shall be the responsibility of the state hunter education program manager or his designee to develop and execute such agreements. A list of approved course providers and hunter education courses shall be kept by the department and made available to the public. Such list does not constitute any endorsement of any course or course provider by the department or the board.~~

B. As of January 1, 2016, any hunter education courses offered through the Internet and accepted by the department shall:

1. Meet the International Hunter Education Association-USA Education Standards, ~~May 2, 2014,~~ set by the IHEA-USA for course content; and

2. Be provided only by an approved course provider that has executed a valid cooperative agreement with the department. Such agreements may be amended at any time by the department and may be canceled with 30 days notice upon failure of the course provider to comply with the terms and conditions of the agreement or its amendments.

C. Any material or product to be used by an approved course provider that makes reference to the department must be approved by the department through the hunter education program manager or his designee before being published or distributed to the public.

D. Any fees charged by a course provider are set by the course provider, but must be clearly communicated to the student prior to the student taking the course. ~~There will be no fees for Virginia hunter education courses provided by the department.~~

Rationale: Section A is redundant and is covered by DWR Hunter Education Program Policy as well as IHEA-USA Standards. Item B, inserting “and” broadens scope to be more inclusive of all Hunter Education programs. Item B.1. removes the obsolete date of a previous IHEA-USA Standards date of issue. Item D is redundant and covered by DWR Policy.

4VAC15-275-60. Hunter education course certificates, record keeping, and student records.

A. Upon successful completion of an online hunter education course, the approved course provider shall provide the student with a course certificate or wallet-size card. At a minimum, such certificate or card shall include the student's name and date of birth, the issuance date, the name of the course, and an indication of acceptance by the department. ~~On a schedule and in a manner mutually agreed to through a cooperative agreement, each approved online course provider shall provide to the department a copy of the record of those students issued a course certificate or wallet-size card. Upon request by the student and subject to verification of successful course completion, it shall be the responsibility of each approved online course provider to issue a duplicate certificate or card.~~

B. Upon successful completion of the Virginia hunter education classroom-based course, the department shall issue a completion certificate or card, which shall include the person's name, ~~date of birth,~~ and the issuance date. Upon request by the person to whom the certificate or card was originally issued and subject to verification of successful completion, the department shall issue a duplicate certificate or card in accordance with its policy.

C. The department shall maintain a database of all students successfully completing the department's classroom-based or online hunter education course. Such database shall include, but not be limited to, student name, address, date of birth, course or other compliance format approved by the department, and the specific name of the course.

D. Each approved course provider for hunter education courses offered over the Internet or through an electronic format shall maintain a database of all students successfully completing such course. The database shall include, but not be limited to, student name, address, date of birth, course completion date, and the specific name of the course.

Rationale: Streamlines and combines sections 4VAC15-275-60 with 4VAC15-275-70.

~~4VAC15-275-70. Recordkeeping and student records. (REPEAL)~~

- ~~A. The department shall maintain a database of all students successfully completing the department's classroom based or online hunter education course. Such database shall include, but not be limited to, student name, address, date of birth, course or other compliance format approved by the department, and the specific name of the course.~~
- ~~B. Each approved course provider for hunter education courses offered over the Internet or through an electronic format shall maintain a database of all students successfully completing such course. The database shall include, but not be limited to, student name, address, date of birth, course completion date, and the specific name of the course. On a schedule and in a manner mutually agreed to through a cooperative agreement, each approved course provider shall provide to the department a copy of the record of those students who successfully complete its course. Such record shall include the database information referenced in this section. It shall be the responsibility of each approved course provider to ensure that reasonable measures, such as the Payment Card Industry (PCI) data security measures, are taken to protect any acquired student data. Further, such data shall not be sold or otherwise used in any way except for the student's own completion of a hunter education course and issuance of course completion documents.~~

Rationale: Streamlines and combines section VAC15-275-70 with 4VAC15-275-60.

4VAC15-275-80. Instructor certification.

- A. The department may designate as a hunter instructor any person found by it to be competent to give instruction in the courses required.
- B. Volunteer instructors are designated to work on a voluntary basis and at the pleasure of the Department of Wildlife Resources.
- C. To be certified as a hunter education course instructor for the department's hunter education program, a person shall (i) have successfully completed a hunter education course and (ii) be certified as an instructor by the department or by a certification program accepted by the department.
- D. Applicants for certified instructor shall submit an application to the department on a form and in a manner determined by the hunter education program manager.
- Applicants may be required to submit a written consent for a criminal history background check in a manner determined by the Law Enforcement Division of the department. At a minimum, the application shall include:

- ~~1. The applicant's name;~~
- ~~2. The applicant's street address;~~
- ~~3. The applicant's telephone number;~~
- ~~4. The applicant's email address, if any;~~
- ~~5. Information describing the applicant's experience and training in hunter and hunting and proof of completion of a hunter education course that is accepted by the department; and~~
- ~~6. Any other information deemed necessary after review of the initial application.~~

~~E. Applicants may be required to submit written consent for a criminal history background check in a manner determined by the department or an interview in a manner determined by the department and in accordance with state policy.~~

Rationale: Simplifies the process which is covered by DWR Volunteer Policy.

~~4VAC15-275-90. Virginia Hunter Education Card. (REPEAL)~~

- ~~A. The department may issue an optional long-lasting and durable Virginia Hunter Education Card to persons who can show that they have met the minimum standard of hunter education course competency pursuant to § 29.1-300.2 of the Code of Virginia.~~
- ~~B. Upon receipt by the applicant, the optional Virginia Hunter Education Card will serve in lieu of any other certificates or cards that have been issued to the bearer as a result of meeting the minimum standards for hunter education course competency. As such, the Virginia Hunter Education Card will not be transferable or revocable and will have no expiration date.~~
- ~~C. A person may apply for a replacement Virginia Hunter Education Card. A replacement card may be issued if (i) the original card is lost, stolen, or destroyed; (ii) misinformation is printed on the card; or (iii) if the bearer has legally changed his name. Supporting documentation may be required.~~

Rationale: Covered by DWR Hunter Education Policy.

~~4VAC15-275-100. Fees. (REPEAL)~~

- ~~A. Pursuant to § 29.1-300.3 of the Code of Virginia, no fee shall be charged for the instructor's service.~~
- ~~B. Fees charged by an approved online course provider for hunter education courses other than the department's course are set by the course provider, but must be clearly communicated to the student prior to the student taking the course.~~
- ~~C. The fee for issuance of an optional Virginia Hunter Education Card, which will serve in lieu of a previously obtained hunter education course certificate or card, or a replacement Virginia Hunter Education Card shall be \$10.~~

Rationale: Covered by DWR Hunter Education Policy.

4VAC15-290-80. Stuffing or mounting birds and animals – records; inspections.

A. A holder of a permit to stuff or mount birds and animals shall keep a complete record of all transactions ~~as required by the permit. Such records shall include the species to be mounted or tanned; the date of receipt; the name, address and telephone number of the person for whom the work is being performed; the name of the person who killed the specimen (if different from above); the hunting license or Virginia driving license number of such person; the county where the specimen was taken or, if taken out of state, the state in which it was taken; and the date the completed work was returned to the customer. Such records shall be retained for three years. These records, and the premises where such business is conducted, shall be open to inspection by representatives of the department during normal business hours.~~

B. ~~Upon receipt of any specimen of wildlife, a~~ A holder of a permit shall ~~immediately~~ affix to such specimen a tag bearing the designation of the species, the name and address of the customer and the date the specimen was killed. ~~Such tag shall remain affixed to the specimen, except when the specimen is actually in the process of being worked on, until it is delivered to the customer.~~ A numbered tag, with numbers corresponding to the number of the line entry of the records required in subsection A of this section, may be used in lieu of that.

Rationale: Amendments applied in order to reduce regulatory burden of unnecessary language without changing the ultimate regulatory outcomes.

4VAC15-290-140. Possession and display of a harvest information program authorization to hunt migratory game birds.

Every person, whether licensed or exempt from being licensed, ~~(i)~~ must be registered with the Virginia Harvest Information Program (HIP) to hunt migratory game birds, including waterfowl, doves, woodcock, snipe, rails, gallinules, moorhens, and coots; ~~(ii) must carry the HIP authorization on his person when hunting; and (iii) shall present it immediately upon demand of any officer whose duty it is to enforce the game and inland fish laws.~~ The penalty for violation of this section is prescribed by § 29.1-505 of the Code of Virginia.

Rationale: Amendments applied in order to reduce regulatory burden of unnecessary language without changing the ultimate regulatory outcomes. Hunters now have their HIP numbers and proof of purchase in the online Go Outdoors Virginia account, and Conservation Police can look these up remotely.

4VAC15-330-180. Bills of sale for trout creel in commercially operated fishing ponds.

The operator of a commercially operated fishing pond shall be required to furnish each fisherman taking trout therein a ~~bill of sale, which shall include the name of the fisherman, date, species and number of trout creel.~~ receipt. The fisherman shall retain this ~~bill of sale~~

receipt as long as the fish are in his possession ~~and a duplicate of that shall remain with the operator of the commercially operated fishing pond and be made available for inspection by all authorized department personnel.~~

Rationale: Regulatory simplification per Executive Order 19, reduces two mandates while still maintaining the integrity of the regulatory section.

4VAC15-330-190. Trout artificially raised for sale.

A. Permit required. It shall be lawful to sell artificially raised brown trout, brook trout or rainbow trout. Commercial aquaculture operations in Virginia that artificially raise and sell brown, brook, and rainbow trout must obtain a permit from the department.

~~B. Records. Any person who shall artificially raise brown trout, brook trout or rainbow trout for sale shall keep a record of the number and species, the number raised or, if imported, from whom purchased.~~

~~C. Inspection of premises or establishments. Any establishment raising trout or ordering, importing or possessing trout, as provided for in subsection A of this section, shall be open to inspection at all reasonable hours to any representative of the department.~~

D. Trout as bait. Artificially raised rainbow trout may be sold as bait for use in the James River and the New River, and in impoundments (ponds, lakes, and reservoirs), except impoundments listed as designated stocked trout waters, Lake Moomaw, and Philpott Reservoir. Persons possessing purchased rainbow trout for bait must have a valid invoice or bill of sale, specifying date of purchase, the number of trout purchased, and name of an individual or business permitted to sell trout.

Rationale: Records are kept per permit issuance terms to artificially raise trout, so not needed in regulatory language. Same with notice of inspections; is outlined upon issuance of trout aquaculture operations.

4VAC15-340-20. Haul seines to take fish for personal use.

A. Authorization to take fish for personal use. Pursuant to §§ 29.1-412 and 29.1-416 of the Code of Virginia, a permit to use a haul seine to take fish for personal use authorizes the holder of such permit to take nongame fish (except for those species listed in 4VAC15-20-130) with a haul seine for private table use, but not for sale in the counties of Franklin, Henry and Patrick, and in those waters as specified in § 29.1-531 of the Code of Virginia in the county for which such permit is issued, except as otherwise prohibited in 4VAC15-320-100, 4VAC15-330-60, 4VAC15-330-20 (Repealed), and in waters listed in subsection F of this chapter.

B. Holder to be present when seine operated. The holder of a permit to take fish with a haul seine for personal use must be present when the seine is being operated but may have other persons to assist him who are not required to have a permit. However, those assisting the

permittee or handling live fish or both must meet the fishing license requirements of the Commonwealth.

C. Length and size of haul seines. The length of a haul seine to take fish for personal use shall not be more than 60 feet in length. The minimum size of mesh shall be 1-½-inch bar mesh (3-inch stretch mesh).

D. Season to take fish with a haul seine. The season to take fish with a haul seine for personal use shall be from July 1 through September 30, both dates inclusive.

~~E. Department notification required to use a haul seine. Persons permitted to use a haul seine for personal use must notify the regional law enforcement office a minimum of 48 hours prior to use.~~

F. Haul seine use restricted in certain areas. The use of haul seines for personal use is prohibited in the following stream sections of Franklin and Patrick counties:

FRANKLIN COUNTY

Roanoke River from County Route 634 crossing upstream to the Roanoke/Franklin County line.

PATRICK COUNTY

Smith River from Philpott Lake upstream including headwaters.

Rock Castle Creek from its confluence with Smith River upstream, including headwaters.

Dan River from VA/NC state line upstream to County Route 631 crossing.

Poorhouse Creek from its confluence with North Fork Mayo River upstream including headwaters.

North Fork Mayo River from its confluence with Poorhouse Creek upstream.

Rationale: No other gear requires notification of law enforcement officer. Further, very few personal haul seine permits are issued in a given year. None were issued in 2025.

4VAC15-340-40. Dip nets; generally.

A. Authorization to take fish with dip nets. A county dip net permit shall authorize the holder to take shad, herring, mullet, and suckers (daily creel (possession) limits for shad and herring are found in 4VAC15-320-25, there is no limit for mullet, and subsection D of this section provides limits for suckers), in the county named on the face of the permit with a dip net in inland waters, except where otherwise prohibited by local legislation or by the sections appearing in this chapter.

B. Persons required to have permit; inspection by conservation police officers. A dip net permit, or valid fishing license, shall be required for all persons using or assisting in the use of a dip net

and permits, or licenses, shall be carried at all times while using such nets ~~and shall be subject to inspection by conservation police officers.~~

C. Release of certain fish netted. All fish, except shad, herring, mullet, suckers and carp, when taken with a dip net shall be returned to the water alive with as little injury as possible.

D. Special provisions applicable only to suckers. The following special provisions shall apply only to the taking of suckers, with a dip net:

1. Not more than 20 may be taken by any person in one day;
2. The open season for taking same with a dip net shall be from February 15 through May 15, both dates inclusive; and
3. Dip nets for taking such fish shall not be more than six feet square.

Rationale: Removes unnecessary language from subsection B. Conservation Police Officers do not need this regulatory permission to inspect fishing tackle.

4VAC15-360-20. Taking minnows and chubs for sale.

~~A. "Haul seine," as used in this section, when used in the inland waters of the Commonwealth above where the tide ebbs and flows shall mean a haul seine not exceeding four feet in depth by 15 feet in length and when used in the public inland waters below where the tide ebbs and flows shall mean a haul seine not exceeding four feet in depth by 100 feet in length. Such a term shall be construed also to include umbrella type nets without limit as to size and also small minnow traps with throat openings no larger than one inch in diameter.~~

B. It shall be unlawful to take minnows and chubs (Cyprinidae) for sale from the inland waters of the Commonwealth.

C. Commercial bait operations must have a Permit to Hold or Sell Certain Wildlife or a Permit to Propagate and Sell Certain Wildlife. With the exception of those species listed in 4VAC15-20-130, these operations may possess and sell unlimited quantities of minnows and chubs (Cyprinidae), when possession is accompanied by a valid invoice or bill of sale from an individual permitted under subsection B of this section or from a properly permitted aquaculture facility in Virginia or out-of-state.

Rationale: Since taking of minnows and chubs for sale is not allowed, there is no need to define a gear type or restrictions on that gear.



VIRGINIA DEPARTMENT OF WILDLIFE RESOURCES

2025-2029 BLACK BEAR MANGE MANAGEMENT PLAN

ACKNOWLEDGEMENTS

Primary contributors to this plan include the following Virginia Department of Wildlife Resources Staff:

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Executive Summary

Mange, a highly contagious skin disease caused by mites, affects many wild and domestic mammals. Sarcoptic mange caused by *Sarcoptes scabiei* is implicated most often in Virginia's bears. From 2014 to 2018, sporadic reports of bear mange in Virginia were primarily focused in the northern Shenandoah Valley (close to known distributions in West Virginia, Maryland, and Pennsylvania). Since 2020, reports have increased in frequency and geographic spread, with 27 counties having at least 3 cases and 33 counties having at least one case. There are many unknowns related to the occurrence and spread of mange in bears. Clinical signs can include itching, hair loss, thickened and dry skin, altered behavior, and poor body condition in severe cases. Research and experience has shown that many bears with mild to moderate cases can survive and clear symptoms of mange. There has been no clear evidence from other states with longer histories with sarcoptic mange that the disease limits bear populations over the long-term. However, localized population declines have been observed recently in some mange-affected areas of Virginia, particularly in counties with historically liberal harvest seasons.

With a primary goal of long-term population viability, Virginia Department of Wildlife Resources (VDWR) recognizes that it must utilize an adaptive management framework to address the imperfect knowledge about mange in bears. Informed by the 2023-2032 Virginia Bear Management Plan, goals for the management of bear mange in Virginia include:

- 1) implementing science-based surveillance and management techniques,
- 2) managing for resilient populations of black bears affected by sarcoptic mange,
- 3) identifying and addressing critical knowledge gaps, and
- 4) communicating effectively with constituents and fostering citizen science opportunities.

This management plan is structured around these four goals. Objectives developed to guide the attainment of each goal are followed by potential strategies that clarify approaches or actions that can be taken.

Surveillance and Monitoring

To date, the majority of VDWR's surveillance for sarcoptic mange has been from opportunistic investigations of bears with suspicious clinical signs reported by members of the public or hunting communities. Strategies going forward will continue to leverage public reports and citizen science to track the status of the disease, both in bears and wild canids. More active (and costly) surveillance methods are required to answer important epidemiological questions like prevalence/incidence rates of disease, impacts to

populations, and changing host: parasite dynamics. This plan includes objectives and strategies to address:

- standard data collection and response protocols,
- comprehensive statewide surveillance for mange in bears, and
- surveillance for mange in other wildlife species.

Management & Response

Control measures that are both cost-effective and likely to be helpful should be evaluated and implemented, but it is important to acknowledge that no “silver bullets” currently exist. Eradication of mange in free-ranging species with robust populations has not been successful and is not a practical, cost-effective goal. This plan includes objectives and strategies to address:

- removal of severely infested bears,
- transmission of mange, and
- bear population management in the face of mange.

Research

For over a decade, VDWR has participated in research efforts within Virginia and across multiple other affected states to better understand mange in bears. This plan includes objectives and strategies to address future research opportunities, limitations, and hurdles.

Communication & Outreach

Since 2014, when the current sarcoptic mange outbreak in bears began in Virginia, a central component of VDWR’s efforts related to mange has been outreach and communication with the general public, interested hunters and landowners, and external partners and agencies within Virginia and regionally. This plan includes objectives and strategies to address:

- public awareness of mange,
- engagement of constituents in surveillance and management, and
- inter- and intra-agency understanding of mange.

Introduction

Mange is a highly contagious skin disease caused by microscopic mites affecting many wild and domestic mammals. At least four different mite species have been reported in bears (see Appendix 2); however, sarcoptic mange caused by the skin-burrowing mite *Sarcoptes scabiei* causes the most clinical disease in Virginia. This widespread mite species causes sarcoptic mange in a variety of mammalian hosts, including scabies in humans, and several host-adapted variants (e.g. canis, hominis, suis, etc.) are thought to exist. To date, current evidence from Virginia suggests that the mite and the host species (bears, wild canids) are genetically the same as those in other states in the region, including West Virginia, Maryland, and Pennsylvania. In the 1990's, sarcoptic mange emerged as a significant concern for bears in Pennsylvania and has radiated outward to other contiguous bear populations. From 2014 to 2018, sporadic cases of sarcoptic mange began to show up in the several of Virginia's northwestern mountain counties. Since 2020, reports have greatly increased in frequency and geographic spread, with at least 33 counties now with at least one case.

Currently, there are many unknowns related to the presence and spread of mange in bears, and research efforts are underway to understand these processes. Mites are easily transferred to a new host when an unaffected animal comes into direct physical contact with an infested individual. In addition, mites that fall off an infested host can persist in the environment under ideal conditions for up to two weeks and may infect a new animal that enters a contaminated site. Because bears are relatively solitary, the biggest risk for indirect environmental transmission likely occurs under conditions where they congregate, either naturally (e.g. dens, mating, scent-marking) or unnaturally (e.g. garbage cans, bait piles, bird feeders, and other food resources).

The clinical signs of mange are a result of damage to the host's skin by the burrowing mite, the immune reaction of the host, the physical skin trauma that occurs through scratching, and the secondary bacterial infections that subsequently develop. Clinical signs are variable but can include intense itching, mild to severe hair loss, thickened or dry skin covered by scabs or tan crusts, altered behavior (e.g. lethargy) and poor body condition in severe cases. Research primarily done in Pennsylvania has shown that many bears with mild to moderate cases survive and clear symptoms of mange (Tiffin et al 2024). Bears exhibiting signs of a late-stage mange infestation are often very noticeable to the public due to their poor skin and body condition, their inability to find sufficient resources (food or shelter) in their natural environments, and their propensity to inhabit residential areas or man-made structures.

Although mange is a cause of mortality in black bears, there has been no clear evidence from other states with longer histories of mange in bears that the disease limits populations over the long-term (personal conversations with bear and health teams in PA & WV). However, localized population declines have been observed recently in some mange-affected areas of Virginia, particularly in counties with historically liberal harvest seasons. A multitude of factors including increased harvest seasons to achieve publicly-desired population reductions, successive years of poor hard mast production (primarily red and white oaks), and increased winter temperatures, along with the expansion of mange in bears, have likely all contributed to declining trends in several of Virginia's bear management zones. Research projects with Virginia Tech are currently being conducted to provide information on survival, movements, transmission routes, and potential susceptibility of certain bear populations in Virginia.

VDWR takes sarcoptic mange seriously and is concerned about potential population-level impacts as well as individual bear welfare. For unknown reasons, mange appears to be demonstrating higher case rates and faster spread in Virginia than in some other states despite apparent similarities with regards to hosts, mites, and other disease dynamics. Long-term prospects are for the disease to likely remain endemic in areas already affected and for continued geographic expansion.

With a primary goal of long-term population viability, VDWR recognizes that it must manage this disease to the best of its abilities despite incomplete knowledge of disease processes, extrapolating from existing knowledge about bear biology and sarcoptic mange epidemiology in other species. VDWR is incorporating an adaptive management framework into its approach to wildlife disease management (including mange in bears and chronic wasting disease in deer) which facilitates learning from prior management decisions and allows flexibility to change disease management strategies based upon effectiveness,, emergence of new information, and public acceptance. Using an adaptive management framework, future bear management decisions may be influenced by new and ongoing research aimed at demonstrating how mange spreads on the landscape and evaluating the effectiveness of mange management actions in Virginia and elsewhere.

Goals

The 2023-2032 Virginia Bear Management Plan contains direction regarding surveillance and management of mange and other diseases in bears that informed the development of this mange management plan. The Population Viability goal includes objectives and strategies related to determining and addressing risk factors to long-term bear population

viability. The Population and Carrying Capacity goal in the bear plan includes objectives and strategies for assessing and meeting bear population objectives in each zone across the state. The Bear Health and Welfare goal includes objectives and strategies for monitoring of diseases to determine impacts on the health and welfare of individual bears and on bear populations; implementing applicable management actions to reduce impacts of disease on bear health and populations; and, increasing public awareness regarding bear diseases that may impact the health of bears, humans, and/or other wild or domestic animals.

The goals of the VDWR, as they pertain to management of mange in bears, are as follows:

- i. Implement science-based surveillance and management techniques and continually adapt as more is learned.
- ii. Manage for resilient populations of black bears affected by sarcoptic mange to ensure sustained use and conservation of the resource.
- iii. Identify critical knowledge gaps and address them through professional networks and research efforts.
- iv. Communicate broadly and effectively with constituents and foster citizen science opportunities.

Section 1: Surveillance and Monitoring

Overview

Surveillance programs for wildlife diseases can utilize passive (opportunistic) or active (systematic) strategies (Mörner et al 2002, Artois et al 2009). To date, the majority of VDWR's surveillance for sarcoptic mange has been from the opportunistic investigations of suspect bears reported by members of the public or hunting communities. These reports are invaluable for tracking the general progression and trends of the disease, but are skewed by numerous factors, including the visibility of certain bears or their proximity to humans, variable human population densities, time of year, and even the willingness of the public to report to VDWR. Active surveillance methods are required to answer important epidemiological questions like prevalence/incidence rates, impacts to populations, and changing host:parasite dynamics. But due to the high costs and logistical hurdles of many active methods, they are infrequently employed over large geographic areas or long time periods. Going forward, a robust surveillance program for sarcoptic mange in bears and other affected hosts in Virginia will require integrating passive and active surveillance approaches that form a comprehensive, statewide mange reporting network, supplemented by targeted, short-term projects designed to answer specific questions, and longer-term, intensive monitoring of certain populations or metrics.

Objective 1: Standardize and objectify mange data collection and response protocols.

Strategy 1: Develop and implement a case severity grading system based on recognizable clinical signs.

Clinical signs of sarcoptic mange include alopecia, hyperkeratosis, erythema, and intense pruritus. These are often first noted on the head and face but can begin anywhere on the body. The skin then becomes thickened, fissured, and lichenified, providing opportunity for secondary bacterial and yeast infections. Immune system hypersensitivity responses to antigens in the mites and their by-products are likely responsible for the widespread skin pathology. The secondary infections and intense pruritus can then lead to further behavioral changes, thermoregulatory compromise, loss of body condition, and death. Severely affected individuals are often emaciated. (Niedringhaus et al 2019) (Appendix 3)

A case severity definition that can be applied objectively by trained individuals offers an opportunity to standardize case data and responses. Several researchers have created matrix scoring systems to grade case severity in bears based on 1) hair loss, 2) skin condition, and 3) body condition (Tiffin 2022, Francisco et al unpublished). Similarly, since 2014 VDWR has collected data on these variables as well as the behavioral status of suspected mange cases in bears. To standardize case severity of mange affected bears in Virginia and ensure consistent responses, VDWR will develop a scoring system using a combination of these variable as well as time of year. Within the scoring matrix, body condition will carry more weight than the other scoring variables as body condition appears to correlate more strongly with survival than any of the other factors (Tiffin 2022). While data on skin condition will continue to be assessed, determining pathology through photographs or observations from afar can be difficult; thus, skin condition will not be incorporated into a dispatch or euthanasia protocol, but only scored if an animal is handled.

Strategy 2: Establish consistent individual and geographical case definitions.

Although clinical signs (especially in severe cases) are highly suggestive of sarcoptic mange (Brewster et al 2013, Valdeperes et al 2019), there are other causes of alopecia and skin disease that can be misdiagnosed as sarcoptic mange (Appendix 3). There are other mite species that can live on bears (Appendix 2) so it is imperative that proper identification be obtained. *Ursicoptes americanus* mites appear to be more prevalent on bears than originally thought and co-infections with *S. scabiei* have been documented

(Broadhurst et al 2025). Definitive diagnosis of sarcoptic mange requires recovering *S.scabiei* mites from the skin of infested animals through skin scraping or skin biopsy procedures, then confirming the species through microscopic identification of characteristic mite morphology or molecularly via polymerase chain reaction (PCR). Mange can also be confirmed through histopathological examination of skin biopsies by a veterinary pathologist, but mite speciation may not always be possible with this method (Peltier et al 2018). Although microscopic examination is relatively quick and inexpensive, it requires training to perform correctly. Thus, only confident, trained VDWR staff or referral laboratories will be used to “confirm” a suspected case.

Utilizing the clinical signs and diagnostic procedures described above, the following case definitions will be established:

- Sarcoptic mange confirmed
 - Cases will only be considered confirmed if *S. scabiei* mites are verified through microscopic identification by trained individuals, PCR, or histologically.
 - Although subclinical cases of sarcoptic mange have not been witnessed in bears, it is theoretically possible that a case could be confirmed despite no clinical signs.
- Sarcoptic mange suspected, but unconfirmed
 - If quality photographs or game camera images are received that clearly exhibit clinical signs consistent with sarcoptic mange, then the case will be considered suspect.
 - Suspected cases *will be* counted and included in epidemiological and statistical analyses, consistent with previous VDWR case reporting.
- Sarcoptic mange possible
 - This case definition is reserved for reports that could be consistent with mange but exhibit a lack of confidence in the diagnosis. Some examples of possible cases include:
 - Poor quality or long-distance images provided by the public in which clinical signs may be evident but are difficult to discern.
 - A bear exhibiting symptoms that are consistent with numerous causes and no further diagnostics are able to be performed (ex: photos showing mild crusting of the ear tips or mild alopecia).
 - Possible cases *will not* be counted for epidemiological or statistical purposes.

Using confirmed cases, the opportunity exists to study the validity of using photos and observational tools for diagnosis, allowing for further refinement of the case definitions.

Spread of the disease will be tracked at the smallest geographic resolution as possible (ideally GPS location or address) and status of the disease will generally be reported at the county level, using the following designations:

- Mange affected county
 - A county that has had 3 confirmed and/or suspected cases in a single year or 5 confirmed and/or suspected cases in 3 years.
 - This is the designation that VDWR has employed since 2014 and will be retained for consistency purposes.
 - Previous experience has demonstrated that a single mange case in a location far from affected areas does not necessarily “seed” the disease in the bear population (see maps in Appendix 1).
- Mange emerging county
 - A county that is adjacent to a mange affected county *and* has had at least one confirmed or suspected case.
 - These counties are likely to see additional cases in the near future.
- Mange status unknown county
 - A county that does not meet either of the above definitions.
 - This designation would include counties with no confirmed detections as well as counties with single detections that are disjunct from mange effected or emerging counties.

Separating emerging from affected counties allows for varying levels of surveillance or management effort to be applied. As an example, response protocols could focus confirmatory diagnostic tools on emerging and unknown counties. While there are currently no differences in management strategies based on county mange status designations, future protocols might look different in affected vs emerging counties.

Strategy 3: Refine data collection and database management techniques focused on maintaining a usable, complete, long-term data set.

Since the emergence of mange in Virginia’s bears, case data has been stored in several spreadsheets and Survey 123 datasets which contain inconsistencies in exactly what was collected and how it is stored. Much of the above discussion in Strategies 1 & 2 seeks to identify what data should be collected, but challenges still exist with how and where to store that data.

In order to accurately categorize and share Virginia's experience with other states and researchers, finding a comprehensive, consistent, long-term mange data solution should be a high priority for VDWR's wildlife health and bear teams.

Objective 2: Perform comprehensive statewide mange surveillance in bears using a combination of active and passive methods.

Strategy 1: Continue to leverage reports from the public to track the status of the disease.

As stated above, this technique has been the primary method for tracking disease progression within Virginia and despite inherent biases, is still a valuable surveillance tool.

Reporting mechanisms currently in place include:

- USDA-WS Virginia Wildlife Conflict Helpline (Tollfree, operates M-F, 8AM-4:30PM)
 - This is the primary route from which mange reports are currently received by VDWR. Reports from the Helpline are sent directly via email to the VDWR bear team and the local district wildlife biologist for assessment.
- VDWR Dispatch Center (Operates 24/7, primarily for law enforcement communication)
 - When the dispatch center receives a call for service that references a bear with mange, it is referred to the USDA-WS Helpline, local Conservation Police Officer (CPO), and/or District Wildlife Biologist for the area from which the call was received.
- Email Reporting (Wildlife health, General VDWR, Bear Mange)
 - There are several VDWR email boxes that have been used to report mange including the general VDWR information (wildlife@dwr.virginia.gov), wildlife health (wildlifehealth@dwr.virginia.gov), and bear mange reporting (bearmange@dwr.virginia.gov) email boxes.
 - These mailboxes are monitored by various staff and reports are directed to the appropriate local staff member. Email reporting is not intended for situations involving an emergency response.
 - The Bear Mange mailbox was set up primarily for the reporting of harvested mange bears during an open hunting season but frequently receives general reports of mange affected bears outside of hunting seasons.

Additional reporting Mechanisms in Progress:

- After-hours phone access to a conflict specialist.

- Beginning in the fall of 2025, a human-wildlife conflict specialist will begin duties which include taking after- hours and weekend reports of mange affected bears.
- Calls will continue to be directed to the USDA-WS Virginia Conflict Helpline where a voicemail can be left for the conflict specialist. The conflict specialist will have access to monitor these calls/voicemails during evenings and weekends and provide a response (when needed) for severely mange affected bears.
- Online Reporting Option
 - Expansion of an online disease reporting system interface is in development. This system is part of a broader effort to better capture disease incidents for all wildlife across Virginia.

Strategy 2: Engage interested constituents in citizen science.

Fostering engagement from interested constituents can add valuable data and build trust with VDWR. Listed below are some examples of citizen science projects VDWR is currently pursuing or plans to pursue.

- Hunter log and general public observation form
 - A general bear observation form was created and distributed to interested constituencies. This voluntary survey collects date, location (as precise as possible), and number of bears observed. Observations of both healthy bears and mange affected bears can be reported on the observation form.
 - A bear hunter-specific observation form was created and distributed prior to the beginning of the August bear chase season in 2025. This voluntary form asks participants to record bear observations along with hunt metrics such as hunt duration, use of hounds, weaponry, and harvest. Surveys such as these are helpful for gaining hunter effort data along with observations of healthy and mange affected animals.
- Tissue sampling of hunter-harvested bears
 - Annually, over 2,000 black bears are hunter-harvested in Virginia with the most recent 3-year average being 2,630 bears (2022-2024). While physical harvest check stations are no longer operated, hunter participation in sampling efforts for disease surveillance in other species (e.g. white-tailed deer) has remained a valuable tool through both voluntary and mandatory efforts.
 - Biological tissue samples such as muscle, hair, tooth, liver, and blood are all valuable samples that can be readily collected and stored from hunter-

harvested bears. Additionally, skin scrapes and/or skin biopsies could provide valuable information from both mange affected and non-affected bears.

- Genetic analyses, including landscape-level gene flow, toxin exposure (e.g. rodenticides), mange exposure (antibody presence), and mange mite or other parasite identification are a few of the analyses that could be run from the aforementioned samples. Additionally, sample banking, particularly of bears in current non-mange affected areas, will be critical for future comparisons and analyses. Future funding for genetic or other analytical work will be crucial to continue understanding mange and its impacts on black bears.
- Consistent metadata (e.g. harvest date and county) are available for hunter-harvested bears and ideally, hunters would willingly provide more specific harvest location information.
- VDWR staff will collaborate with bear hunters to identify practical sample collection methodologies.

Strategy 3: Utilize trail camera grid surveys to evaluate disease status and progression.

Due to the visible nature of mange, trail camera surveys utilizing randomized grids across bear home ranges may be a useful tool for monitoring disease presence and prevalence on the landscape. Camera grids have previously been used for active mange surveillance in other host species (Brewster et al 2017, Ringwaldt et al 2023). Pairing camera arrays with occupancy modeling frameworks (Appendix 7) could allow for the creation of mange detection heat maps, "severity" scoring, and the ability to analyze disease presence with covariates such as habitat (cover types, elevation, aspect), disturbance (distance to roads, human habitation), and site occupancy by other potential mange affected species (e.g. canids).

- Two large camera grids have been deployed as part of a bear spatially explicit mark-recapture population study in collaboration with Virginia Tech (Appendix 5) and images from these grids are currently being evaluated using occupancy modeling. Ideally, at the conclusion of this project, these pre-existing camera grids could be utilized for long-term monitoring and the refinement of statistical methods.
- An ~80 camera grid was deployed in several mange affected (endemic) counties along the northern part of the Blue Ridge in summer 2025. This camera grid will be utilized for a minimum of 2 field seasons (preferably 3) to determine occupancy, habitat use, and detection probability in this area which has demonstrated declining bear population trends in recent years.

Strategy 4: Continue to trap, collar, and study appropriate bears or mange cases, as funding and staff resources allow.

- Outside of defined research projects, opportunistic trapping of mange affected bears and monitoring with the use of GPS enabled collars can provide additional survival, movement, and reproductive data that will continue to build on project datasets. Opportunistic trapping events can occur at any time of year (although primarily outside of open hunting seasons due to drug withdrawal periods) affording opportunities to provide additional insight into disease progression and survival.
- Opportunistic trapping/collaring will most likely occur following public reporting of a mange affected bear. Thus, these trapping events may be more likely to occur in developed landscapes with more wildlife-urban interface as compared to existing research trapping efforts currently occurring in more rural settings (e.g. National Forest, Wildlife Management Areas). This will offer additional insights into the potential use of anthropomorphic food sources and developed areas by mange affected bears.
- The use of GPS collars to monitor female bears of reproductive age will be especially important to determine future fecundity rates which directly impact population dynamics. Modern GPS collars typically last 3 to 4 years in the field, allowing for long term monitoring over multiple reproductive cycles.
- Additional research needs are outlined in the research section below and include opportunities for continued monitoring of mange and non-mange affected bears across the state. However, it needs to be recognized that trapping and monitoring of collared bears requires funds and staff resources that will not always be available.

Objective 3: Perform adequate surveillance for mange in other wildlife species.

The early history of mange in North American wildlife is centered around wild canids and is discussed in Appendix 1. Although documentation of the early cases in Virginia's canids is lacking, it has likely existed for over half a century. Currently, red foxes (*Vulpes vulpes*) and coyotes (*Canis latrans*) are the sympatric hosts currently most affected in Virginia (Kelly & Sleeman 2003, VDWR anecdotal data). Other mammalian hosts in Virginia that have published records of sarcoptic mange elsewhere in North America include racoons, fishers, fox squirrels, house mice, feral swine, porcupines, and white-tailed deer (Niedringhaus et al 2019).

Genetic characterization has revealed that the mites found on both bears and canids in the mid-Atlantic region are genetically similar (Peltier et al 2017, Francisco unpublished). The role other hosts might currently play in the transmission and maintenance of the disease in bears is poorly understood, but despite the disease existing statewide in canids for decades, transmission to bears rarely, if ever occurred. Before the emergence of the sarcoptic mange in Virginia's bears in 2014, the disease was only confirmed in one bear (Appendix 1). More information about the disease in sympatric hosts that overlap with bears is needed to elucidate what role they play in the transmission and maintenance of the disease in bears.

Strategy 1: Centralize and standardize all potential reports of mange in Virginia's wildlife.

To track epizootics and spatiotemporal data of mange in wild canids and other wildlife species, VDWR will begin centralizing and standardizing data from public reports of suspected mange events. These reports could be solicited and obtained from the same reporting methodologies as discussed in the bear surveillance section above. VDWR currently receives suspected mange reports from a number of these outlets, but placing an emphasis on the collection of sufficient metadata and centralizing reports will be necessary to allow for review and potential statistical evaluation. Since witnessing mange in wild canids (especially red foxes) has been common for so long, undoubtedly many observations go unreported and constituent outreach will be necessary to encourage reporting.

Additionally, there are numerous partner organizations and constituent groups who interact with wildlife afflicted with mange, including VDWR licensed recreational trappers, VDWR permitted wildlife rehabilitators and nuisance wildlife control operators, USDA-Wildlife Services staff, and county animal control operators. All of these groups could be regularly surveyed to discover regional trends. Larger wildlife rehabilitation facilities often have excellent, databased clinical records that could be regularly filtered and obtained.

Strategy 2: Leverage trail camera grid surveys to evaluate mange status.

As discussed above in Objective 2, Strategy 3, standardized camera grids can be used to determine disease status and even estimate prevalence within several host species. Occupancy modeling is currently being performed utilizing images from two Virginia Tech research grids. Research grids for unrelated studies can even provide insight into specific locations and times. For example, photos from a large chronic wasting disease project in

Arkansas have been used to analyze mange in numerous species (Jorge personal communication).

Strategy 3: Continue to contribute to the genetic and biogeographical understanding of Sarcoptes in North America.

Researchers with the Southeastern Cooperative Wildlife Disease Study (SCWDS) continue to study the genetic relatedness of mites recovered from numerous host species, and VDWR will continue to collect and contribute specimens to these efforts. To accomplish this, VDWR staff will opportunistically collect skin biopsies or skin scrapes from clinically affected animals and will also work with willing participants from the groups mentioned above for assistance in procuring samples.

Section 2: Management and Response

Overview

Disease management in wild animal populations utilizes strategies geared towards three basic goals: 1) prevention of disease introduction, 2) control of disease, or 3) eradication of disease (Wobeser 2002). Since *S. scabiei* can infest a large number of mammals over a broad geographic range, several intervention and management strategies have been previously attempted, with varying degrees of success. It is likely this disease will continue to expand within Virginia's bears and regionally throughout contiguous populations, and limiting human assisted movement or acceleration of disease spread will be an important consideration moving forward. Control measures that are both cost-effective and likely to be helpful should be studied and implemented, but it is important to acknowledge that no "silver bullets" currently exist to prevent mange in free-ranging wildlife populations. Further, eradication of mange has not been successful in widespread free-ranging populations and is not a realistic goal. As stated in goal #3 of this plan, VDWR will have to consider effects of this disease as it strives to manage for consistent, resilient bear populations. Given what is currently known, VDWR attempts to respond in such a way that will be more helpful than harmful to bears over the long-term.

Disease prevention, reduction, or management protocols can focus on either the infectious agent (*S. scabiei*), the host (bears and other mammals), or the environment (Virginia's landscapes). Many actions were considered and are described below, even if their implementation is not recommended at this time. It is important for any plan to be adaptive in nature to incorporate new research or results from previous efforts. This is

especially true for mange in bears, where substantial knowledge gaps create a significant need to extrapolate from previously attempted management actions with other species.

Additionally, population impacts of disease can lead to necessary adjustments in species population goals and management approaches. Mange in Virginia's black bears will be a persistent management consideration, but the short and long-term population impacts are still unclear. It is imperative that necessary population data be collected now, so that future population management actions can be appropriately modeled, followed, and reviewed.

Objective 1: Implement appropriate, welfare focused interventional strategies.

Strategy 1: Continue to opportunistically humanely dispatch or euthanize emaciated bears suffering from mange.

The reason for euthanizing emaciated, severely affected bears is two-fold. First, although natural recovery is possible for these individuals, bears exhibiting an advanced state of disease in poor body condition are less likely to recover (Tiffin 2022, Tiffin et al 2024). Second, these bears are often highly visible to the public and present justified animal welfare concerns. It has also been shown that these bears often have an extremely high mite burden (Francisco personal communication) so removal may also alleviate some transmission risk.

This recommendation is in line with how other agencies are approaching mange. A survey of 35 state and federal personnel with bear management responsibilities from 17 states was performed in 2023 by Francisco et al at SCWDS (publication currently in review). When asked about responding to mange in wildlife (not just bears), 97% responded that severely affected animals should be euthanized, but 43% opposed the euthanasia of moderate cases and 80% opposed the euthanasia of mild cases.

The only published survival data of mange infected bears is from Pennsylvania, where 81% of bears recovered regardless of treatment protocol (Tiffin et al 2024). The survival rate of infected bears in Virginia (both in mange affected and mange emerging counties) is currently unknown, but this population parameter is one of the key questions that VDWR's current collaborative bear mange study with Virginia Tech hopes to answer (Appendix 5). Given the research from Pennsylvania and in the absence of Virginia-specific data, it seems prudent to give non-severely affected individuals a chance to recover.

Individual and population immunity is also poorly understood in bears. Similar to the disease in canids, individual immunity in bears is probably short-lived (Neidringhaus et al 2019), disease re-occurrence is common, and due to subsequent Type I hypersensitivity responses, secondary cases can even be more severe (Francisco et al in-review, Little et al 1998). Although no evidence exists for affected populations of any species developing complete resistance, populations do adapt over time. Often, when sarcoptic mange is introduced into a naïve population, a primary wave of emergence can have drastic population effects (Ferreira et al 2022, Carver et al 2023), which are then followed by periodic or sporadic, localized epizootics. The long-term dynamics of this disease in bears have yet to be worked out, but actions that could slow or interfere with host:parasite evolution and population adaptation should be avoided.

Demonstrating the Department's application of adaptive management to the presence of mange in bears, VDWR is updating its Bear Mange Response Protocol for the fourth time since 2014. Over time, this protocol has evolved from early attempts to dispatch all affected individuals to now only removing severely affected animals for welfare reasons. As stated in the Objective 1, Strategy 1 of the surveillance section, a new, standardized scoring system will be used to determine if dispatch of a bear is appropriate based on body condition, hair loss, behavior, and time of year.

Similar to bears, VDWR commonly authorizes humane dispatch for other wildlife severely-affected by mange and will continue to do so as clinical disease progression for these species leads to emaciation and presents similar animal welfare concerns. Further, spillover from canids is thought to be responsible for sporadic cases of bear mange (Schmitt et al 1987), and consistent (as opposed to random) handling of severely-affected mange individuals of all species may lead to important discoveries regarding the transmission and occurrence of mange in free-ranging populations.

Dispatch of mange-affected bears may legally be performed by department staff, local law enforcement, licensed veterinarians, animal control officers, and when authorized, members of the public. In May 2025, the VDWR Board approved a new regulation (VA Administrative Code 4VAC15-40-310) to clarify that VDWR staff, and external partner agency staff designated by the Director, can give permission to the public to humanely dispatch animals, including for disease reasons. The public must notify VDWR first, and photos and verbal descriptions will be utilized by authorizing staff to complete mange scoring and dispatch protocols. Since *S. scabiei* poses a risk to domestic animals and humans, safe carcass handling and disposal language will be provided when dispatch is authorized (Appendix 6).

Pharmaceutical treatment for severe cases is occasionally brought up in place of humane dispatch. VDWR is not recommending widespread treatment of any mange cases at this time (discussed further in Appendix 4).

Objective 2: Reduce mange transmission and prevent human-assisted movement of mange mites.

Strategy 1: Properly dispose of infectious carcasses.

Proper carcass management in large-bodied species presents obvious challenges, but whenever possible, carcasses of bears that are humanely dispatched (either by VDWR personnel or the public) should be removed from the landscape or buried on-site. Proper disposal methods include deep burial, placement in lined landfills, incineration (in a commercial incinerator), and digestion. Safe carcass handling and disposal language will be provided to VDWR staff and those authorized to dispatch or who find dead specimens on their property.

Strategy 2: Avoid the relocation of bears to new areas. If movement of a bear is necessary, follow proper diagnostic and biosecurity procedures to prevent the accidental translocation of mites.

The VDWR stopped routinely relocating bears from conflict situations in 2001, and only does so today under rare, extreme circumstances. The following protocols will be used if a decision is made to relocate a bear:

- If possible the bear should be released in the county of origin. If this is not feasible, the bear can only be moved to a county with similar mange status. Bears from mange affected areas cannot be moved to mange unknown areas.
- If field conditions allow and staff possess the necessary equipment, a skin scrape evaluation performed under sedation/anesthesia should be performed. If this cannot be performed, then prophylactic treatment can be considered.

Limited bear movements may also occur due to the VDWR's orphan surrogacy and rehabilitation programs, which are conducted in collaboration with the Wildlife Center of Virginia (WCV). A brief description of these programs, including disease prevention and management measures is below:

Surrogacy Program

Orphaned neonate cubs are placed with surrogate sows as appropriate during the denning season as a first option for an “orphan” event. VDWR is currently in the process of expanding this program more broadly across the state, so that cubs can be placed locally. Following a basic health check, cubs are often placed the same day or within 48 hours of the orphaning event and often do not receive any additional care other than basic feeding. Any cubs needing medical attention prior to placement are housed at the WCV’s indoor intensive care unit (ICU).

Rehabilitation Program

Orphaned cubs which are not eligible for surrogate placement (outside of the denning season, no available surrogates) are housed at the WCV for a period ranging from 6 months to 1 year prior to release back to the wild. Most commonly, these bears are released as yearlings during the spring (April) and when feasible, in their county of origin. All yearlings must have 3 negative skin scrapes to be eligible for release. All equipment taken to the WCV for the releases (traps, carriers) are disinfected with a 10% bleach solution prior to and following release events.

Strategy 3: Continue to promote best management practices to ensure domestic canines are not involved in mite transmission.

There is little evidence to suggest that domestic dogs are a significant source of transmitting mites to new areas or other species. Still, because they (and other domestic animals) are capable of being infested, emphasizing common preventive measures is warranted. These strategies could be added to best management practices recommendations for hunting with hounds and recreating outdoors with pets. Many prophylactic preventive strategies for other parasitic diseases (heartworm, fleas, etc.) are also effective at preventing or limiting mange, and dog owners should consult with their veterinarians to adopt a protocol that minimizes risk. Dogs that are suspected of potentially being infested should be evaluated by a trained professional and appropriately treated before being further utilized for hunting or other outdoor activities.

Strategy 4: Limit the artificial congregation of bears.

Transmission of sarcoptic mange is driven by direct contact between individuals or indirectly through contact with recently contaminated environments. The amount of direct vs indirect transmission sustaining the disease in bears has been speculated but is difficult to research (Browne et al 2021). Mite survival off the host has been documented for up to 13 days under ideal laboratory conditions with mites taken from infected bears

(Niedringhaus et al 2019) and 19 days with mites taken off infected dogs (Arlian et al 1984), but the infectivity of these mites over time is unknown. Indirect transmission through shared environments, like denning sites, has been implicated in transmission in some species (Cypher et al 2017, Carver et al 2023).

Any practice that artificially congregates bears has the potential to increase both direct and indirect transmission and should be avoided whenever possible. Artificial congregation can occur due to point sources (bird feeders, baiting/feeding sites, mismanagement of trash, etc.) or at larger scales (agricultural operations, etc.). It has been illegal to feed or bait bears anywhere in the Commonwealth since 2003 (VA Administrative Code 4VAC15-40-282). Maintenance of the prohibition on baiting and feeding of bears, increased outreach on the importance of avoiding these practices, and training on proper enforcement of the regulation are important measures to minimize transmission risks. Supplemental feeding of bears in mange-affected populations in Virginia is occasionally proposed by constituents as a measure to help stressed individuals and bolster population recovery efforts. Although it is thought that widespread supplemental feeding of black bears has the potential to increase fecundity and artificially inflate population densities (Kirby et al 2017), the risks of mange transmission through artificial feeding outweigh any potential benefit.

Through participation in the BearWise program, VDWR provides outreach messaging and assistance to communities and constituents about living with bears and managing artificial attractants. Although this is done primarily to mitigate bear conflicts, any progress made in this realm also has the potential to alleviate mange transmission risk.

Objective 3: Incorporate disease effects into bear population models and population management.

Strategy 1: Adapt population models and indices to include non-hunting mortality, so that population management tools can be implemented in a timely, data-driven manner.

As with most wildlife species, no economically practical methods exist to accurately and precisely estimate black bear population size on an annual basis across the entire state of Virginia. Population estimation techniques that involve capturing and marking bears, conducting surveys (e.g., camera, hair snare, bait station), or genetic analysis are viable on smaller study areas but are generally cost prohibitive at the regional or statewide scale. Virginia, like many eastern states (Black Bear Management Jurisdictional Survey, 2023), utilizes population reconstruction to estimate a minimum bear population index by bear

management zone and statewide. Population reconstruction modeling utilizes data from hunter-harvested animals which can be collected in a cost-efficient manner and provides the most economically responsible and sensitive annual population indices for bears at bear management zone and statewide scales.

Multiple eastern states have compared reconstructed bear population indices utilizing population reconstruction to integrated population models. The results indicate that integrated population models can enhance precision of the populations indices; however, overall trends and population index values were similar for both methods. In mange affected bear populations natural mortality rates as well as harvest rates are likely variable and may strongly influence population estimates using reconstruction. Integration of natural mortality rates into population reconstruction models is one mechanism to alleviate the impact of mange on population reconstruction models. In addition to investigating natural mortality rates in mange and non-mange affected areas, DWR is also investigating and evaluating alternative population monitoring indices (e.g., occupancy modeling, SECR) which may afford other cost-effective approaches to managing bears in Virginia (See Appendix 5 for further discussion of population models.).

Strategy 2: Adjust bear hunting seasons when necessary to reduce cumulative mortality and achieve bear population objectives.

Experience in Virginia suggests that bear mortality from mange is likely cumulative with other factors such as bear harvest through hunting and bear-vehicle collisions. Although direct effects of mange on bear populations are difficult to address, reducing female bear harvest mortality through hunting season adjustments is a primary tool within VDWR's control. Whenever bear populations decline below the levels established in objectives of the 2023-2032 Bear Management Plan, bear hunting season adjustments are considered. During the 2024-2025 hunting regulation review and amendment cycle, bear seasons were reduced in 24 counties primarily located in the northwestern portion of the state where sarcoptic mange is endemic.

Harvest reductions in areas where mange has already impacted populations are critical for the ability for those populations to rebuild but can also be used pre-emptively to bolster populations ahead of mange outbreaks. Using the Shenandoah Valley of Virginia as a case study, it does not seem beneficial to reduce bear populations ahead of mange as this only seems to exacerbate the impacts that mange may have on a population. Prior to mange (or significant reports of mange) in the northern Shenandoah Valley, bear population objectives for these bear management zones were modified to "reduce" (from stabilize) in

2017. To meet this objective a new 3-day early bear season was implemented in 2018, which allowed the use of all legal weapons (archery, muzzleloader, firearms) as well as hounds and would run for 3 days during the week prior to early archery season (generally the last week of September or first week of October). This season proved to be extremely popular with many bear hunters and effective at harvesting female bears. During this timeframe, reports of sarcoptic mange in this area began to increase, with significant increases in reports noted from 2019 through present day. The combination of the high female harvest (as prescribed to meet population objectives), poor mast years which occurred during these same timeframes, and the onset of sarcoptic mange, bear populations in the Shenandoah Valley have taken a significant decline. Population reconstruction and harvest graphics for bear management zones 5 and 9 are shown below as an example of this decline.



Figure X: Zone 5 population reconstruction and harvest, 2023.



Figure X: Zone 9 population reconstruction and harvest, 2023.

Additional management strategies evaluated but *not recommended* for widespread adoption at this time.

Explanations for why certain strategies are not adopted are typically not laid out in management plans, but due to the interest of stakeholders regarding some of these items, a more detailed discussion and justification is warranted. Strategies that were evaluated by VDWR but which are not recommended at this time include aggressively targeting clinical bears for culling, widespread pharmaceutical treatment of clinical bears or populations, and establishment of disease management or containment areas. A thorough discussion about why these strategies were not adopted is in Appendix 4.

Section 3: Research

Overview

Since VDWR began detecting cases of mange in bears in northwest Virginia in 2014, staff have continued to expand knowledge of this disease and how it may impact the management of bears. This has been done by reviewing research conducted in other states and species, implementing research efforts in Virginia, and participating in regional, multistate studies.

Due to limited internal research capacity and funding, VDWR has relied heavily on crucial external partnerships to help study sarcoptic mange. In collaboration with the Wildlife Center of Virginia (WCV), the effectiveness of several treatment protocols was evaluated, specifically ivermectin and fluralaner. The results found that although anthelmintic treatment in combination with supportive care can clear mange infestations, even in severely affected individuals (Van Wick & Hashem 2019, Van Wick et al 2020), once released back into the wild most animals become reinfested, some more severely than when first admitted (Francisco et al in review). VDWR has also contributed diagnostic samples for several multi-state research projects led by the Southeastern Cooperative Wildlife Disease Study (SCWDS) at the University of Georgia, including studies on general mange surveillance, black bear mange toxicology, bear mange skin microbiome, and bear mange mite enumeration. Lastly, VDWR is currently partnering with Virginia Tech on a large two-part project, one part studying disease progression through spatial-temporal and physiological effects of sarcoptic mange in black bears, and another evaluating bear population density estimates in mange affected vs mange unaffected areas using spatially explicit capture-recapture (SECR). These partnerships and research efforts will help guide evidence-based management not only here in Virginia but in other states being impacted by mange in black bear populations. The specifics of all the past and current research projects VDWR has been or is involved in can be found in Appendix 5.

Still, there are critical questions about mange in bears that remain partially or fully unanswered and require further study. VDWR intends to be active in this realm, helping answer these questions and continuing to contribute knowledge from its experience to the scientific community.

Objective 1: Identify future research opportunities, limitations, and hurdles.

Strategy 1: Prioritize major knowledge gaps for future research endeavors.

With the expansion of sarcoptic mange throughout bear populations in the mid-Atlantic, VDWR has an opportunity to be a regional leader in helping address knowledge gaps. But with significant funding constraints, efforts should be focused on answering some of the most applicable questions. The following discussion highlights some of the most important research needed to effectively address disease and population management.

- *What short and long-term impacts does mange have on bear populations?*

As previously stated, this disease is very likely to remain in Virginia, and VDWR will need to manage bear populations accordingly. An understanding of survival/mortality rates is needed, both in endemic and emerging areas. If survival in Virginia's bears is not similar to that found in Pennsylvania's bears (Tiffin et al 2024), then attempts must be made to elucidate the reasons for the difference. In addition to understanding survival/mortality rates, sub-lethal impacts to fitness and reproductive physiology must also be quantified so that they can be integrated into population models. Ongoing collaborative projects with Virginia Tech will start providing insights into these variables, but VDWR must be prepared to continue investing towards additional research in this realm.

It is plausible that selective pressures applied by the disease may be changing the genetic structure and diversity of the population. Such changes cannot be determined without a baseline understanding of the genetic diversity prior to disease emergence. It has been hypothesized that genetic bottlenecks and lack of genetic diversity could be contributing to the current emergence of the disease (see Genetic Health Marker Testing project description above). The fields of population and landscape genetics are rapidly evolving with advancing technology and could lead to numerous future project opportunities. In anticipation of expanded opportunities for genetic research, VDWR plans to begin a more thorough collection and banking protocol of bear tissues for this work.

An understanding of the role of population immunity is also lacking. Individual immunity appears relatively short-lived (Niedringhaus et al 2019) but could still contribute to the overall dynamics as the disease becomes endemic. Some species exhibit initial severe waves of disease followed by sporadic epizootics driven by environmental factors, host densities, and population immunity. Whenever opportunity arises, VDWR will attempt to collect and bank serum that could be used for serosurveys as well as population exposure and immunity studies.

- *What epidemiological or ecological knowledge is missing regarding sarcoptic mange in black bears?*

Although sarcoptic mange is an ancient disease affecting >140 mammalian species, disease epidemiology can vary significantly between species and is poorly understood in bears. A thorough understanding of transmission in bears is still lacking, hindering development of effective intervention and control strategies.

Fundamental knowledge gaps exist for the roles of direct and indirect transmission, interspecies transmission, and effects of population density.

The solitary nature of bears has led some researchers to speculate that the bulk of transmission may be indirect (Browne 2022). However, mites have limited longevity in the environment, 13 days under ideal laboratory conditions (Niedringhaus 2019). Den contamination is frequently implicated for some species (wombats, foxes, etc.) but is probably only a concern in bears denning in family groups. Basic life history can be used to make some transmission assumptions (ex: more direct contact between bears during breeding seasons), but a more thorough, quantifiable understanding of contact rates and spatial overlap (both intraspecies and interspecies) at various times of the year could lead to the development of better transmission models and possibly targeted, strategic interventions or treatments. Integrating data from collared bears, environmental sampling, and wild canid surveillance will be needed to decipher and model the complex transmission pathways.

Some herding species exhibit a high degree of density dependent transmission, but frequency dependent (or density independent) transmission has been described in other species. At present, there is no evidence that transmission of sarcoptic mange in bears is density-dependent. However, a more thorough understanding of the role that density plays in mange transmission in bears would be very useful for bear managers to implement harvest management approaches that minimize disease occurrence and transmission within the bear population. Management of bear population density at the leading edge of an expanding mange outbreak is presently a significant challenge for managers. In addition to establishing case studies regarding management experiences in such scenarios, rigorous data collection on population changes and the potential variables driving those changes provides an opportunity for retrospective analysis and study that could provide valuable insight to other bear managers facing this management challenge.

- *What surveillance or management actions require further refinement or review?*

As discussed in the Management & Response section and Appendix 4 of the plan, widespread treatment of bears or other sympatric species is not a practical response given the current state of knowledge regarding management of mange in free-ranging wildlife, but investigating treatment options under a structured,

experimental framework remains a viable strategy for advancing current knowledge on management of mange.

Prophylactic treatment (vaccination) against *S. scabiei* has been most explored in domestic rabbits, even showing some potential to reduce clinical signs, mite survival, and replication (Liu et al 2014, Shen et al 2023). But to date, there are not vaccines commercially available for use in any species. Varying levels of immune responses (especially hypersensitivity responses) exhibited by different host species add another layer of complexity that would need to be thoroughly explored before such treatment would be applicable to bears or any wildlife species. Additionally, the logistical hurdles and cost of administration to a wide-ranging wild population must also be considered. Oral vaccine programs do exist for certain diseases of wildlife affecting public health (ex: rabies) and endangered populations (ex: black-footed ferrets), but the feasibility of vaccine options for sarcoptic mange remain unknown and even if feasible, it would not be expected to be a tool available anytime soon.

An indirect enzyme linked immunosorbent assay (ELISA) is commercially available to detect Immunoglobulin G (IgG) antibodies in the serum of canids. Use of this assay in bears has been studied as both an accessory diagnostic tool and a method to evaluate population-level exposure (Peltier et al 2018, Niedringhaus et al 2020, Houck et al 2021). The detection of antibodies in serum can help confirm active disease but can also indicate prior exposure or prior disease and recovery. The temporal aspects of the humoral response in bears has not been quantified through artificial challenge studies, but serial testing post-treatment demonstrated rapidly declining titers, all falling below detectable limits within 14 weeks (Niedringhaus et al 2020). There is also likely significant variability of IgG titers due to individual immune response and level of infective dose. A study of North Carolina bears discovered an 18% seroconversion rate despite no known cases of sarcoptic mange in the state (Houck et al 2021), indicating that bears may be frequently exposed to *S. scabiei* through sympatric hosts or the environment. Further work is needed to determine whether this is true exposure or if assay cross-reactivity could be occurring to antigens from other mite species. This, combined with a better understanding of the immune response of bears, could elucidate future opportunities for serology to be used to study disease dynamics and exposure in populations; thus, VDWR will begin to bank serum samples as opportunity arises.

Strategy 2: Advocate for adequate funding for mange research and continue to build collaborative partnerships.

Dedicated funding sources for continued and new research will be critical in closing these knowledge gaps and making sound adaptive management decisions moving forward. As additional states experience mange in bears, regional/multi-state research projects are likely to develop (and currently are being developed). Dedicated funding needs to be in place so that Virginia can take advantage of these opportunities to partner with additional state agencies, research universities, and disease specialists on mange research and management. Partnerships with other state agencies and universities (both in state and out of state) will be critical to ensuring knowledge dissemination as research unfolds and new and emerging techniques or management strategies are developed.

Section 4: Communication and Outreach

Overview

Since 2014, when the current sarcoptic mange outbreak in bears began in Virginia, a central component of VDWR's efforts related to mange has been outreach and communication with the general public, interested hunters and landowners, and external partners and agencies (both within Virginia and regionally). Transparency and open communication with all interested parties is integral to creating and maintaining trust, and ultimately, for successful management of the disease. The enhancement and adaptation of current efforts in outreach and communication will reinforce public confidence in VDWR as the lead agency in Virginia with respect to mange in wildlife. Although beyond the scope of this management plan, the development of a comprehensive communications plan for mange in bears (and perhaps other animals) in Virginia could be useful. In lieu of a more formal communications plan, the measures outlined below represent a pragmatic approach given current circumstances and resources.

Objective 1: Increase public awareness and transparency about mange in Virginia's bear population and VDWR's management of the disease

Efforts should address questions such as, what is known and unknown about mange, why is this disease important to wildlife managers and the public, and what is being done (or not done) about mange to include why (or why not) those items are being done. Outcomes of successful public outreach will include better public understanding of sarcoptic mange, preventing misconceptions, and acknowledgement that the agency is committed to science-based management. Respondents to a recent survey of wildlife managers and

researchers in the eastern U.S. emphasized that it is particularly important to educate residential homeowners and renters who may have limited understanding of mange as a natural disease of bears and other species (Francisco et al 2025, in review).

Strategy 1: Develop a centralized webpage with resources for multiple species susceptible to mange and with separate links to information specific to bears and other species.

Expanding website content to better reflect and address those mange topics which the public is most frequently searching will maximize page visits and educational effectiveness. This strategy will also help establish VDWR as the topical authority among segments of the public which may not normally consider VDWR as source of information on mange in wildlife. Many current mange-related queries pertain to topics not addressed fully by VDWR's existing online content. It will be important to address questions such as what is mange, how do pets get mange [from wildlife], is mange contagious, can humans get mange, and what does mange look like.

Website text including words and phrases likely to be relevant to users' questions is more likely to rank higher in search results and drive more traffic to VDWR online mange content. Content should generally be written at a 6th–8th grade level or lower. The language used matters: most users won't find (or find useful) content that uses significant amounts of jargon or scientific terms; consider what the visitor is going to be searching for and use common, straightforward terms and plain language. It may be beneficial to include frequently asked questions and answers regarding important aspects of mange (e.g., risks to humans and other animals, why we do not treat bears, why some bears have to be dispatched). Consider strategically leveraging images and video to enhance visibility in search results.

Strategy 2: Expand other outreach methods and opportunities, including updates to existing flyers and factsheets, social media, in-person or virtual presentations, community events, publication of articles in various media, etc.

Over the past few years, VDWR has expanded its outreach efforts regarding mange. The annual hunting and trapping digest now contains a full page of information on mange, reporting mange observations, and what to do if you harvest a bear with mange. In conjunction with staff in DWR's Outreach Division, bear program staff developed a new partnership with the Virginia Master Naturalist (VMN) program. Over the last 3 years, bear program and Outreach staff have trained VMN chapters across the state to provide formal presentations and tabling events on all things, including mange, related to bears. During

training, staff provide information on mange and include materials that can be disseminated to the public. Currently 18 chapters are enrolled in the program, and over the last 3 years, they have provided information to an average of 15,500 constituents per year. DWR bear program staff also serve on a national level working group updating materials associated with BearWise to include specific information regarding mange in bears.

Strategy 3: Work with Virginia Tech researchers to maintain a public website for the ongoing Virginia Bear Mange Study to inform interested parties about research objectives and progress.

A website specific to the ongoing VA Bear Manage Study went public in April 2025, with information on study objectives, the study team, and progress updates ([Virginia Bear Mange Study | Home](#)).

Strategy 4: Provide periodic updates to bear hunters, landowners, and other organizations with an interest in bear mange, to include hot topics, regional news, research updates, opportunities for engagement, etc.

Frequent communication with interested stakeholders can build trust, maintain collaborative relationships, demonstrate VDWR's concern and commitment to management of mange, and ensure that correct information regarding mange is disseminated. As mange spreads, it is important that stakeholders in newly impacted areas hear from VDWR before misinformation becomes entrenched.

Strategy 5: Provide updates on mange research or management to the Board of Wildlife Resources' Wildlife and Boat Committee semiannually.

Objective 2: Engage constituents to maximize reporting of bears with mange, collection of data associated with the disease, and efficiency of implementing measures to reduce transmission or impacts of mange

Efforts should address what hunters and other publics can do to help, how their information or efforts contribute to management of mange, and how to reduce risk of mange to humans and domestic animals. Opportunities to become involved give concerned citizens some ownership and investment in management of mange in bears.

A recent survey of wildlife managers and researchers in the eastern US pointed to the importance of equipping wildlife rehabilitators to assist in mange outreach and

management, given their public-facing roles with wildlife. Ideally, such outreach and communications would convey that mange occurs naturally in the wild and that many animals are able to recover from mild and moderate cases (Francisco et al. 2025, JWM in press).

Strategy 1: Provide up-to-date guidance regarding ways the public and hunters can assist with management of mange.

Following is abbreviated existing guidance from the current VDWR website, annual hunting and trapping laws digest, etc.:

- To help reduce the negative impact of mange in black bears, the public can minimize the congregation of bears (and other animals) by removing or securing potential attractants (e.g., discontinue feeding birds or other wildlife, secure garbage or compost containers) and help VDWR track the distribution of the disease by reporting all suspected cases of mange to the Department through the VA Wildlife Conflict Helpline (vawildlifeconflict@usda.gov or toll free 1-855-571-9003) or through an online platform under development. Per protocol, severely affected bears may be dispatched, either by staff or other officials or by citizens authorized by VDWR.
- Hunters should report any mange suspect bear observed during the bear hound training season to the VA Wildlife Conflict Helpline. During hunting season, if a hunter harvests a bear with signs of mange they must utilize their bear tag and report the bear at the time of harvest because this information remains a vital element of the Department's bear management program. The harvested bear should also be reported to bearmange@dwr.virginia.gov with the photo and confirmation number from reporting the harvest.
- Best management practices should be used when handling a mange infested bear, which should be minimized to avoid unnecessary exposure, to include wearing disposable gloves, disinfecting equipment or areas contacted by the bear, washing clothes worn when with the bear, and contacting a doctor or veterinarian regarding human or animal exposure, respectively.

Strategy 2: Provide opportunities for hunters and others to engage in citizen science that will advance understanding and management of mange in bears.

Following are ongoing opportunities for citizen engagement in collection of mange-related data:

- Bear observation form – Interested members of the public can report on numbers of healthy bears and bears with mange observed.
- Bear hunter log – Participating hunters can record useful metrics with regards to bear hunting (e.g., healthy and mange-affected bears seen, ran, and treed) in mange and non-mange areas.
- Hunter sampling – Participating bear hunters can collect samples, following clear and simple protocols, to support ongoing or new research/monitoring in Virginia and regionally (e.g., via SCWDS).
- Skin samples from other species affected by mange (e.g., canids) – In coordination with the furbearer program, recreational trappers, rehabbers, and commercial nuisance animal permittees can opportunistically obtain samples from mange affected-animals.

Objective 3: Ensure that staff across VDWR and partner agencies understand management of bear mange and can provide consistent messaging to constituents

Strategy 1: Ensure that public-facing staff across VDWR are equipped with sufficient information to assist with management of mange and provide consistent messaging to constituents.

To ensure consistency, competency, and efficiency across all operational levels, VDWR will provide information and training to all personnel involved in surveillance, diagnostics, field response, and public engagement activities.

Strategy 2: Continue to collaborate with external agencies and partners within and outside of Virginia regarding important research and management, including the human dimensions aspects of mange (e.g., public opinions, knowledge, successful messaging).

In 2022, Virginia hosted a multi-state meeting, attended by 22 states plus universities, to discuss the current state of knowledge of mange; this meeting initiated much of the research collaboration now occurring with other states in the region and with SCWDS. In 2023-24, VDWR participated in a multi-state survey of bear managers about effective management strategies and promoted a survey developed by SCWDS that assessed public and hunter perceptions of black bear mange management strategies, including euthanasia, treatment, and non-intervention. Within Virginia, partnerships could be enhanced with the establishment of an interagency committee to collaborate on multiple aspects of bear research and management, to include sarcoptic mange.

Conclusion

VDWR takes mange in black bears seriously, with a primary goal of long-term population viability for conservation and societal benefits. Implementing diverse strategies for surveillance and monitoring, management and response, research, and communications and outreach, mange must be managed to the best of our abilities despite incomplete knowledge of the disease. Incorporating an adaptive management framework facilitates learning from prior management decisions and flexibility to change disease management strategies based upon effectiveness, emergence of new information, and public acceptance. Future bear management decisions may be influenced by new and ongoing research aimed at demonstrating how mange spreads on the landscape and evaluating the effectiveness of mange management actions in Virginia and elsewhere.

Appendix 1: History of Mange in Bears and Other Wildlife in North America

S. scabiei is a generalist mite that has infected at least 148 mammalian hosts (including humans and many domestic animals) across the world (Escobar et al 2021). Although a single, heterogenous species, several genetic clades exist that seem to correlate closely with the type of infected host (canis, hominis, bovis, etc.). The first reports of mange in wildlife in North America came when mites from domestic dogs were used to infect coyotes and wolves in Montana in the early 1900's, which were subsequently released in an attempt to infect predator populations more widely (Chapter 107, 1905 Montana Legislative Code). Epizootics of sarcoptic mange were then reported in red foxes in Ohio (Olive & Riley 1948), Pennsylvania (Pryor 1956), and Wisconsin (Trainer & Hale 1969).

The first published record of a mange-causing mite in black bears involved a *Demodex* species identified in a sample from a partially alopecic bear sow captured in northern Wisconsin in 1975 (Manville et al 1978). However, this case presented milder clinical signs compared to later sarcoptic infestations. Sarcoptic mange specifically entered the record in 1984 in Oscoda County, Michigan, when a young bear with hair loss, crusty skin, and poor body condition was shot and diagnosed via skin scrapings (Schmitt et al 1987). This bear had been observed alongside another symptomatic young bear, and the following spring, an adult female, presumed to be their mother, was euthanized and confirmed with sarcoptic mange, signaling early spread in wild populations (Schmitt et al 1987). It is presumed that these cases were a spillover effect from sympatric hosts, and it does not appear that the disease spread further within the local bear population.

In 1991, an adult male bear with sarcoptic mange was documented in Indiana County, Pennsylvania. Three additional cases were reported the following year, and the disease began radiating outward to affect additional counties. Over a span of nearly 30 years, the disease had been confirmed in bears in 55 out of PA's 67 counties and spread into nearby states with contiguous populations, including West Virginia in 2003, Maryland in 2008, and New York in 2011 (Niedringhaus et al 2019) (see Figure 1). A cluster of cases in eastern Oklahoma, northwest Arkansas, and southwest Missouri has also emerged, with the first reports in those states occurring in 2016, 2018, and 2020, respectively (SCWDS unpublished data).

The first suspected bear mange case reported in Virginia was a bear cub in Rockingham County in late 2003, which included histopathological skin samples that were sent to SCWDS. Mange was confirmed but was suspected to be ursicoptic and not sarcoptic. Two additional suspected cases were reported in 2004. The first was a yearling from Augusta

County, which was also diagnosed with *U. americanus*. The second was an adult female bear from Rockingham County. This bear was captured, treated at WCV, ear-tagged, and released. *S. scabiei* mites were recovered from skin scraping at the time of intake, making this Virginia's first confirmed case of sarcoptic mange in bears. It is unclear whether this case was the result of opportunistic spillover from wild canids or regional spread from other bears. Regardless, no additional cases were reported to VDWR until 2014.

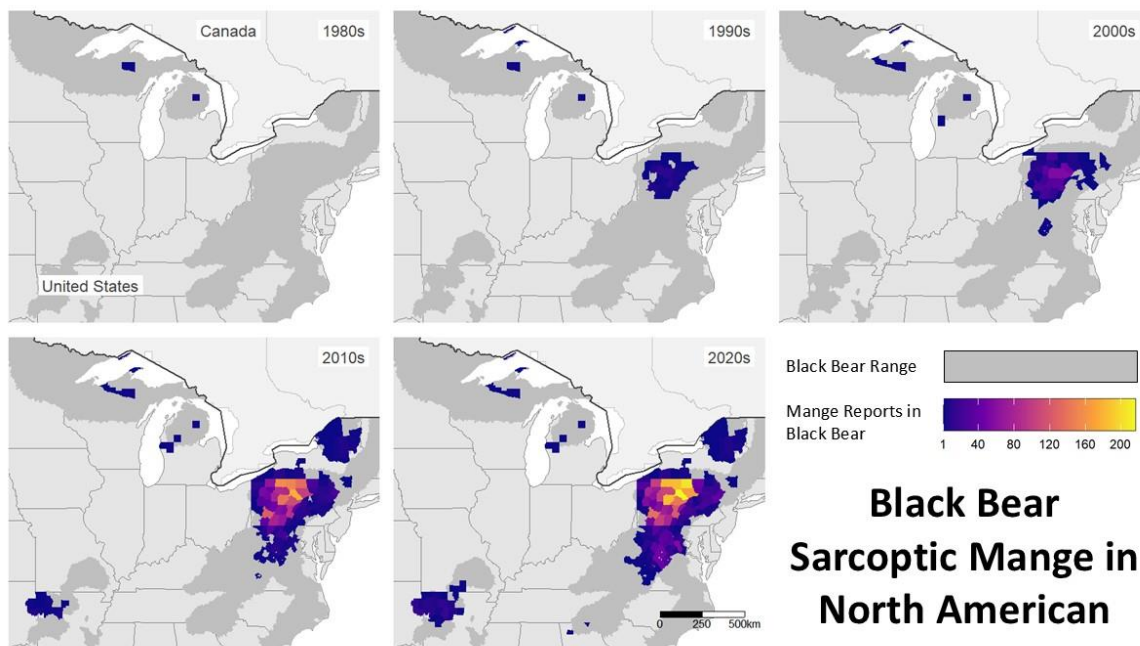


Figure 1. Heat map of the distribution of sarcoptic mange reports of black bears by decade in North America from the 1980's-2020's (SCWDS, unpublished data).

Beginning in 2014, DWR began receiving public reports of suspected mange in bears in northwestern Virginia counties. Table 1 shows the number of confirmed/suspected cases received by VDWR by year beginning in 2014. In 2020, the number of reports increased drastically. It is unknown to what degree this is reflective of expanded prevalence of the disease versus increased reporting by the public. In 2020, DWR released multiple outreach documents to the public asking constituents to report suspicious cases, and the onset of the SARS-CoV2 pandemic also led to a large uptick in the number of Virginians spending time outdoors. The graphs in Figure 2 show the serial geographic expansion of affected Virginia counties between 2014 and 2024.

Year	Reports	# Counties with Reports
2014	2	1
2015	2	1
2016	14	1
2017	12	5
2018	22	8
2019	29	12
2020	110	15
2021	121	19
2022	123	18
2023	162	23
2024	274	33

Table 1: Breakdown of bear mange reports (both confirmed and suspected) received by VDWR between 2014 and 2024.

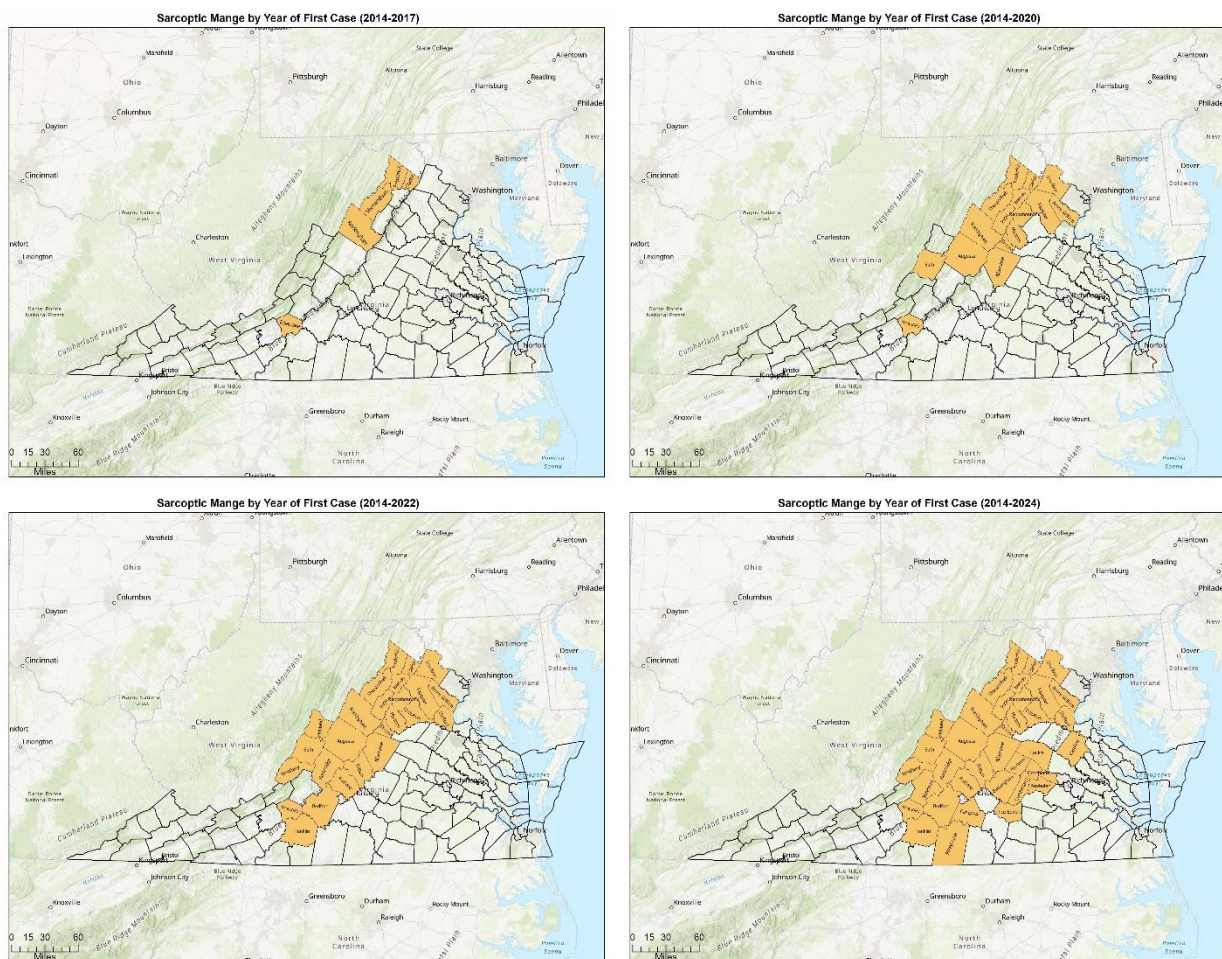


Figure 2. Graphs showing southern and eastward expansion of sarcoptic mange in bears from 2014-2024. All counties with at least one case are highlighted.

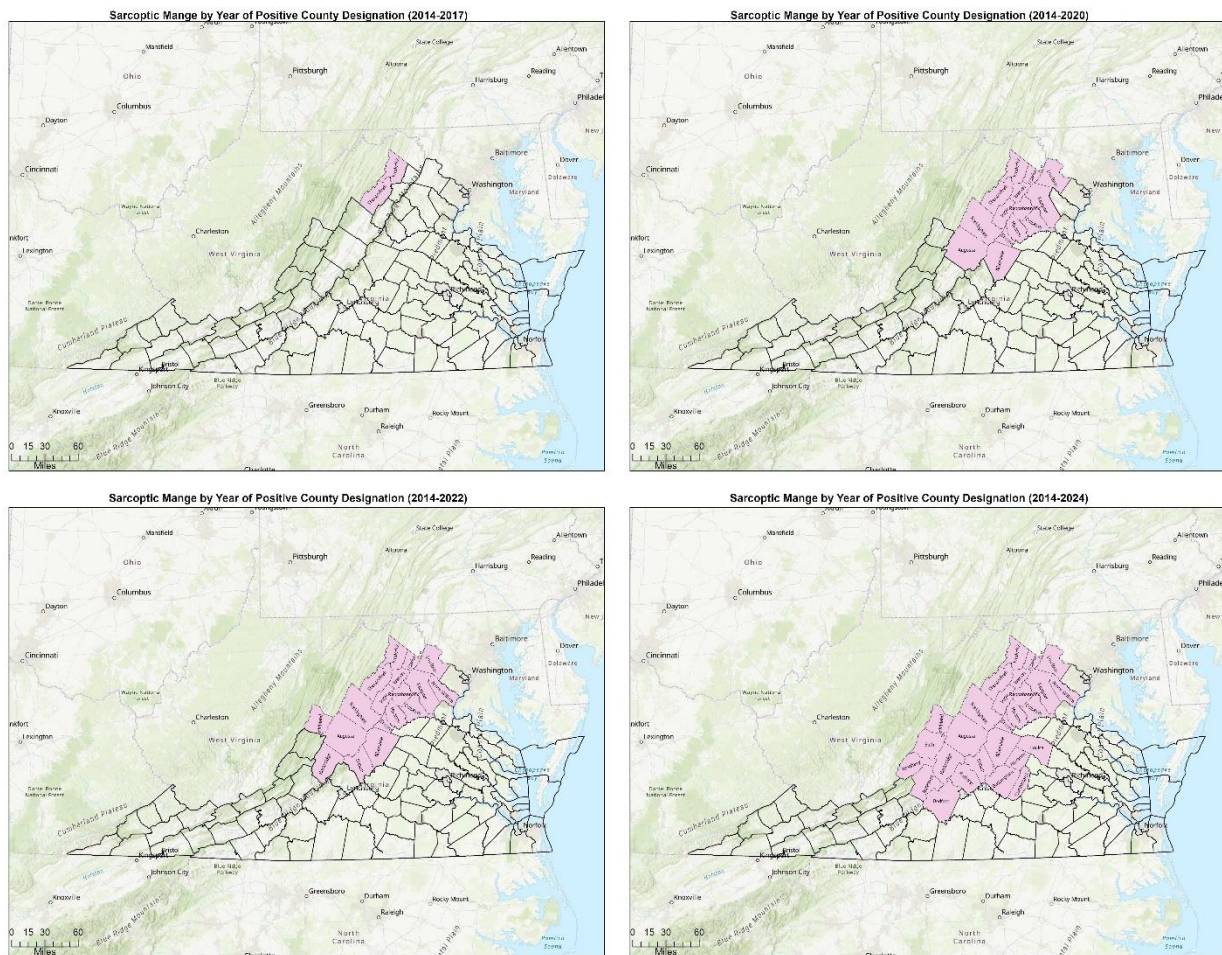


Figure 2. Graphs showing southern and eastward expansion of sarcoptic mange in bears from 2014-2024. All counties meeting “mange affected” status as described in Objective 1, Strategy 2 of the surveillance section.

Appendix 2: Mange Mites in Black Bears

Sarcoptes scabiei is a microscopic mite within the acarid subgroup of eight-legged arachnids. This tiny mite features a rounded, flattened body with short, sturdy legs equipped with claws and dorsal spines. These characteristic adaptations enable it to burrow efficiently into a host’s skin. Female mites excavate tunnels up to 1 cm long in the epidermis. A single female may lay 3-4 eggs daily, totaling over 50 eggs, during a 4-6 week lifespan (Arlian & Morgan 2017). Eggs then hatch into larvae within 3-4 days, and these larvae migrate to the skin surface to mature into nymphs and adults, perpetuating the infestation through rapid reproduction. Its life cycle, which encompasses eggs, larvae,

nymphs, and adults, unfolds entirely on or within the bear, completing in approximately two weeks under warm, humid conditions. This efficient cycle facilitates the mite's spread within and between hosts.

Sarcoptic mange has affected at least 148 mammalian species across 39 families, including being the causative agent of scabies in humans. Evolution across a broad geographic range has resulted in several host-adapted variants (e.g. *canis*, *hominis*, *suis*, etc.). In North American wildlife, sarcoptic mange has been reported in foxes, wolves, coyotes, white-tailed deer, fishers, raccoons, porcupines, feral swine, fox squirrels, swamp rabbits, house mice, and bighorn sheep (Niedringhaus et al 2019). Initial genetic analysis of mites from bears in Pennsylvania and nearby sympatric species utilizing ITS-2 and *cox1* genes revealed that several mite genetic variants may be circulating (Peltier et al 2017), but subsequent genetic work performed at SCWDS using *cox* genes and whole mitochondrial sequencing has revealed that the mites indeed do genetically cluster regionally and across host species (Francisco et al unpublished data). Mites from bears and sympatric hosts in the mid-Atlantic region appear to be genetically related and most similar to a clade of North American mites of canine origin.

Transmission of *S. scabiei* most commonly occurs through direct contact of infected individuals, but indirect contact through contaminated environments can also play a role. Mite survival off the host has been documented for up to 13 days under ideal laboratory conditions with mites taken from infected bears (Niedringhaus et al 2019) and 19 days with mites taken off infected dogs (Arlian et al 1984), but the infectivity of these mites over time is unknown. Cool, humid environments appear to favor longer mite survival, with freezing temperatures and hot summer temperatures contributing to more rapid mite death (Niedringhaus et al 2019). Host life history and biology likely also contribute to the amount of direct vs indirect transmission within a population (Browne et al 2020), but the relative proportion of direct vs. indirect transmission in bears is not fully understood. July is currently the month during which VDWR receives the highest number of suspected reports followed by May, June, and August (see Table 2).

Some species exhibit a high degree of density dependent transmission (Fernández-Morán et al 1997, Ferreyra et al 2022), but frequency dependent (or density independent) transmission has been described in other species (Niedringhaus et al 2019, Carver et al 2023). The relative effects of how density affects transmission in bears is also poorly understood and needs to be further studied. Finally, although spillover from sympatric canid hosts is hypothesized as the disease entry point into bear populations, their role in

the maintenance and transmission of the disease in bear populations is not fully understood.

Month	Cumulative Reports
January	55
February	46
March	56
April	62
May	111
June	101
July	142
August	99
September	55
October	49
November	56
December	39
Total	871

Table 2: 2014-2024 cumulative suspect bear mange reports received by VDWR, by month.

Other mite species exist with the potential to cause clinical mange in bears, including demodectic mange caused by *Demodex ursi* and ursicoptic mange caused by *Ursicoptes americanus*.

- *Demodex* spp.: These cigar-shaped mites, natural inhabitants of hair follicles and sebaceous glands in mammals (e.g., dogs, cats, humans), cause demodectic mange or demodicosis. *Demodex ursi* causes demodectic mange specific to black bears. Their life cycle—egg, larva, protonymph, deutonymph, adult—occurs entirely within follicles, typically as harmless commensals, though disproportionate mite burdens may become problematic in immunocompromised individuals such as those stressed by malnutrition, injury, or disease. Reports of clinical outbreaks historically appear restricted to black bear populations in Florida, manifesting as localized hair loss (e.g., face, limbs) or, rarely, generalized alopecia with redness and scaling (Forrester et al 1993). The first documented case in black bears was reported from northern Wisconsin in 1975, when *Demodex* mites were recovered

from scab tissue of a partially alopecic sow (Manville et al 1978). No confirmed records of demodectic mange exist from Virginia.

- *Ursicoptes americanus*: This host-specific mite causes ursicoptic (audycoptic) mange, burrowing near hair follicles in bears. Initially identified in a captive black bear from Kansas without clinical signs, its first association with disease came in July 1975 from an Idaho bear with severe generalized alopecia (90% head hair loss) and pronounced skin lesions on the neck, thorax, and forelimbs (Yunker et al 1980). The mite is similar to *S. scabiei*, aside from subtle morphology differences and its restriction to hair follicles like *D. ursi* (Yunker et al 1980). Clinically normal bears can harbor *U. americanus* with minimal or no clinical signs, though when signs appear, they are often less severe than those of sarcoptic mange; co-infestations with *S. scabiei* have been documented with overlapping clinical signs, complicating diagnosis (Broadhurst et al 2025). Although the prevalence of *U. americanus* on bears in Virginia is unknown, a recently published study noted that mites were found on 14.7% of bears handled at the Wildlife Center of Virginia between 2014 and 2023 (Broadhurst et al 2025).
- *Chorioptes* spp.: These surface-dwelling mites, common in livestock (e.g., cattle, sheep - dubbed “foot mange” or “leg mange”), feed on epidermal debris rather than burrowing. Chorioptic mange was first detected in a free-ranging Massachusetts black bear in 2019 linked to skin lesions (Niedringhaus et al 2021), but this was a unique case and remains rare in wildlife.

Appendix 3: Mange Pathogenesis and Other Causes of Skin Disease

Clinical signs of sarcoptic mange can vary from mild to severe. Subclinical infections have not been diagnosed in bears but have been noted in other species. Early lesions manifest as small, red, inflamed spots (2-3 cm wide), often starting on the ears, elbows, or abdomen and spreading as the infestation intensifies. Alopecia is noted and can range from localized (small patches) to generalized (extensive lesions) in severe cases. In more severe cases, the skin becomes chronically inflamed and malodorous, often with secondary bacterial and yeast infection. This inflammation and infection leads to a breakdown in epithelial barriers, and serum leaks from damaged tissues which dries into yellowish crusts or scabs. The skin becomes thickened and lichenified. In canids, the skin inflammation is mediated by type I hypersensitivity responses to the mites or foreign material deposited in the skin, and it is likely this also occurs in bears (Niedringhaus et al 2019). Chronic mange can appear as thickened, leathery skin exposed by alopecia. These extensive skin changes compromise the skin’s essential functions, such as maintaining fluid balance and protecting against water loss. Energy depletion from constant scratching and immune response drains fat reserves, while lost insulation impairs thermoregulation. In severe

cases, bears are often emaciated. As these signs progress into the advanced stages of the disease, there is an increased potential for starvation and death.

In comparison, ursicoptic mange can present subtly in normal bears with mild alopecia around the face and muzzle or escalate to more severe hair loss and crusty lesions in extreme cases, overlapping with sarcoptic mange signs and potentially complicating gross diagnosis, particularly when co-infestations occur (Broadhurst et al., 2025). This information reinforces the importance of careful sampling and diagnosis to distinguish it from other mites and assess co-morbidity.

Several other skin conditions can present clinical signs overlapping with sarcoptic mange in black bears. Accurate differentiation among these conditions requires thorough diagnostic evaluation, including skin scrapings, histopathology, fungal culture, and microscopic examinations, to ensure appropriate diagnosis.

- **Pelodera dermatitis:** Pelodera dermatitis, also known as rhabditic dermatitis, can also present clinical signs similar to mange in black bears. It is caused by the free-living nematode *Pelodera strongyloides*, typically found in moist, decomposing organic matter. Bears with Pelodera dermatitis may exhibit alopecia, redness, crusty and thickened skin lesions, inflammation, and severe pruritus (itchiness), which closely mimic the clinical presentation of sarcoptic mange. Lesions commonly occur in areas of prolonged contact with contaminated soil or bedding, such as limbs, abdomen, and ventral surfaces. Unlike sarcoptic mange, however, Pelodera dermatitis often involves superficial skin layers rather than deep burrowing mites (Fitzgerald et al 2008).
- **Trichophyton sp. (Ringworm):** A study conducted between 2014 and 2019 in California documented generalized dermatophytosis in eight juvenile black bears. These bears, originating from different regions, presented with emaciation, alopecia, and exfoliative dermatitis, ultimately resulting in death or euthanasia. Histopathological examinations revealed generalized hyperkeratotic dermatitis, folliculitis, and furunculosis, with skin structures heavily colonized by fungal hyphae and arthrospores. Fungal cultures identified *Trichophyton equinum*, a zoophilic dermatophyte typically associated with equids and rarely reported in non-equid species. The study hypothesized that factors such as illness, malnutrition, age, or immunosuppression may have increased the bears' susceptibility to this generalized fungal infection (Clothier et al 2022).
- **Seasonal Shedding:** Seasonal shedding in black bears can mimic sarcoptic mange primarily through extensive hair loss, patchy coats, and a rough appearance, especially during late spring and early summer. During this normal physiological process, bears naturally lose their thick winter coats in irregular patches,

sometimes revealing dry, dull, or flaky underlying skin. This appearance can resemble the patchy alopecia and roughened skin typically associated with mange. However, unlike mange, seasonal shedding does not usually involve skin inflammation, crust formation, or abnormal weight loss. Additionally, bears undergoing seasonal shedding typically regrow healthy, uniform coats within weeks, whereas bears with mange may take longer to recover or continue to deteriorate without intervention.

- **Pantsless Bear Syndrome:** This hair loss phenomenon on the hind end of black bears has been observed in multiple southern states. The exact cause is unknown but may be attributable to chronically wet environments.
- **Allergic Dermatitis:** Allergic reactions to environmental irritants, insect bites, or plants can lead to generalized itching, hair loss, thickened skin, and crusting.
- **Ectoparasites (Ticks, Fleas, Lice):** Severe infestations with ticks, lice, or fleas may cause significant hair loss, skin irritation, and dermatitis. Close examination typically reveals a heavy burden of visible parasites on the skin.
- **Nutritional Deficiencies or Starvation:** Poor nutritional status or starvation may result in generalized hair loss, dull coat, flaky skin, and overall poor condition.

Appendix 4: Management Strategies Not Recommended for Widespread Adoption

The following discussion intends to provide some context and justification for why these strategies were not recommended.

- *Aggressively targeting clinical individuals for selective or non-selective culling.*

While this approach has not been tried in bears, there are published reports of its use in ruminant herds in Europe (Alasaad et al 2012, Espinosa et al 2020). The authors of these reports noted that this strategy was controversial, difficult to measure impacts, and never proven to be an effective strategy. Given public scrutiny of dispatching bears involved in significant human-bear conflict situations, application of an aggressive, targeted culling program is likely to draw considerable public interest and scrutiny. Although the opportunistic removal of severely affected individuals is recommended above, the distinction between such intervention for animal welfare purposes and the aggressive culling of bears for disease control is notable. For example, although much is still to be learned, bears that survive mange and reproduce subsequently may contribute to population level genetic resistance. Given these sociological and epidemiological factors, it would be inappropriate to initiate such a program in Virginia without a solid, scientific basis establishing the success of this approach. Further, aggressively finding,

targeting, and dispatching individual bears using any methodology for capturing bears would be labor intensive and within free-ranging populations, likely to miss intended target animals.

- *Widespread pharmaceutical treatment of clinical individuals or populations.*

Treatment of mange in bears has generated a lot of interest and discussion. There are several effective treatment options available for domestic dogs and other domestic species (see end of this section). Research on treatment of bears has been limited to ivermectin and fluralaner (Van Wick & Hashem 2019, Tiffin et al 2024, & Francisco et al in-review). It has been shown that treatment of affected bears (sometimes even in severe cases) can contribute to recovery, but the picture is complicated by natural recovery rates as well as immune dysfunction leading to severe, subsequent re-infections. For instance, in Pennsylvania 88% of ivermectin treated bears recovered, but 74% of un-treated bears recovered naturally (Tiffin et al 2024). With this data in mind, the Pennsylvania Game Commission stopped the routine practice of treating clinically affected bears (DiSalvo personal communication). Fourteen adult bears held at the Wildlife Center of Virginia (WCV) were successfully treated with either fluralaner or ivermectin (Van Wick & Hashem 2019, Francisco et al in-review). Four were fitted with radio-collars before release and all died between 76 and 694 days post-release, 3 from severe mange cases and one from unknown causes found decomposing in a den. The ten additional bears successfully treated at WCV were ear-tagged before release; 1 was successfully harvested by a hunter, 1 is thought to have been harvested, 1 was hit by a vehicle, and 7 had unknown fates (Francisco et al in review). Due to these results, VDWR and WCV stopped the labor-intensive practice of capturing, transporting, holding, and treating bears.

Treatment at a landscape or population level presents another set of logistical and ethical hurdles, including effective dosing and administration, adverse effects on non-target species or the environment, potential drug residues in a consumed species, and the opportunity for the development of drug resistance (Moroni et al 2020). For these reasons, treatment is rarely used except in small, isolated populations (Cypher 2017, Oleaga 2019, Rudd et al 2020). A 2019 review of all known treatment programs in wildlife, including ivermectin placed in feed for ruminants in Europe and topical application of ivermectin to wombats in dens, found that although short-term successes were documented in some individuals, long-term post-treatment monitoring was often insufficient to demonstrate a

statistical benefit to the population (Rowe et al 2019). This was emphasized in a subsequent response to the review, with the authors concluding that “pharmacological treatment of mange in wild animals mostly produces individual healing, but its effects on achieving control or eradication in a population are mostly inconclusive” (Moroni et al 2020).

Due to the logistical hurdles, potential consequences, and a lack of demonstrated effectiveness regarding whether treatment programs can benefit populations, VDWR does not intend to adopt widespread treatment protocols for any mange affected animals at this time, including bears. Appropriate outreach will be required to convey this approach to the public as treating of affected wildlife is something the public often expects (Francisco in review). Provided that adequate resources exist, there remains opportunity to study certain treatment protocols at small, controlled scales and to explore the development of tools that could be applied at a landscape level. However, it is critical that such research be conducted in a controlled manner that can generate statistically relevant data from which reliable results can be gained to advance the understanding of mange treatment on the landscape.

The following drug classes are most often used to treat sarcoptic mange:

Macrocyclic Lactones

Historically, mange has been treated with drugs like ivermectin or selamectin, often requiring multiple doses due to the mites’ life cycle. These antiparasitic drugs fall under the umbrella class of macrocyclic lactones, and work by killing the mites responsible for the infestation. However, treatment with macrocyclic lactones typically requires multiple doses over several weeks. The most commonly used treatment option for sarcoptic mange is repeated injections of ivermectin, but its long-term effect on survival is difficult to monitor in free-ranging wildlife (Rowe et al, 2019, Moroni et al 2020).

Isoxazolines

Newer isoxazoline drugs, such as Sarolaner (Simparica®) and Fluralaner (Bravecto®), offer long-acting relief. Fluralaner, approved for dogs in 2014, is better studied and preferred, having shown some early promise in treating sarcoptic mange in black bears (Van Wick & Hashem 2019; Van Wick et al 2020). The drug, which is commonly used as a flea and tick preventative in domestic cats and dogs, operates by inhibiting ligand-gated chloride channels in the neurons of arthropods,

which includes mites. This mechanism makes it effective at eliminating mites without harming the mammalian host. A notable advantage of fluralaner, in comparison to ivermectin, is that a single dose can provide prolonged protection against parasites, potentially eliminating the need for repeated treatments in black bears.

- *Establishment of disease management or containment areas.*

The establishment of disease management areas is frequently used to contain or slow the movement of infectious agents in populations. Extensive consideration was given to their implementation for sarcoptic mange management, but at this point, it is not recommended for the following reasons:

- The disease has rapidly advanced in the population over the past 5 years, affecting new counties each year. As such, DMA designations would need to change frequently, complicating effective communications strategies for disseminating appropriate information.
- There are currently no strategies recommended for implementation that require that “mange affected” areas have different management actions in place than in areas without mange detections, and thus no distinction is needed at this point. Should any such strategies choose to be adopted, DMAs could be established (with defined criteria) if needed.

Population management decisions can (and should) be made using the defined geographic criteria established the VDWR’s Black Bear Management Plan (i.e., bear management zones).

Appendix 5: Past and Current VDWR Research Project Contributions

Treatment of Sarcoptic Mange in Bears – Between 2016 and 2023, 14 adult bears were transported to the Wildlife Center of Virginia for treatment and rehabilitation.

Timeline: 2016-2023

Funding Source(s): VDWR & WCV Operational Funds

Principal Investigator(s): Peach Van Wick, DVM, Karra Pierce, DVM

Co-Investigator(s): Megan Kirchgessner DVM/PhD, Katie Martin, MS, Raquel Francisco, DVM, MS, Jillian R. Broadhurst, Marcelo Jorge, PhD, Michael J. Yabsley, PhD, John Tracey, DVM

Collaborating Institutions: Wildlife Center of Virginia, University of Georgia (SCWDS), VDWR

Status: Concluded. Initial results exhibited great promise for complete clinical resolution of the disease with a single dose of fluralaner (Van Wick et Hashem 2019), but long-term follow-up utilizing GPS collars on four successfully treated bears found that reinfection with *S. scabiei* was common, leading to clinical disease often more severe than the original case (Francisco et al in-review).

Bear Mite Burden – This study evaluates the relationship between *Sarcoptes* mite burdens on different regions of a black bear's body and across disease severity categories. Samples from roughly 30 bears were categorized into severity groups (normal, mild, moderate, severe, recovering). Findings will guide diagnostic protocols by identifying the most reliable body region(s) for mite detection and offer insights into disease pathogenesis. The work directly supports management efforts to refine diagnostic sampling strategies.

Timeline: January 1, 2023 – December 31, 2023

Funding Source(s): Multistate Conservation Grant Program (MSCGP) – Wildlife Restoration Fund

Principal Investigator(s): Michael J. Yabsley, PhD

Co-Investigator(s): Jillian R. Broadhurst

Collaborating Institutions: University of Georgia (SCWDS), AGFC, WVDNR, VDWR, NYSDEC, MDC

Status: Ongoing (Sample Collection CLOSED)

Mange Toxicology – This project investigates toxin exposure in black bears with sarcoptic mange, particularly anticoagulant rodenticides and other environmental contaminants. Liver samples from bears across Arkansas, Virginia, and West Virginia are analyzed for toxicant burdens to determine whether toxin exposure correlates with increased mange susceptibility or severity. Preliminary findings suggest potential immunosuppressive effects of toxins, but further investigation is required to establish causation.

Timeline: January 1, 2023 – December 31, 2023

Funding Source(s): Multistate Conservation Grant Program (MSCGP) – Wildlife Restoration Fund

Principal Investigator(s): Michael J. Yabsley, PhD

Co-Investigator(s): Raquel Francisco, DVM, MS

Collaborating Institutions: University of Georgia (SCWDS), UC Davis 29 Toxicology Laboratory, MDC, AGFC, WVDNR, VDWR, NYSDEC

Status: Ongoing (Sample Collection CLOSED)

Bear Mange Microbiome Study – Partnership with the University of Arizona investigating how sarcoptic mange alters the skin microbiome (bacterial and fungal communities) of American black bears (*Ursus americanus*). The goal is to characterize dysbiosis associated with mange severity and explore secondary infections that may complicate recovery. The study aims to guide future therapeutic interventions by wildlife agencies and rehabilitation centers.

Timeline: 2023–2025

Funding Source(s): Morris Animal Foundation (MAF)

Principal Investigator(s): Raquel Francisco, MS, DVM

Co-Investigator(s): Leigh Combrink, PhD, Michael J. Yabsley, PhD, Natalie Rose Payne

Collaborating Institutions: University of Georgia (SCWDS), The University of Arizona School of Natural Resources and the Environment, VDWR, NYSDEC, AGFC

Status: Ongoing (Sample Collection CLOSED)

Genetic Health Marker Testing in Mange Bears – This study evaluates the diversity of the major histocompatibility complex (MHC) class II genes in black bear populations affected by sarcoptic mange. It tests the hypothesis that populations exhibiting lower MHC diversity are more susceptible to severe mange, potentially informing future conservation genetics efforts and bear management practices.

Timeline: 2023–2025

Funding Source(s): Morris Animal Foundation (MAF) 31

Principal Investigator(s): Raquel Francisco, MS, DVM

Co-Investigator(s): Erin Lipp, PhD, John Wares, PhD, Michael J. Yabsley, PhD, Bernardo Mesa, PhD, Marcela Kelly, PhD

Collaborating Institutions: University of Georgia (SCWDS), East Stroudsburg University of Pennsylvania, Virginia Polytechnic Institute and State University; AGFC, MDC, NCWRC, PGC, WVDNR, VDWR, NYSDEC

Status: Ongoing

Human Dimensions of Mange Management – This project assesses public and hunter perceptions of black bear mange management strategies, including euthanasia, treatment, and non-intervention. Surveys conducted across endemic, emerging, and low-prevalence states measure knowledge of mange, risk perceptions, trust in agencies, and support for management actions. Findings aim to inform communication strategies tailored to different stakeholder groups, facilitating greater public understanding and acceptance of wildlife disease management.

Timeline: January 1, 2023 – December 31, 2023

Funding Source(s): Multistate Conservation Grant Program (MSCGP) – Wildlife Restoration Fund

Principal Investigator(s): Michael J. Yabsley, PhD

Co-Investigator(s): Elizabeth Pienaar, PhD; Raquel Francisco, DVM, MS

Collaborating Institutions: University of Georgia (SCWDS); Georgia Department of Natural Resources (GADNR), WVDNR, VDWR

Status: Ongoing (Sample Collection CLOSED)

Population and Demographic Impacts of Sarcoptic Mange on VA Black Bears and Implications on Harvest Season Structure based on Predictive Densities in Mange and Non-Mange Affected Areas – This research assesses bear density/abundance between mange and non-mange affected areas by utilizing hair snare surveys combined with spatially explicit capture-recapture (SECR) based DNA extraction modeling in mange affected (endemic area and newly emerging mange area) and non-mange affected areas for a minimum of 3 years. Results will help understand if sarcoptic mange outbreaks have resulted in population declines by combining estimates of abundance (objective 1) with vital rate estimates to model the population growth rate of mange affected and non-mange affected areas. Vital rate data will be collected through utilization of GPS collared bears in both mange affected and non-mange affected areas. Estimates of stage specific survival and reproductive rates in both populations will provide critical metrics to pair with density estimates from objective 1. The study will use vital rate data (objective 2) to model population viability under a variety of mange and harvest impact scenarios to determine if, and by how much, harvest needs to be reduced or timing of seasons altered to prevent population declines. Additionally, the data will be used to investigate potential behavioral and physiological mechanisms by which mange causes declines in vital rates (e.g. denning behavior, reduced foraging, increased activity and space use).

Timeline: April 1, 2024 – on going

Funding Source(s): Virginia Department of Wildlife Resources

Principal Investigator(s): Brett Jemser and Marcella Kelly

Co-Investigator(s): Fang Chen, PhD Candidate; Madison Thurber, MS Candidate; Isabella Sciarrino, MS Candidate; Katie Martin, VDWR Bear Project Lead; John Tracey, VDWR Veterinarian; Carl Tugend, VDWR Bear Project Lead

Collaborating Institutions: University of Georgia (SCWDS); Virginia Tech University, VDWR

Status: Ongoing

Appendix 6: Human Health Considerations

Sarcoptic mange is a zoonotic disease, and humans can become infected by handling infested animals. Symptoms may include temporary skin irritation accompanied by red, itchy welts. However, these symptoms are often transient, and infection is usually self-limiting due to the host specificity of *S. scabiei*. True scabies in people is caused by the hominid variant of *S. scabiei*. Contact should be avoided, especially for people with poor immune function, including those receiving immunosuppressive treatments and young children, as symptoms may be prolonged in some cases. Accordingly, hunters should wear disposable gloves during skinning or field dressing and thoroughly wash hands. If a potentially infected animal is handled, skin exposure can be avoided by wearing full length sleeves and pants followed by appropriate clothing laundering.

Appendix 7: Population Monitoring Glossary

- **Population Reconstruction:** population analysis technique utilizing age at time of harvest and the backward addition of cohorts to estimate a minimum population size over time. Natural mortality is not generally taken into consideration but can be added to the model if known.
 - Pros: Data (harvest and age) is easily available and distributed across the state (and bear management zones). Costs of population reconstruction are also very low as the only input cost is generally the aging of harvested bear teeth by the laboratory. Current teeth aging costs for approximately 2500 bears per year in Virginia is \$18,000 annually.:
 - Cons: The lag in population estimation indices behind harvest (for most precise estimates a 3-year lag is utilized) is problematic, particularly for populations with unstable trends. The estimates are also less accurate when the proportion of non-harvest mortality is substantial.
 - Integrated population models combine multiple data sources and often utilize Bayesian frameworks to increase the robustness of population estimates and account for uncertainty in these estimates. Integrated models often utilize age at time of harvest data from population reconstruction plus incorporate other data sources (often unique by state or area of interest) such as abundance estimates from mark-recapture, spatial data (movement data from collared animals), and non-harvest mortality. Integrated models are more costly to develop and run due to the additional input data required. Data availability varies from state to state, and even within states, depending on research and management objectives, budgets, and staffing levels.

- **Occupancy Modeling:** statistical modeling technique to study distribution and habitat use as well as detection probability of target species. This method utilizes non-invasive sampling from cameras deployed over a spatial array to determine detection/non-detection at each site thus allowing the ability to calculate the probability of a site being “occupied” by the target animal. Habitat characteristics, human influence (e.g. distance to roads), and seasonality can all be accounted for within occupancy modeling.
 - **Pros:** Non-invasive sampling method (cameras) which reduces costs and effort and provides valuable information on habitat use and probability of occupancy under different environmental conditions.
 - **Cons:** Labor intensive during camera deployment/recovery and does not provide density/abundance estimates, simply presence/absence of a site being occupied.
 - This methodology is being utilized (primarily due to the low input costs) to monitor bear populations in the northern Shenandoah Valley mangle endemic area beginning in 2025. Camera arrays will be utilized for a minimum of 2 field seasons (preferably 3) to determine occupancy, habitat use, and detection probability in this area which has noted declining bear population trends in recent years.

- **Capture-Mark-Recapture:** utilizes marked individuals and recapture rates to estimate population size. Basic mark recapture models assume closed populations with no significant birth, death, immigration, or emigration throughout the study period, and are used in black bear population estimates by some states. Pennsylvania notably runs one of the largest mark-recapture efforts of any eastern state, tagging over 700 bears each year with the recaptures counted during their bear harvest season (# of tagged bears in the harvest each year). The most commonly utilized formula for mark-recapture is the Lincoln Peterson Formula ($N = (M \cdot C) / R$) where:
 - N= Population Size
 - M = number of animals initially marked
 - C = total # of animals captured in the 2nd capture event (capture effort or harvest)
 - R = number of recaptured marked animals in the 2nd capture event (capture effort or harvest)

While physical marks (ear tags) were the common method for marking bears for many years, advancements in genetics have now allowed for non-invasive sampling utilizing

hair samples. Hair corrals (small wire enclosures) can collect hair samples as bears cross the wire which are then analyzed for DNA in the hair follicles to uniquely identify individual bears. These identified bears are considered “marked”.

- Pros: Increased accuracy and precision of density estimates can be gained by using mark-recapture but are dependent on the size of the area sampled and the number of individuals captured. Mark-recapture is often used within defined boundaries (e.g., National Park, management unit, etc) rather than across a statewide scale.
- Cons: Scaling mark-recapture efforts beyond a single management unit (county or zone or park for example) can be manpower intensive and expensive. Mark-recapture utilizing actual capture and tagging for black bears involves the cost of staff time, immobilization chemicals, tags, monitoring equipment, and traps. Trapping and tagging animals is also not without some risk and stress to the animal that occurs during the capture and handling event. The utilization of hair corrals for non-invasive mark-recapture are also manpower intensive and expensive to scale beyond single management units. Following the initial installation of hair corrals across a defined grid, hair must be collected (generally weekly) for a set amount of time (6-8 weeks). DNA extraction and genetic analysis costs vary but are not cheap, especially depending on the size of the area sampled and number of hair samples processed. Additionally, mark-recapture models provide a population estimate for that point in time (single year) and must be repeated to provide trends in populations. For smaller research units, efforts may be repeated yearly while for larger areas, every 5 to 10 years is more common.
- **Spatially Explicit Capture Recapture:** SECR utilizes the same principles as mark-recapture but includes spatial data such as the location of detection/capture, all detection points on the landscape, and animal home range size and movement histories. The most common method utilized with SECR models for black bear population estimation is hair sampling from noninvasive hair corrals or rub sites set up along a random grid. The use of spatial factors (forest cover, food availability, proximity to roads, agricultural lands, etc) allow modeling to incorporate the variation of density of bear populations across the landscape. Detection probability is also an integral part of SECR models which incorporates the variability of detection of individual animals within a population.
 - SECR with hair corrals is currently being utilized in Virginia as part of the Bear Mange Study across both the mange affected study area and the control area.

Hair corral grids (150 in year 1, 162 for years 2 and 3) were deployed in year 1 of the project and will run for 2 field seasons in the control area and 3 field seasons in the mangle affected area.

- The pros and cons of SECR are similar to those noted above for basic mark-recapture. Pros include improved accuracy and precision of density estimates, especially for defined study areas, while cons include the high cost of scaling up this type of monitoring to a statewide or even bear management zone scale on a routine basis. As noted for mark-recapture estimates provided are for those single points in time (year(s) that data was collected) and additional collection will have to occur to continue to provide data for these efforts. While it would not be practical to apply SECR statewide yearly, some states rotate sample efforts across bear management units over multiple years, with a 5- or 10-year return interval often cited for rerunning sampling and analysis.

- **Additional Bear Monitoring Metrics:**

- In conjunction with harvest data other metrics can be collected to aid in population assessment. None of the below metrics alone can provide population estimates but can contribute to integrated models or overall knowledge of bear status within a state or defined management unit.
 - Bear Vehicle Collision Data
 - Agricultural Damage/Depredation Permits
 - Bear Conflict Reports
 - Disease Reports
- Virginia utilizes all the above metrics when assessing bear population objectives and biennial regulation amendments to bear harvest seasons. Data quality for each of these metrics often varies depending on how it was collected (e.g., citizen reports, staff reports, partner agency reports).

Glossary of Terms and Acronyms

Direct transmission: Disease transmission that occurs from direct contact between two individuals

Indirect transmission: Disease transmission between two individuals through a contaminated reservoir, fomite, or environment

Density-dependent transmission: Occurs when contact rates that drive disease transmission increase when the density of the population increases

Frequency-dependent transmission: Occurs when contact rates that drive disease transmission remain constant regardless of the density of the population

Sympatric hosts: Related species in the same geographic area that host the same parasitic species

Epizootic: A drastic or sudden increase in the number of cases of infectious disease in an animal population

Endemic: A baseline level of disease activity in an affected animal population

SCWDS: Southeastern Cooperative Wildlife Disease Study

WCV: Wildlife Center of Virginia

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BOARD OF WILDLIFE RESOURCES

GOVERNANCE MANUAL

Revised ~~March 18, 2021~~ January 22, 2026

I. PURPOSE

The Board of Wildlife Resources for the Virginia Department of Wildlife Resources has established this Governance Manual in accordance with §29.1-102, Paragraph B, of the Code of Virginia to provide guidance and structure for the deliberations and decisions necessary for it to fulfill its statutory responsibilities and to accomplish its mission. It fully recognizes that the General Assembly has given stewardship responsibilities for the Commonwealth's wildlife and boating resources to the Department on behalf of Virginia's citizens and has entrusted the Board with the moral ownership of the Department on behalf of the public. Therefore, the Board will strive to understand the public's values regarding wildlife and boating resources and shall govern its actions based on those values.

II. AUTHORITY

Section 29.1-102 of the Code establishes the Board of Wildlife Resources, delineates the composition and selection of its members, and provides basic instructions regarding the structure and function of the Board. Section 2.2-2100 of the Code defines a supervisory board as one that is responsible for agency operations, including approval of appropriations requests, appointment of the agency Director, and compliance by the agency Director with all Board and statutory directives. The responsibilities and authorities of the Board are set forth in §29.1-103 and in other sections of Title 29.1. The Board is accountable to the purposes and provisions of Title

29.1 of the Code of Virginia and has specific authorities as summarized below:

A. Administration

The Board shall:

Serve as trustee of the Lifetime Hunting and Fishing Endowment Fund (§29.1-101.1).

Adopt rules and procedures for the conduct of its business that shall be set forth in a Governance Manual. The Board may establish committees to assist with its duties and responsibilities. All decisions by a committee shall be reviewed by the Board, and shall only take effect if approved by the Board (§29.1-102.B).

Elect one of its members as its chair whose duties shall be limited to (i) presiding at all regular and called meetings of the Board; (ii) serving as Board liaison to the Director, other Board members, and the Secretary of Natural Resources; and (iii) the other duties set forth in the Governance Manual as approved by a majority of the Board. The Board shall also elect a vice-chair to preside in the absence of the chair. Any additional duties of the vice-chair shall be set forth in the Governance Manual. The Board shall annually elect one of its members as chair and one of its members as vice-chair (§29.1-102.C).

Meet at least once every quarter of the calendar year for the transaction of its business, and other meetings may be called if necessary by the chair or at the request of any three members. The majority of the members shall constitute a quorum (§29.1-102.D).

Meet in Richmond or at such other places within the Commonwealth as may be necessary (§29.1-102.D).

Appoint the Director, subject to confirmation and reconfirmation every four years by the General Assembly, to head the Department and to act as principal administrative officer and ensure his compliance with statutory and Board directives. The Director is subordinate to the Board (§§2.2-2100, 29.1-109.B, and 29.1-103.1).

Approve requests for appropriations (§2.2-2100).

Manage gifts of property or money in such a way as to maximize their value to the citizens of Virginia (§29.1-104).

Reduce all rules, resolutions, regulations, and policies of the Board to writing for the Director; these writings shall be public documents and shall be available to the public on request (§29.1-107).

Open minute books and other records of the Board to examination by the Governor, members of the General Assembly, and Auditor of Public Accounts, or their representatives, at all times. The accounts of the Board shall be audited in the manner provided for the audit of other state agencies. In addition, the Board shall ensure that the Auditor of Public Accounts, or an entity approved by him, conducts an annual audit of a fiscal and compliance nature of the accounts and transactions of the Department. The Board may order such other audits as it deems necessary and desirable (§29.1-108).

Pay twenty-five percent of the proceeds from timber sales on lands owned by the Board to the locality in which the timber was located (§29.1-111).

Enter into a cooperative agreement with the United States Forest Service to define the means and methods to improve the fish and wildlife resources of the national forests in Virginia and shall program the expenditure of all funds derived from the sale of the national forest stamp (§29.1-411).

Designate (Board Chair) a Motorboat Committee with three members from the Board (§29.1-701).

The Board is authorized to:

Designate funds to the Capital Improvement Fund and may transfer an amount equal to fifty percent or less of the revenue generated annually from the sales and use tax which has been deposited in the Game Protection Fund pursuant to subsection E of § 58.1-638 (§29.1-101.01).

Adopt resolutions or regulations conferring upon the Director all such powers, authorities, and duties as the Board possesses and deems necessary or proper to carry out the purposes of Title 29.1 (§29.1-103.12).

Administer and manage the Virginia Fish Passage Grant and Revolving Loan Fund pursuant to Article 1.1 (§29.1-101.2 et seq.) of Chapter One of this title (§29.1-103.13).

Receive gifts, grants, bequests, and devises of property, real or personal, and money, which, if accepted, shall be taken and

held for any uses prescribed by the donor, grantor, or testator and in accord with the purposes of Title 29.1 (§29.1-104).

Enter into contracts, with the approval of the Governor, for the lease of lands or buildings owned by the Board (§29.1-105).

Enter into reciprocal agreements for sport-fishing licenses with adjoining jurisdictions having inland waters adjacent to Virginia (§29.1-535).

Perform all such acts as may be necessary for the establishment and implementation of cooperative wildlife restoration projects and fish restoration and management projects, as defined in the provisions of the Federal Aid in Wildlife Restoration Act of September 2, 1937 (16 U.S.C. § 669 et seq.), as amended, and to the provisions of the Federal Aid in Sport Fish Restoration Act of August 9, 1950 (16 U.S.C. § 777 et seq.), as amended, and the implementing regulations promulgated thereunder. Revenues derived from license fees paid by hunters and fishermen, as well as interest, dividends, or other income earned on such revenues, shall not be diverted and shall be used solely for the administration of the Department's fish and wildlife programs (§29.1-103.2.)

B. Acquisition

The Board is authorized to:

Acquire by purchase, lease, or otherwise lands and waters in the Commonwealth and to establish buildings, structures, dams, lakes, and ponds on such lakes and waters (§29.1-103.2); lands and waters for game and fish refuges, preserves or public

shooting and fishing, and establish such lands and waters under appropriate regulations (§29.1-103.4); lands and structures for use as public landings, wharves, or docks, to improve such lands and structures, and to control the use of all such public landings, wharves, or docks by regulation (§29.1-103.5).

Pursuant to Chapter 906 of the 2007 Virginia Acts of Assembly, the Board shall act in accordance with the policy of the Commonwealth that there shall be no net loss of those public lands managed by the Department that are available for hunting in Virginia (§29.1-103.2).

C. Conservation of Wildlife

The Board is authorized to:

In consultation with the Virginia Department of Agriculture and Consumer Services, the State Veterinarian, and representatives of appropriate agriculture agencies and organizations, to promulgate regulations pertaining to diseases in wildlife populations (§29.1-103.1.).

Conduct operations for the preservation and propagation of game birds, game animals, fish and other wildlife in order to increase, replenish, and restock the lands and inland waters of the Commonwealth (§29.1-103.3).

Acquire and introduce any new species of game birds, game animals, or fish on the lands and within the waters of the Commonwealth, with the authorization and cooperation of the local government for the locality where the introduction occurs (§29.1-103.6).

Restock, replenish, and increase any depleted native species of game birds, game animals, or fish (§29.1-103.7).

Control land owned by and under control of the Commonwealth in Back Bay, its tributaries, and the North Landing River from the North Carolina line to the North Landing Bridge (§29.1103.10).

Exercise powers it may deem advisable for conserving, protecting, replenishing, propagating, and increasing the supply of game birds, game animals, fish, and other wildlife in the Commonwealth (§29.1-103.11).

Determine when dams or other obstructions interfere with the free passage of anadromous and other fish within the streams of the Commonwealth and also to determine “suitable fishways” (§29.1-532).

Take such regulatory or other action as it may determine to be necessary to enable the Commonwealth to become a party to the Interstate Wildlife Violator Compact, as authorized in Article 2.1 (§ 29.1-530.5) of Chapter 5, and to implement the Compact in the Commonwealth (§29.1-103.17).

D. Education

The Board shall:

Establish regulations and rules to administer and enforce a hunter education program (§ 29.1-300.2)

~~Establish one full-time hunter education coordinator position per administrative region of the Department~~ Staff the hunter education program with appropriate personnel to ensure that

hunter education, training, workshops, and volunteer management are carried out across the Commonwealth (§29.1-300.2).

The Board is authorized to:

Have educational matter pertaining to wildlife published and distributed (§29.1-103.8).

Hold exhibits throughout the Commonwealth for the purpose of educating school children, agriculturists, and other persons in the preservation and propagation of wildlife in the Commonwealth (§29.1-103.9).

E. Regulations and Rules

The Board shall:

Regulate or prohibit by regulation any drilling, dredging, or other operation designed to recover or obtain shells, minerals, or other substances on land owned by and under control of the Commonwealth in Back Bay, its tributaries and the North Landing River from the North Carolina line to North Landing Bridge to prevent practices and operations which would harm the area for fish and wildlife (§29.1-103.10).

Conform its regulations regarding the hunting of migratory game birds with the regulations of the United States government in regards to open seasons and bag limits (§29.1-515).

Promulgate regulations necessary to carry out the provisions of Chapter 6 of Title 29.1 pertaining to the licensing and operation of shooting preserves (§29.1-600.1).

The Board is authorized to:

Promulgate regulations pertaining to the hunting, taking, capture, killing, possession, sale, purchase, and transportation of any wild bird, wild animal, or inland water fish and the feeding of any game, game animals, or fur-bearing animals as defined in § 29.1-100, or the feeding of any wildlife that results in property damage, endangers any person or wildlife, or creates a public health concern. (§29.1-501).

Prescribe the seasons and bag limits for hunting, fishing, trapping, or otherwise taking such wild birds, animals, and fish in the Commonwealth (§29.1-506) and on lands and waters owned or controlled by the Board (§29.1-508).

Close or shorten open seasons under certain conditions by giving public notice (§29.1-507).

Promulgate regulations to change the shotgun shell capacity (§29.1-519).

Adopt regulations permitting trappers to visit traps less frequently than at least once every 72 hours under specified conditions (§29.1-521).

Promulgate regulations establishing model ordinances for hunting with firearms that may be adopted by counties or cities (§29.1-528).

Promulgate regulations establishing model ordinances for hunting with bow and arrow that may be adopted by counties or cities (§29.1-528.1).

Prescribe distances less than 500 yards between waterfowl hunting blinds and the use of such blinds with restrictions (§29.1-351).

Establish a practical system of identification of trout offered for sale for table or other uses that it prescribes (§29.1-531).

Declare endangered and threatened species of fish and wildlife and to prohibit the taking, transportation, processing, sale, or offer of sale within the Commonwealth (§29.1-566).

Declare birds and animals as predatory and undesirable or nonindigenous aquatic nuisance species and control the importation and possession of such animals (§§29.1-542, 29.1573).

E. Fees, Licenses, and Permits

The Board shall:

Establish by regulation a procedure for selling bonus deer permits and set the fee for this permit according to some restrictions (29.1-305.1).

The Board is authorized to:

Establish and collect admittance, parking or other use fees at certain Department-owned facilities according to certain restrictions (§29.1-103.14).

Establish and collect a use fee through the issuance of an annual hunting stamp required to hunt on private lands managed by the department with certain requirements (~~§29.1-403.15~~ 29.1-113).

Revise, as it deems appropriate, through the promulgation of regulations, the fees charged for hunting, fishing, and trapping licenses with certain restrictions (§29.1-103.16).

Adopt regulations to carry out the provisions of the apprentice hunting license statute (§29.1-300.4.)

Designate agents for the sale of hunting and fishing licenses and appoint agents for the sale of licenses and permits via telephone and electronic media (§§29.1-323 and 29.1-337).

Create a separate special license for the hunting of bear in the Commonwealth according to fees and requirements (§29.1-305).

Impose daily use fees and issue permits to fish in specially stocked trout streams (§29.1-318).

Administer a permit system to allow certain privileges for the collection, holding, etc. of wildlife according to regulations, reports, and fees as it may prescribe (§29.1-413).

Grant permits to bona fide field trial clubs and associations to hold field trials with dogs under regulations and fees that it establishes (§29.1-422).

Issue permits to raise, purchase, release, and hunt pheasant on private lands under rules, regulations, and seasons that it may require (§29.1-514).

Recognize persons, companies, or corporations with canneries or processing plants in other states that are duly licensed to operate such facilities in those states so that those entities can possess, transport, sell, etc. wild animals, birds, fish that are

packaged in a can, tin, pot or other receptacle outside of the Commonwealth (§29.1-543).

Permit the taking and possession, etc. of endangered or threatened (§29.1-568), predatory and undesirable (§29.1-542), and nonindigenous aquatic nuisance (§29.1-575) species under special conditions.

Adopt revisions to the fees charged for motorboat registration and title certificates (§29.1-701.1).

F. Boating

The Board shall:

Promote the interest of retail buyers of watercraft and may prevent unfair methods of competition and unfair or deceptive acts or practices (§29.1-802).

The Board is authorized to:

Make rules and regulations as it deems necessary and proper for the effective administration of Chapter 7 of Title 29.1 concerning boating laws (§29.1-701.E).

Allow exceptions to the requirement to display decals showing the expiration date of motorboat registrations on the side of motorboats (§29.1-703).

Adopt regulations as it deems appropriate for the safe and reasonable operation of vessels and for proper equipment (§29.1-735).

Promulgate regulations to implement a boating safety education program for all motorboat and personal watercraft operators to meet boating safety education requirements (§29.1-735.2).

Promulgate regulations applicable to the commercial operations of parasail operators on waters of the Commonwealth (Acts of Assembly Chapter 625 of the 2007 Session).

Promulgate regulations governing the takeoff, landing, and taxi of seaplanes on impoundments located on the inland waters of the Commonwealth (§29.1-735.1).

Establish special or general rules regarding safe and reasonable operation of vessels on any waters within any political subdivisions of the Commonwealth upon application from that subdivision or on its own motion (§29.1-744).

Promulgate regulations within the provisions of the Watercraft Dealer Licensing Act (§29.1-805).

III. PRINCIPLES

A. COMMITMENT

The Board is devoted to accomplishing the Department's mission and fulfilling its vision, as follows:

Mission: To manage Virginia's wildlife and inland fish to maintain optimum populations of all species to serve the needs of the Commonwealth;

To provide opportunity for all to enjoy wildlife, inland fish, boating, and related recreation and to work diligently to safeguard the rights of the people to hunt, fish and harvest game as provided for in the Constitution of Virginia;

To promote safety for persons and property in connection with boating, hunting, and fishing;

To provide educational outreach programs and materials that foster an awareness of and appreciation for Virginia's fish and wildlife resources, their habitats, and hunting, fishing, and boating opportunities.

Vision: The Board of Wildlife Resources seeks to provide long-term direction and resources to the Department to firmly establish and maintain it as a leader among wildlife and boating agencies within the ~~Nation~~ country. The Board's deliberations and decisions will be based on sound scientific principles and procedures, as developed, researched, recognized, and accepted within the bounds of comprehensive professional wildlife resource management, and will focus on excellence in service to the citizens of Virginia. The Board will strive to provide an environment that fosters ethical behavior, teamwork, professional development, and distinction in performance among its members and the employees of the Department. The Board is fully committed to excellence in governance and in fulfilling its responsibilities as stewards of these most valuable resources.

B. APPROACH TO GOVERNANCE

1. To achieve its vision for the Department, the Board will govern according to the following values:
 - a. An outward vision;
 - b. A long-term perspective;
 - c. A proactive approach to governance;
 - d. Strategic leadership;
 - e. Consideration of multiple viewpoints during deliberations, integration of ideas or consensus building in decision-making, and accord following decisions; and
 - f. Clear distinction between the roles and actions of the Board and those of the staff, particularly in regards to the role of the Director.
2. The Board will be guided by the following principles in all of its deliberations, decisions and actions:
 - a. The Board will convey its organizational values and perspectives to the Department with the development of broad policies that are founded on the principles of openness, integrity, and accountability.
 - b. The Board's focus will be on long-term goals, expressed as "Ends" statements, that address the Department's mission, and not on the operational approaches or "means" of attaining those goals.

- c. The Board will develop policies in four areas as follows:
- Ends – properly targeted, mission-related goals, results, impacts or outcomes;
 - Executive Limitations – articulation of limits and boundaries for staff actions;
 - Board-Executive Relationship – delegation of authority to the Director and evaluation of how that delegated authority is used within the context of the Department’s mission and the Board’s policies; and
 - Board Process – the way that the Board governs itself and provides leadership and direction to the organization.
- d. While the Board expects staff recommendations regarding Board policy requirements, the Board will initiate policy development according to its needs. Additionally, the Board will review and update its policies as a part of its three-year review of the Governance Manual or at any other time it determines to be necessary. The Board will be responsible for excellence in governing.
- e. The Board will apply self-discipline as necessary to govern with excellence. Discipline will apply to all aspects of Board activities, such as preparation

for meetings, interactions with the public and staff, behavior and attendance at Board events, policy development principles, and adherence to Board processes as established in Board policies. Board members will interact with staff to enhance their understanding of Department programs and their ability to perform their duties, but will provide direction to the Department via Board actions to the Director.

- f. The Board recognizes that it is ultimately accountable for all aspects of the Department and will conscientiously strive to accomplish its obligations to the citizens of the Commonwealth. It will allow no officer, individual, or committee of the Board to usurp this role or hinder this commitment.
- g. Officers and committees will be established to assist the Board with its responsibilities. Major decisions and actions of the Board will occur at the Board level, and when appropriate, by a vote of the entire Board.
- h. The Board will monitor and regularly assess its own policies and performance and will make adjustments as necessary to maintain and/or improve its governance of the Department.

- i. Furthermore, it will ensure the continuity and advancement of its governance skills through training and development of all Board members and through thorough orientation of new Board members.

IV. STRUCTURE AND FUNCTION OF THE BOARD

A. COMPOSITION

- 1. The members of the Board are appointed and serve in accordance with §29.1-102 of the Code of Virginia, which provides, inter alia:
 - a. The Board shall consist of 11 members. The members appointed shall be citizens of the Commonwealth and shall be knowledgeable about wildlife conservation, hunting, fishing, boating, agriculture, forestry, or habitat. Each Department region, as constituted on July 1, 2014, shall be represented by two members, and three members shall be members-at-large, each representing a different Department region. Members shall be appointed for terms of one to four years; however, appointments shall be made in a manner whereby no more than three members shall have terms which expire in the same year. An appointment to fill a vacancy shall be made in the same manner, but only for the unexpired term. No person shall

be eligible to serve more than two consecutive four-year terms.

- b. The Governor appoints Board members, subject to confirmation by the General Assembly.
- c. The Governor may remove Board members from office during their respective terms.

- 2. All new Board members must complete an orientation program in conjunction with the first regularly scheduled Board meeting following the announcement of their first appointment to the Board or as soon as practicable following the announcement of their first appointment to the Board if orientation cannot be completed in association with the first Board meeting. The Executive Director shall be responsible for developing and presenting the orientation program, and the Board Secretary will distribute an extensive orientation manual to new Board members upon announcement of the appointments.
- 3. All Board members shall be required to sign an affirmation pledging to uphold both the letter and spirit of The Board of Wildlife Resources' Code of Ethics and Conduct within ninety (90) days of the date of their appointment to the Board or within thirty (30) days of the adoption of these policies, whichever comes later.

B. OFFICERS

Officers of the Board will consist of a Chair and a Vice-

Chair (§29.1-102.C). The Chair will appoint a Nominations Committee that will develop a slate of candidates for both positions and present it to the Board at a Board meeting in the last quarter of the fiscal year. The Chair will entertain a motion to accept the Committee report and open the floor for additional nominations. After the membership has had ample opportunity to make nominations, the Chair will accept a motion to close the nominations. The Board will elect officers from the candidates for both positions by majority vote during its meeting in the last quarter of the fiscal year. New officers will assume the responsibilities of their positions on July 1 and will serve through June of the next year. The term of office is one year for both positions. The Chair and Vice Chair shall not be eligible to be re-elected to their respective positions and no person shall serve more than one year as Chair and one year as Vice Chair during a four-year term. The Vice Chair does not assume the Chair's position; however, the Vice Chair can be nominated for and elected to become the Chair.

In the case of unexpected vacancies, the Board may install duly elected officers by majority vote at its next meeting. If incoming officers have not been selected, the Board may nominate and elect a member to fill the vacant position by a majority vote. Installation of the officer will occur immediately after he/she is elected by vote of the Board.

C. CHAIR

The Chair is charged with ensuring the openness, integrity, and accountability of the Board's process, motivating the Board members to focus on the long-term, mission-related "Ends" for

the Department and to fulfill their responsibilities and duties toward those Ends; and to oversee the operation of Board meetings to optimize the effectiveness and efficiency of those meetings. Towards these ends, the Chair:

1. Works with the Director to develop agendas for Board meetings;
2. Presides over meetings of the Board;
3. Votes on motions as other members, except that the Chair shall not be required to cast his or her vote before hearing or counting the votes from the other members (Note: Robert's Rules of Order, which the Board has adopted, normally requires that the Chair does not vote, except in certain situations. However, since each member represents an administrative region, all should cast their votes on the public's behalf.)
4. When required, certifies actions taken by the Board;
5. Communicates to outside interests on behalf of the Board regarding specific decisions or actions made by the Board;
6. Appoints members to standing committees including a Motorboat Committee (§29.1-701) and to ad hoc committees created by the Board, subject to confirmation by the Board. The Chair may serve on standing committees, but shall not serve as a chair of a standing committee;
7. Communicates regularly, but at least quarterly, with the Secretary of Natural Resources to inform him/her regarding activities and programs of the Board and

Department and to receive information on initiatives by the Administration;

8. Designates one member of the Board, who may include the Board Chair or Vice Chair, to serve as liaison to the Wildlife Foundation of Virginia; and
9. Performs such additional duties as prescribed within this policy or as may be established by resolution of the Board.

D. VICE-CHAIR

The Vice Chair is a member of the Board, elected by a majority vote of the Board according to the procedures for the election of officers. The duties of the Vice Chair are as follows:

1. Preside over Board meetings if the Chair is unable to do so as per §29.1-102.C;
2. Serves on standing committees as appointed by the Chair;
3. Provide guidance and interpretation on Board meeting procedures according to the rules (§29.1-102) within the current edition of Robert's Rules of Order, The Modern Edition.
4. Perform such additional duties as prescribed within this policy or as may be established by resolution of the Board.

E. SECRETARY

The Board instructs the Director to designate a staff member with acceptable credentials to serve as the Board Secretary. Following the Board's appointment of this individual as Board Secretary, this person shall serve in this capacity until such time as he or she is unable or unwilling to continue to do so, or until such time as the Board terminates the appointment. The Secretary to the Board has the following duties and responsibilities:

1. To maintain a current list of the membership of the Board and of each committee;
2. To notify Board members of Board and committee meetings;
3. To coordinate and disseminate information to the members of the Board;
4. To prepare correspondence for the Chair when he/she is communicating on behalf of the Board;
5. To maintain official minutes and records of all proceedings of the Board;
6. To coordinate the response to requests received by the Board under the Freedom of Information Act;
7. To ensure timely filing of reports with the Secretary of the Commonwealth under the State and Local Government Conflict of Interests Act;
8. To prepare, prior to each meeting of the Board and its committees, advertisements of the meeting and to place them in the appropriate media outlets, in accordance with the requirements of the Administrative Process Act.

9. To prepare, prior to each meeting and in coordination with the Board or committee Chair and the Director, an order of business (agenda) that lists all known issues to be addressed at the meeting, in their exact order of presentation;
10. To coordinate agendas and presentations for the Board;
11. To prepare a calendar of events for the Board to insure compliance with all Board requirements and deadlines; and,
12. Perform such additional duties as provided herein or as may be set by resolution of the Board.

F. MEETINGS/ATTENDANCE

The Board drafts and approves a regular meeting schedule in advance of each calendar year. Meetings will occur at least once every quarter in accordance with §29.1-102.D. The schedule may be amended by agreement of a majority of the Board. The Board may schedule additional meetings, if deemed necessary, after giving appropriate notice to all members of the Board and to the public. The Chair will schedule a meeting upon the request of three members of the Board and will notify the Director of the called meeting. The request may be made verbally during a duly convened Board meeting or in writing to the Board Chair at other times. In all cases, the purpose of the meeting must be clearly stated, and those three or more members making the request must be clearly identified.

Members are expected to attend all meetings unless there are mitigating conditions that preclude a member's presence. In

such cases, the member must notify the Board Chair and Board Secretary in advance of the meeting and give the reason for his/her absence.

G. PROCEDURAL STANDARDS

1. The Board will use the current edition of Robert's Rules of Order, The Modern Edition, to govern the proceedings of all of its Board and committee meetings insofar as they are applicable and not inconsistent with law or any of the policies adopted by the Board. All meetings of the Board and its committees shall comply with the provisions of the Virginia Freedom of Information Act (Title 2.2, Chapter 37 of the Code of Virginia).
2. Voting by proxy is prohibited by law.
3. A majority of members of the Board shall constitute a quorum at Board meetings (§29.1-102.D).
4. Approval of an action or decision shall be by a majority of a quorum of the Board.

H. RESPONSIBILITIES AND DUTIES OF THE BOARD

To accomplish its trustee and administrative duties, the Board shall perform the following duties:

1. The Board shall establish the strategy for and approve all actions regarding the following policy-related items:

a. General Duties

1. Ends policies
2. Decision-making structure
3. Governance Manual
4. Annual budget
5. Wildlife and boating regulations
5. Financial reporting system
6. Internal control system

b. Administration-Related Duties

1. Agency mission and vision
2. Strategic plan and objectives
3. Executive limitations policies
4. Board/Secretary of Natural
Resources/Director relationships
5. Board/Director relationship policies
6. Director selection and performance
evaluation processes

2. The Board shall approve all actions and decisions regarding the following areas of policy implementation and Department operations:

a. General Duties

1. Creation and appointments to Standing, Advisory, and Ad Hoc Committees
2. Mandate and appointment of the Director
3. Audit function

- b. Administration-Related Duties
 - 1. Educate constituents regarding Board policies and strategic plans for the Department
- 3. The Board shall monitor the following elements to ensure compliance with, and continued appropriateness of, Board policies and guidelines:
 - a. General Duties
 - 1. Ends policies
 - 2. Decision-making structure and governance manual
 - 3. Financial reporting system
 - 4. Budget
 - 5. Internal control system
 - 6. Legislation
 - 7. Audit function
 - b. Administration-Related Duties
 - 1. Plan vision and mission
 - 2. Strategic Plan and objectives
 - 3. Executive limitations policies
 - 4. Board/Secretary of Natural Resources/Director relationship
 - 5. Board/Director relationship policies
 - 6. Director performance evaluation processes

4. The Board shall oversee each of the following and take such action as is necessary and/or appropriate:
 - a. General Duties
 1. Implementation of Ends policies
 2. Effectiveness of governance policies
 - b. Administration-related Duties
 1. Effectiveness of executive limitations policies
 2. Effectiveness of Board/Secretary of Natural Resources/Director relationship
 3. Effectiveness of board/director relationship policies
 4. Performance of the Director

V. RELATIONSHIP BETWEEN THE BOARD AND THE SECRETARY OF NATURAL RESOURCES

The Board recognizes that the Department is an agency within the Natural Resources Secretariat and understands that the governance structure of the Department is unique for this cabinet of state government. While this structure is different, the Board is committed to insuring that the Department operates effectively and appropriately within this important unit of state government. Therefore, the Board will focus on its statutorily-mandated responsibilities as expressed within its mission statement and will also seek to establish and maintain regular communications and coordination of efforts with the

Secretary of Natural Resources in regards to initiatives of the Administration and government-wide procedural and process-related requirements. The Board will pursue the following actions to ensure compliance with initiatives of the Administration and government-wide requirements.

- A. The Board directs the Chair via this governance manual to communicate regularly with the Secretary of Natural Resources to keep him/her informed of Board initiatives and to receive updates on issues and directives from the Administration and the requirements of government-wide procedures.
- B. The Board will solicit input from the Secretary of Natural Resources when it develops performance plans for the Director and as it evaluates the Director's performance. The Board will specifically request that the Secretary of Natural Resources forward information regarding special initiatives or performance measures required by the Governor so that they can be incorporated into the Director's performance plan.
- C. The Board will place requirements upon the Director to meet regularly with the Secretary of Natural Resources to discuss issues relative to the Department and to provide regular, written updates to the Secretary of Natural Resources regarding initiatives, programs, and activities of the Department. The Director will provide summaries of those reports to the Board,

and the Board will solicit feedback from the Secretary of Natural Resources as to the Director's performance in this regard.

VI. RELATIONSHIP BETWEEN THE BOARD AND DEPARTMENT OPERATIONS

All authority delegated from the Board to the staff will be delegated through the Director; thus, all authority and accountability of Department operations and staff performance rests with the Director.

- A. The Board will instruct the Director to achieve certain results for its constituents through the development of Ends policies. The Board will institute limitations on the Director's latitude for accomplishing these Ends via the establishment of Executive Limitations policies. These policies will spell out the practices, methods, conduct, and other "means" that are available to the Director as he directs the operations of the department.
- B. As long as the Director adheres to a reasonable interpretation of the Ends and Executive Limitations policies, he/she is authorized to create additional policies, make all decisions, take all actions, establish all practices, and develop all activities.
- C. The Board recognizes that changes to its Ends and Executive Limitations policies will shift the boundary between the Board and the Director as well as the Director's latitude in executing the Department's operations. The Board will recognize delegations that

are in place at such times and will respect and support the Director's choices.

- D. The Director is bound only to decisions of the Board acting as a body.
- E. Decisions or instructions of individual Board members, officers, or committee are not binding on the Director except in rare occasions when the Board has specifically authorized such exercise of authority.
- F. The Board will routinely monitor the Department's performance relative to the Ends and Executive Limitations policies and will consider the results in the evaluation of the Director's performance.

G. DIRECTOR

Pursuant to §§29.1-103, 2.2-2100, and 29.1-109.B, the Board shall appoint a Director to head the Department and to act as principal administrative officer. The Director shall have the following powers as defined in the Code of Virginia or by regulations and policies of the Board:

1. Administration

The Director shall:

Regularly brief the Secretary of Natural Resources on initiatives, programs, and activities of the Department. The Director shall meet with the Secretary of Natural Resources or his/her representative at least once every month and shall submit written reports to the Secretary on significant Department activities as requested by the Secretary. He/she shall seek guidance from the Board on mission-related matters and obtain counsel from the Secretary in regards to government-wide procedural and process-related matters and on initiatives of the Administration. The Director shall brief the Board on interactions and issues with the Secretary of Natural Resources at each of the Board's regularly scheduled meetings.

Accept service of process on behalf of the Board.

The Director is authorized to:

Employ persons necessary for the administrative requirements of the Board and to designate the official position and duties of each (§29.1-109.B.3).

Perform such acts as may be necessary to the conduct and establishment of cooperative fish and wildlife projects with the federal government as prescribed by Congress and in compliance with rules and regulations promulgated by the Secretary of the Interior (~~§29.1-109.B.4~~ 29.1-109.B.5).

Make and enter into all contracts and agreements necessary or incidental to the performance of his/her duties and the execution of his/her powers, including, but not limited to, contracts with the United States, other state agencies, and governmental subdivisions of the Commonwealth (§~~29.1-109.B.5~~ 29.1-109.B.6).

Sign on its behalf, documents, leases, and conveyances previously approved by the Board (via Board policy).

Employ special counsel approved by the Governor to defend any Conservation Police Officer appointed by the Director who is prosecuted on any criminal charge arising out of any act committed in the performance of his official duties (§29.1-218).

Grant and acquire interests in land and water through minor land leases, easements, and contracts subject to the necessary state approvals. For the purposes of this policy only, minor land leases, easements, and contracts include utility crossings, access to properties, administrative buildings, antenna sites, boat landings, and wildlife lands; and furthermore, the value of each such minor lease, easement, or contract shall not exceed \$5,000 or a total of \$200,000 per fiscal year for all such leases, easements and contracts (via Board policy).

Recommend to the Board any policy changes that should be made (via Board policy).

Enter into agreements with individuals and entities regarding the commercial use of ~~DGIF~~ DWR facilities and to establish a fee schedule for such use (via Board policy).

2. Conservation of Wildlife

The Director shall:

Appoint regular and special Conservation Police Officers as he may deem necessary to enforce the game and inland fish laws and shall issue a certificate of appointment to each Conservation Police Officer (§29.1-200).

The Director is authorized to:

Enforce or cause to be enforced all laws for the protection, propagation, and preservation of game birds and game animals in the Commonwealth and all fish in the inland waters thereof (§29.1-109.B.1).

Initiate prosecution of all persons who violate such laws, and seize and confiscate wild birds, wild animals, and fish that have been illegally killed, caught, transported, or shipped (§29.1-109.B.2).

On request of any employer owning more than 500 acres, the Director may appoint as special Conservation Police Officers persons employed by the owner. On request of two or more adjoining landowners who own 1,000 or

more contiguous acres, the Director may appoint as special Conservation Police Officers persons employed by one or more of the landowners (§29.1-217).

When practicable, consult with, and keep informed, wildlife and boating constituent organizations so as to benefit Virginia's wildlife and natural resources, and accomplish the Department's mission (§~~29.1-109.B.6~~ 29.1-109.B.7).

Manage, harvest, and sell timber on lands owned by the Board in accordance with the best timber and game management practices (§29.1-111).

Approve the use of drugs on vertebrate wildlife (§29.1-508.1).

Allow employees of federal, state, and local government agencies, and persons holding a valid Commercial Nuisance Animal Permit issued by the Department, to visit conibear-style body-gripping traps that are completely submerged at least once every 72 hours or as otherwise permitted by regulation (§29.1-521 A.9).

Register deer enclosures in certain instances (§29.1-525.1.D).

Authorize the feeding of bear, deer, or turkey on national forest lands and department-owned lands (4VAC15-40-281).

Approve nontoxic shot for waterfowl hunting

(4VAC15-260-140).

Designate waters as “designated stocked trout waters” (4VAC15-20-190) and Trout Heritage Waters (4VAC15-330-10).

Designate waters to be included within the Urban Fishing Program (4VAC15-330-200).

3. Regulations and Rules

The Director is authorized to:

Propose adoption of modifications and amendments to the Federal Endangered and Threatened Species List in accordance with the procedures of §§29.1-501 and 29.1-502 of the Code of Virginia (4VAC15-20-130).

Establish and post rules governing certain activities on Department-owned or controlled lands (4 VAC15-40-280).

Develop rules necessary for the enforcement of the Board’s policy concerning the use of boat ramps (via Board policy).

4. Fees, Licenses, and Permits

The Director shall:

~~Deliver licensing materials to license agents or clerks before the first day of the license year, must account for unused, annually-expiring material and unsold licenses,~~

~~and shall~~ Shall determine and supply equipment and materials needs for suppliers of electronic license sales outlets (§29.1-330).

Approve all permits for threatened and endangered species issued on behalf of the Board according to Board policy.

The Director is authorized to:

Authorize the acceptance of methods of payment of licenses and permit fees (§29.1-112).

Enter into an agreement with the State Forester (Department of Forestry) so the Department can sell permits for hunting and trapping in state forests (§10.1-1152).

Permit special fishing permits for certain veterans (§29.1-312).

Issue at a regular fee up to 25 state resident fishing licenses in the name of any state institution operated by the Department of Mental Health, Mental Retardation, and Substance Abuse Services for use by patients of the institution (§29.1-313).

Issue special fishing permits for certain handicapped persons (§29.1-314), school classes (§29.1-315), youth camps (§29.1-316), and juveniles (§29.1-317).

Issue complimentary hunting and fishing licenses to certain representatives from federal, state, and nongovernmental organizations (§29.1-339).

Determine an electronic or computerized means for the submission of applications for waterfowl blind licenses (§29.1-348).

Require fur permit holders to submit detailed activity reports (§29.1-405).

Issue permits for the killing of deer or bear when damaging crops, livestock, etc. This authority includes the killing of deer over bait within the political boundaries of any city or town, or any county with a special late antlerless season; this authority also includes the option of using non-lethal control measures for bear and elk (§29.1-529).

Permit the importation, possession, purchase, receipt, or transportation of a nonindigenous aquatic nuisance species and to obtain warrants if necessary to enter and inspect property for the presence, seizure, or eradication of such species (§29.1-574 through 29.1-577).

Issue and revoke licenses for shooting preserves under certain conditions (§§29.1-600 and 29.1-609).

Obtain licenses, permits, stamps, or records from license agents as necessary to administer the Department's licensing program (4VAC15-20-110).

~~Appoint new consignment agents based on provisions of 4VAC15-20-120. [Repealed 9/1/2025]~~

~~Administer the Department's license agent program via 4VAC15-20-120. [Repealed 9/1/2025]~~

Set permit schedules, permit conditions, delegate signature authority, establish protocols for handling appeals to permit decisions, and for establishing policy for re-issuance of permits to individuals whose previous permits have been revoked or denied (4VAC15-30-5).

Issue special permits to reduce or control animal populations by licensed hunters or licensed trappers on areas designated by department wildlife biologists (4VAC15-40-240).

~~Issue permits and establish special rules according to procedures in 4VAC15-320-140. [Repealed 1/1/2019]~~

Authorize or renew permits to allow existing boat docks and piers on the Department's public fishing lakes (via Board policy).

5. Boating

The Director shall:

Furnish annual lists of boat registrations to commissioners of revenue (§29.1-707).

Insure that the Department has an enhanced enforcement effort from Memorial Day through Labor Day at Smith Mountain Lake that is commensurate with the level of boating activity (§29.1-739.2).

The Director is authorized to:

Designate agents for temporary boat registration agents (§29.1-703.2).

Award certificate of boat registration numbers directly or to authorize others to act as agents and award certificates of numbers (§29.1-706).

Approve or disapprove requests for placement of “no wake” buoys or other markers for private individuals upon application from a local governing body (§29.1-744.E).

Require and approve materials provided to individuals renting a personal watercraft (§29.1-749.3).

Conduct hearings, inspect records of a licensed watercraft dealer, and to take action in the name of the Commonwealth regarding complaints and violations of

the Virginia Watercraft Dealer Licensing Act (§§29.1-803, 29.1-804, and 29.1-806).

Administer the watercraft dealer licensing system pursuant to provisions of Article 2, Chapter 8, in Title 29.1 of the Code of Virginia.

To allow exemptions to the requirement that decals signifying the last month and year during which the certificate of number is valid must be displayed on each side of a motorboat as per §29.1-703. (Board Resolution, November 29, 2005).

The Director may delegate other responsibilities, duties and authority, not specified above, to members of the administrative staff of the Department to improve or advance the efficiency of the Department's operations.

VII. COMMITTEES

A. STANDING COMMITTEES

The Board may establish standing committees that it deems necessary to assist it in carrying out its responsibilities and fulfilling its mission. The purpose of a standing committee must be clearly stated to avoid overlap in responsibilities with other Board committees, the Board's officers, and the Director.

After it is instituted, a standing committee shall remain in existence until dissolved by appropriate action of the Board.

Additionally upon establishment, a standing committee shall develop a committee charter that will include a purpose statement, an overview of the committee's responsibilities and duties, its operating procedures, and its composition. The committee charter will be presented to the Board for review and approval. Committee Charters shall be reviewed as a part of the Board's three-year review of the Governance Manual or at any other time the Board or the committees determine necessary and will be attached to the Board's Governance Manual.

All standing committees of the Board are subject to the following principles and guidelines, unless specifically given other guidance by vote of the Board:

1. Standing committees are to assist the Board in fulfilling its responsibilities, and in doing so, will frequently interact with the Department's staff. In those interactions, the committees may offer advice or suggestions to staff, but will not provide specific instructions or directions to staff.
2. A standing committee may not act or speak for the Board, unless the Board specifically authorizes such representation for specific purposes.
3. Standing committees will normally focus on the development of policy within specific topical areas and will provide policy alternatives and associated implications to the Board for deliberation and action. These committees will not intrude into operational issues

or decision-making that are in the Director's realm of responsibilities.

4. All standing committees shall notify all members of the Board regarding the time and place of all committee meetings. Any Board member may attend the meeting of any standing committee and participate in its discussions; however, only members of the committee may vote on items under consideration by that body.

The Board has established standing committees as follows:

1. **FINANCE, AUDIT, AND COMPLIANCE COMMITTEE**

The purpose of the Finance, Audit and Compliance Committee is to conduct initial and continuing reviews of issues regarding internal and external audits, and the financial conditions, both short- and long-term, of the Department. While financial expertise is not a requirement for appointment to the Board, the Board Chair shall consider the financial background of members in making appointments to the Committee. Audit reviews will include compliance with Board policies, accounting practices and auditing procedures, adequacy of financial reports and disclosures, the Director's expenses, and violations of law. Financial evaluations will focus on implementation of the Department's annual budgets as approved by the Board as well as the Department's long-term funding needs. The Committee will develop and submit reports, draft policies, and/or

recommendations regarding audits and the finances of the Department to the full Board for its consideration.

2. EDUCATION, PLANNING, AND OUTREACH COMMITTEE

The purpose of the Education, Planning, and Outreach Committee is to evaluate its educational, planning, and outreach needs relative to the statutory mandates, mission, and strategic plans of the Board, and to develop and submit reports, draft policies, and recommendations regarding those needs, as necessary, to the full Board for its consideration. The Committee will regularly evaluate the Department's mission, the Board's policies, its long-term planning requirements, and Governance Manual and develop recommendations regarding mission and vision statements, policy and governance changes, and strategic planning for the Board. The Committee will also investigate reported breaches of The Board's Code of Ethics and Conduct and report its findings to the Board.

3. NOMINATIONS COMMITTEE

The Nominations Committee will interact with the membership of the Board to develop candidates for the officers of the Board for consideration by the full Board. The Committee will report its slate of candidates at a Board meeting in the last quarter of the fiscal year.

4. WILDLIFE AND BOAT COMMITTEE

The purpose for the Wildlife and Boat Committee is to evaluate the long-term needs of the Commonwealth's wildlife and boating resources, and to draft recommendations and/or policies addressing those needs for consideration by the entire Board and to serve as the Motorboat Committee in accordance with §29.1-701 of the Code of Virginia. This Committee will also assess the needs, desires, and impacts of the users of these resources and provide guidance to the full Board as described above.

5. LAW ENFORCEMENT COMMITTEE

The purpose for the Law Enforcement Committee is to evaluate the long-term needs of the Commonwealth's and the Department's Law Enforcement resources, and to draft recommendations and/or policies addressing those needs for consideration by the entire Board. This Committee will also assess the needs, desires, and impacts of the users of the law enforcement resources and provide guidance to the full Board as described above.

B. ADVISORY COMMITTEES

The Board may appoint advisory committees as it deems necessary to assist the Board in fulfilling its responsibilities on behalf of the citizens of the Commonwealth for the proper

stewardship of the state's wildlife and boating resources and the operation of the Department. The Board will establish the purpose, composition, and qualifications for membership of each advisory committee prior to its creation. The recommendations of an advisory committee are not binding upon the Board. The Board may instruct the Director to provide staff support to an advisory committee, but the committee will provide its reports and/or recommendations directly to the Board for its consideration.

C. SPECIAL (AD HOC) COMMITTEES

The Board may establish special (ad hoc) committees, as needed to carry out specified tasks. A special committee shall cease to exist upon completion of its assignment and presentation of its final report and/or recommendations to the Board. A special committee may not be established to carry out an assignment that overlaps existing functions of any standing or advisory committee.

VIII. RELATIONSHIP WITH THE PUBLIC

The General Assembly established the Board of Wildlife Resources to represent the public's interest in the wildlife and boating resources of the Commonwealth and to oversee the operations of the Department of Wildlife Resources. The Governor appoints the members of the Board to serve as stewards of those resources and the Department. As the public's trustee in these matters, the Board will conduct its business in an environment that not only allows, but also invites, public scrutiny. The Board of Wildlife Resources shall operate in full

compliance with both the letter and the spirit of the Virginia Freedom of Information Act (VFOIA) and the State and Local Government Conflict of Interests Act.

A. PRINCIPLES

1. The Board and the Department shall maintain open communications with the public, its constituent groups and partners in wildlife conservation, and the news media.
2. The Board and the Department will disseminate information, as appropriate, to the public through appropriate channels in an expeditious manner and will, when justified, protect the confidentiality of its transactions on the public's behalf.
3. All meetings and records of such meetings of the Board shall be open to the public except for such meetings that are closed pursuant to, and in accordance with, the provisions of Title 2.2, Chapter 37 of the Code of Virginia.
4. Board members will not engage in discussions with the public or the press about investigations or litigation. All attempts to pursue such contacts, oral or written, shall be strongly discouraged. Each member shall keep a record of any such occurrences and shall forward notice of them to the Director, who will seek guidance from the Office of the Attorney General when appropriate.

5. Because its regulatory actions are subject to review, Board members receiving ex parte contacts during official, public comment periods for pending regulatory actions will encourage the contacting party to place his or her comments into the public record and shall refer all such contacts, in writing, to the Director for inclusion in the public record.

B. COMMUNICATIONS WITH THE MEDIA

1. The Board speaks through its resolutions, and Board members are free to communicate with the media regarding those decisions.
2. The Board may designate the Chair or other member to be the spokesperson for specific issues or resolutions and will refer the media to the designated spokesperson in those cases. The Board herewith authorizes the following delegation:
 - i. The Director is authorized to act as spokesperson regarding administrative and operational matters.
3. The Board Chair shall review all official press releases regarding Board policy, activities, or other Board-related matters prior to release.

IX. OPINIONS OF THE ATTORNEY GENERAL

According to §2.2-505.A of the Code of Virginia, The Board Chair or the Director shall make written requests for official advisory opinions from the Attorney General. The Director shall notify the Board Chair upon requesting an official opinion from the Office of the Attorney General and shall notify the full Board at its next meeting.

X. AMENDMENT OF GOVERNANCE MANUAL

The Governance Manual of the Board of Wildlife Resources may be amended by a majority vote of the Board as long as the proposed amendment is provided to the Board at its preceding, regular meeting.

If urgent and/or extraordinary circumstances warrant immediate action by the Board, the Board may amend an element or provision at the meeting when the proposed amendment is introduced, provided that the Board approves such action prior to consideration of the proposed amendment.

In addition to the foregoing provisions, the Education, Planning, and Outreach Committee shall evaluate the Governance Manual every three years to ascertain whether refinements or changes are needed. The Committee shall report its findings and recommendations to the Board, which will take action on the recommendations at its next regularly scheduled meeting.

XI. VALIDITY OF GOVERNANCE MANUAL

If any of the policies or provisions of the Governance Manual are found to be in conflict with any provisions of the Code of Virginia, the

statutory provisions of the Code shall apply instead of the policy or provision in the Governance Manual. In the event that any element or provision of the Governance Manual is invalid due to a conflict with the Code of Virginia, the remaining provisions of the Governance Manual shall continue in full force and effect. The Board will initiate its process to amend its Governance Manual to conform to the provisions of the Code at its next regularly scheduled meeting according to the provisions in article IX above.

Reviewed for posting to the ~~VDGIF Web Site~~ DWR website - ~~July 31, 2008~~ February 1, 2026 [pending final Board approval at January 2026 meetings]

Reviewed for presentation to the Education, Planning and Outreach Committee per the required 3-year review and evaluation – ~~September 4, 2008~~ January 21, 2026.

DOCUMENT HISTORY:

Amendments approved by the Education, Planning, and Outreach Committee on September 16, 2008 and the Board of Game and Inland Fisheries on October 23, 2008 (first action) and February 27, 2009 (final action). These amendments were the result of the required 3 – year review and evaluation

Reviewed for presentation to the Education, Planning, and Outreach Committee per the required 3-year review and evaluation—April 2, 2012

Amendments approved by the Education, Planning, and Outreach Committee on May 16, 2012 and the Board of Game and Inland Fisheries on June 12, 2012. These amendments were the result of the required 3 – year review and evaluation

Reviewed for presentation to the Education, Planning and Outreach Committee per the required 3-year review and evaluation—February 10, 2015

Amendments approved by the Education, Planning, and Outreach Committee on March 3, 2015 and the Board of Game and Inland Fisheries on March 17, 2015. These amendments were the result of the required 3 – year review and evaluation

Amendments approved by the Education, Planning, and Outreach Committee on October 18, 2017 and the Board of Game and Inland Fisheries on October 19, 2017. These amendments were the result of some administrative wording changes and a change to ensure that board meetings were held once per quarter as required. These amendments were the result of the required 3-year review and evaluation.

Amendments approved by the Education, Planning, and Outreach Committee on October 23, 2019 and the Board of Game and Inland Fisheries on October 24, 2019. These amendments were the result of administrative wording changes regarding the Chair and Vice Chair and create two committees from the Wildlife, Boat, and Law Enforcement Committees consisting of the Wildlife and Boat Committee and the Law Enforcement Committee. These amendments were the result of the required 3-year review and evaluation.

Amendments approved by the Education, Planning, and Outreach Committee on January 20, 2021 and by the Board of Wildlife Resources on January 21, 2021 with final approval of the Board on March 18, 2021. These amendments were the result of the agency 51

name change from Game and Inland Fisheries to Wildlife Resources.

Amendments approved by the Education, Planning, and Outreach Committee on January 21, 2026 and by the Board of Wildlife Resources on January 22, 2026 with final approval of the Board on January 22, 2026. These amendments were clerical and technical in nature and did not alter any authorities or responsibilities of the Board, Director, or Department.

BOARD OF DIRECTORS CODE OF ETHICS AND CONDUCT

~~Revised March 18, 2021~~ January 22, 2026

I. PURPOSE

The Board of Wildlife Resources, a supervisory board of gubernatorial appointees to represent the public's trust for wildlife and boating resources, must be self-governing, self-policing, and have consistent guidelines for its operations. The Board of Directors hereby establishes its Code of Ethics and Conduct to provide guidance to its members regarding ethical and behavioral considerations and/or actions as they address their duties and obligations during their appointment.

Compliance with the provisions of this Code will allow the Board to fully implement its Governance Manual; to enhance relationships and foster teamwork among Board members and also with staff; and to build respect, confidence, and credibility with the citizens of the Commonwealth.

II. CODE OF ETHICS

Each Board member shall adhere to the following Code of Ethics:

- A. Board members shall act with integrity and in an ethical and professional manner in their interactions with each other, the Director, the Secretary of Natural Resources, the Administration, members of the General Assembly, Department employees, consultants, advisors, and the public.
- B. Board members shall maintain high ethical and moral character, both professionally and personally, so that their behavior will reflect positively upon the Board of Wildlife Resources and the Department.
- C. Board members shall act with competence and shall strive to maintain and enhance their competence and that of their fellow Board members.
- D. Board members shall use proper care and exercise independent professional judgment in the performance of their duties.
- E. Board members shall maintain confidentiality about all matters that are considered in closed meetings.
- F. Board members shall follow the provisions of the Freedom of Information Act in regards to public records, owned, prepared, or in possession of the Department.

G. Board members are required to be familiar and comply with the provisions of the State and Local Government Conflict of Interests Act, §§ 2.2-3100 et.seq. of the Code (the Conflict Act). In addition to such compliance, and beyond the definition of “conflict of interest” contained in the Conflict Act, Board members will meet the following criteria in order to avoid even the appearance of impropriety:

1. Board members will have no private contracts or business dealings with the Department.

2. Board members will recuse themselves and will not participate in the consideration of any matter or attempt to affect the outcome of any issue before the Board when to do so might result in even the appearance of a conflict of interest as defined by the Conflict Act.

3. Board members will not abuse their authority by using their offices to obtain favorable treatment by the Department for any person.

4. Board members shall receive no payments from the Department or from any funds or transactions of the Department except for appropriate compensation for their services and reimbursement for expenses as provided by law under §2.2-2813 of the Code.

H. Board members shall exercise due diligence to avoid breaches of duty via negligence, intentional action or omission, and unauthorized communications with individuals trying to influence by improper means or seeking to receive personal gains through Board decisions.

I. Board members recognize that all Board decisions and actions are to be based on integrity, competence, and independent judgment on the merits and benefits to the wildlife and boating resources and the citizens of the Commonwealth.

III. STANDARDS OF CONDUCT

Board members shall comply with the following standards of conduct:

- A. Board members shall not engage in conduct that would compromise, discredit, or diminish the integrity of the Board and/or the Department.

- B. The Board will respect the authority of the Director and will provide instruction and direction only to the Director. The Board will not instruct the Director in regards to specific operational decisions.

1. Board members will be sensitive to the considerable workload of the staff when making requests for assistance, and all requests for assistance will be made through the Director.
 2. The Board will respect the Director's authority in all personnel matters.
 3. Board members will reorient staff that attempt to use Board members as their representatives or use Board members as an avenue for input to the Department or the Director.
- C.** No individual member shall give orders or instructions to any employee of the Department. This does not preclude an individual member from offering his or her opinion, based upon his or her expertise and/or experience, when an employee of the Department requests such an opinion.
1. Board members must recognize that, as individuals or as subgroups, they lack the authority to give orders or direction to the Director except when such instruction is given according to the Board's Governance Manual or specific delegation.
 2. Individual Board members are not to become involved in operational management of the Department.
- D.** Board members will operate with the understanding that they represent both the citizenry of the Commonwealth as well as constituents from a particular Congressional District.
- E.** Board members will give due consideration in receiving professional and scientific input from staff, realizing that staff proposals represent the current biological thinking (§29.1-109) usually over large geographical areas.
- F.** Board members will strive to establish sound working relationships with each other by taking time to know and appreciate each other as individuals.
1. Board members will be respectful of each other and will not utilize Board meetings to upstage or embarrass colleagues.
 2. Board members will respectfully consider the opinions of others during deliberations, strive for integration of viewpoints or consensus building in decision-making, and will respect the corporate judgment of the Board in regards to its decisions.
- G.** Board members will refrain from using Board meetings or regulation approval processes to advance their personal agenda.

- H.** Board members will strive to cultivate and maintain good relations with the public, press, and constituent groups; however, they will recognize their limitations to speak for the Board as set forth in the Board's Governance Manual.
- I.** Individual Board members shall refer all proposals or other communications regarding potential or existing programs, contracts, or services to the Director.
- J.** Board members shall not communicate with persons under consideration for selection by the Board and/or the Director for contracts, acquisitions, etc. while the procurement process is in progress.
- K.** A Board member shall not participate in a breach of this Code of Ethics and Conduct by another member, contribute to the concealment of such breach, or knowingly or negligently allow such breach to occur.

IV. GIFTS

- A.** A Board member shall not solicit or receive a gift or favor from any person, company, or organization, or from any intermediary interest, that may compromise or appear to compromise the independent judgment of the member regarding his or her obligations to the Board. All gifts will be reported in accordance with the State and Local Government Conflicts Act (§§2.2-3100 et seq.).
- B.** Any gift received by a Board member that is prohibited by this policy shall immediately be returned to its source. If a gift is immediately returned to the sender or donated to a suitable charitable organization, it will not be necessary to report the gift.

V. GENERAL PROVISIONS

- A.** The provisions of this policy do not excuse any Board member from other restrictions of state or federal law regarding conflicts of interest.
- B.** Any breach of this Code of Ethics and Conduct shall be reported to the Finance, Audit and Compliance Committee. The Committee will investigate, as appropriate, and report its findings and recommendations to the Board.
- C.** All Board members will sign an affirmation pledging to honor and follow, according to both the letter and the spirit, this Code of Ethics and Conduct.

Charter of the Nominations Committee

~~Revised March 18, 2021~~ January 22, 2026

As presented in the Board's Governance Manual, the Nominations Committee is to interact with the membership of the Board to develop candidates for the officers of the Board for consideration by the full Board. The Nominations Committee will report its slate of candidates at a Board meeting in the last quarter of the fiscal year.

Purpose:

As presented in the Board's Governance Manual, the Nominations Committee is to interact with the membership of the Board to develop candidates for the officers of the Board for consideration by the full Board. The Nominations Committee will report its slate of candidates at a Board meeting in the last quarter of the fiscal year.

Composition:

The Committee shall be comprised of not less than three (3) or more than four (4) members of the Board of Wildlife Resources. Committee members shall be appointed by the Board Chair and shall serve a term concurrent with that of the Chair. A quorum of the Committee shall consist of a majority of the members.

Responsibility:

The Committee is to serve as the Board's primary work group to develop a slate of candidates for the officer positions of the Board (Chair and Vice-Chair). In the development of a slate of candidates, the Committee will ensure that no person shall serve more than one year as Chair and one year as Vice-Chair during a four-year term pursuant to the Code of Virginia ~~§29.1-102.C.~~ §29.1-102.D.

Meetings:

The Committee shall meet as necessary to develop its slate of Board officer candidates in order to report such slate during a Board meeting in the last quarter of the fiscal year.

Charter of the Finance, Audit, and Compliance Committee

~~Revised March 18, 2021~~ January 22, 2026

The Board of Wildlife Resources hereby constitutes and establishes a Finance Audit and Compliance Committee (hereafter referred to as the Committee) with authority, responsibility, and specific duties as described below.

Purpose:

The Finance, Audit and Compliance Committee is to conduct initial and continuing reviews of issues regarding internal and external audits, and the financial conditions, both short- and long-term, of the Department of Wildlife Resources (DWR). Audit reviews will include compliance with Board policies, accounting practices and auditing procedures, adequacy of financial reports and disclosures, the Director's expenses, and violations of law. Financial evaluations will focus on implementation of the Department's annual budgets as approved by the Board as well as the Department's long-term funding needs. The Committee will develop and submit reports, draft policies, and/or recommendations regarding audits and the finances of the Department to the full Board for its consideration.

Composition:

The Committee shall be comprised of not less than three or more than five members appointed by the Chair of the Board. The Chair may also appoint alternate members, who shall be counted for quorum purposes and vote only in the absence of regular members. These members are to be independent of management and operating executives. The majority of the members must be financially literate. One of the members shall be appointed by the Board Chairman to Chair the Committee. A quorum of the committee shall consist of a majority of the members.

Authority:

The Committee is granted the authority to investigate any activity of DWR, and all employees are directed to cooperate as requested by members of the Committee. The Committee with the approval of the Board is empowered to seek assistance from persons having special competence in these areas, as necessary, to assist the Committee in fulfilling its responsibility.

Responsibility:

The Committee is to serve as a focal point for the communication between the Board of Directors, the Chief Compliance Review Officer, the external auditors, and DWR management as their duties relate to financial accounting, reporting, risk management, and controls. The Committee is to assist the Board of Directors in fulfilling its fiduciary responsibilities as to accounting policies and reporting practices of DWR and all subsidiaries and the sufficiency of auditing relative thereto. It is to be the Board's principal agent in assuring the quality of Compliance Review, the integrity of management, and the adequacy and transparency of

financial and operating disclosures. The opportunity for the Chief Compliance Review Officer, any external auditors or people with expertise in these areas to meet with the entire Board of Directors, as needed, however, is not to be restricted.

Meetings:

The Committee generally meets at least four times each fiscal year, and as many times as the Committee deems necessary. Fewer meetings may be approved by the Board under extenuating circumstances. As necessary or desirable, the chair may request that members of management, the Chief Compliance Review Officer, and the representatives of external auditors be present at meetings of the Committee. The Chief Compliance Review Officer shall be requested to attend any meeting of the committee related to its oversight responsibilities for auditing, financial reporting, risk management or internal control structure issues.

Minutes:

The minutes of each meeting are to be prepared and sent to Committee members and approved at subsequent meetings.

Specific Duties:

The Committee is to be informed and vigilant in fulfilling the following duties:

1. Review the budgetary and financial implications of management's tactical and strategic plans submitted to the full board.
2. Review any report by DWR's Finance, Audit and Compliance ~~Review~~ Committee. Review any recommendations, implementations, and follow-up with the Chief Compliance Review Officer
3. The Committee chair or designee will serve as the Board's point of contact with the external auditors and will meet with the external auditors during the entrance and exit conferences and at other times as needed or upon request of the external auditors.
4. The Committee chair or designee will review with management and the external auditors if necessary or desirable, upon completion of their audit, financial results for the year or for the period under audit.
5. Review any deficiencies noted by the external auditors in the agency's electronic data processing procedures and controls, any serious difficulties the external auditors encountered with management in performing the audit, and any deficiencies noted by the external auditors in the internal control structure.
6. Review any activity reports from the Chief Compliance Review Officer.
7. Review with the agency's management, the Chief Compliance Review Officer and any other entity or person, it deems necessary, the agency's general policies and procedures

to reasonably assure the adequacy of internal accounting and financial reporting controls, including such controls related to the Executive Director's expenses and any use of agency assets.

8. Review with Chief Compliance Review Officer, the significant findings, current status, and management's corrective action as a result of any compliance reviews.
9. Manage the Department's internal audit function including review and approval of the internal audit's charter, annual audit work plan, reports and recommendations. The internal auditor shall report functionally to the Chair of the committee and administratively to the Department's Director or designee. The Committee shall create performance and evaluation criteria for the internal auditor, and shall conduct annual evaluations of the auditor's performance with the Director. The Committee Chairman shall participate with the Director in decisions regarding the appointment of the internal auditor, and the Committee's approval shall be obtained by the Director prior to the appointment or removal of the internal auditor.
10. Initiate any special investigations of breach of the Board's Code of Ethics and Conduct; conflict of interest; and non-compliance with federal, state, and local laws and regulations.
11. Evaluate audits and reviews conducted by any other governmental entities that involve financial or compliance matters.
12. Review with the Attorney General's Office at least on an annual basis, the status of legal matters that may have a significant impact on the agency's financial status.
13. Meet privately with the Chief Compliance Review Officer and the Department's Internal Auditor annually as deemed appropriate.
14. Submit to the Board of Directors the results of performing the foregoing duties, and submit to the Board of Directors any findings or recommendations that the Committee may have.

Charter of the Wildlife and Boat Committee

~~Revised March 18, 2021~~ January 22, 2026

The Board of Wildlife Resources hereby constitutes and establishes a Wildlife and Boat Committee (hereafter referred to as the Committee) with responsibility and specific duties as described below.

Purpose:

As presented in the Board's Governance Manual, the Wildlife and Boat Committee is to evaluate the long-term needs of the Commonwealth's wildlife and boating resources and to draft recommendations and/or policies addressing those needs for consideration by the entire Board and to serve as the Motorboat Committee in accordance with § 29.1-701 of the Code of Virginia. This Committee will also assess the needs, desires, and impacts of the users of these resources and provide guidance to the full Board as described above.

Composition:

The Committee shall be comprised of three (3) members of the Board of Wildlife Resources. Two alternate members may additionally be appointed; however, the alternate members shall be counted for quorum purposes and vote only in the absence of regular members. Committee members shall be appointed by the Chairman of the Board with each member to serve a term as determined by the Board Chair at the time of Committee appointment. A quorum of the Committee shall consist of two members entitled to vote at a meeting.

Responsibility:

The Committee is to serve as the Board's primary workgroup to address such issues as, but not necessarily limited to, Boating Safety and Boating Safety Education Programs, The Wildlife Action Plan, the Department's Wildlife Diversity, Fisheries and Wildlife Management Programs, Land Acquisition and Facilities Development needs, Wildlife and Boating Regulatory and legislative initiatives, and Wildlife and Fisheries health issues.

Meetings:

The Committee generally meets at least four (4) times each fiscal year, with additional meetings as deemed necessary by the Committee. Fewer meetings may be approved by the Board under extenuating circumstances. The Chair may request the Director to have Department staff members be present at meetings of the Committee to provide information and/or expertise regarding the business matters, issues, and discussion topics of the Committee.

Minutes:

The minutes of each Committee meeting are to be prepared and distributed for review to Committee members. Minutes will be approved at the next scheduled Committee meeting.

Specific Duties:

1. Serve as a forum for discussion of specific legislative initiatives for the Wildlife and Boat Program areas and make recommendations to the full Board for consideration and/or action.
2. Review and periodically assess the Department's Wildlife and Boating Programs to determine that these programs continue to be aligned with the agency's mission and strategic vision/plan. Recommend changes if needed.
3. Consider and make recommendations on the Capital Program needs of the Department as it relates to the potential for enhanced conservation and recreational opportunities.
4. Conduct assessments of the needs, desires and impacts of various resource users and Department constituents and provide guidance to the full Board.

Charter of the Law Enforcement Committee

~~Revised March 18, 2021~~ January 22, 2026

The Board of Wildlife Resources hereby constitutes and establishes a Law Enforcement Committee (hereafter referred to as the Committee) with responsibility and specific duties as described below.

Purpose:

As presented in the Board's Governance Manual, the Law Enforcement Committee is to evaluate the long-term needs of the Commonwealth's and the Department's law enforcement resources, and to draft recommendations and/or policies addressing those needs for consideration by the entire Board. This Committee will also assess the needs, desires, and impacts of the users of these resources and provide guidance to the full Board as described above.

Composition:

The Committee shall be comprised of not fewer than three (3) members of the Board of Wildlife Resources consisting of the Board Chair, Vice Chair and one other member. Committee members shall be appointed by the Chairman of the Board with each member to serve a term as determined by the Board Chair at the time of Committee appointment. A quorum of the Committee shall consist of two members entitled to vote at a meeting.

Responsibility:

The Committee is to serve as the Board's primary workgroup to address such issues as, but not necessarily limited to law enforcement and its function within the Department and the Commonwealth as it relates to the agency's overall missions.

Meetings:

The Committee generally meets at least four (4) times each fiscal year, with additional meetings as deemed necessary by the Committee. Fewer meetings may be approved by the Board under extenuating circumstances. The Chair may request the Director to have Department staff members be present at meetings of the Committee to provide information and/or expertise regarding the business matters, issues, and discussion topics of the Committee.

Minutes:

The minutes of each Committee meeting are to be prepared and distributed for review to Committee members. Minutes will be approved at the next scheduled Committee meeting.

Specific Duties:

1. Serve as a forum for discussion of specific legislative initiatives for the Law Enforcement Program areas and make recommendations to the full Board for consideration and/or action.
2. Review and periodically assess the Department's Law Enforcement Programs to determine that these programs continue to be aligned with the agency's mission and strategic vision/plan. Recommend changes if needed.
3. Consider and make recommendations on the Capital Program needs of the Department as it relates to the potential for law enforcement services and function.
4. Conduct assessments of the needs, desires and impacts of various resource users and Department constituents and provide guidance to the full Board.

Charter of the Education, Planning, and Outreach Committee

~~Revised March 18, 2021~~ January 22, 2026

The Board of Wildlife Resources hereby constitutes and establishes an Education, Planning, and Outreach Committee (hereafter referred to as the Committee) with responsibility and specific duties as described below.

Purpose:

As presented in the Board's Governance Manual, the Education, Planning, and Outreach Committee is to evaluate its educational, planning, and outreach needs relative to the statutory mandates, mission, and strategic plans of the Board, and to develop and submit reports, draft policies, and recommendations regarding those needs, as necessary, to the full Board for its consideration. The Committee will regularly evaluate the Department's mission, the Board's policies, its long-term planning requirements, and Governance Manual and develop recommendations regarding mission and vision statements, policy and governance changes, and strategic planning for the Board. The Committee will also investigate reported breaches of The Board's Code of Ethics and Conduct and report its findings to the Board.

Composition:

The Committee shall be comprised of no less than three (3) members of the Board of Wildlife Resources. Chair of the Board shall appoint the Committee Chair and the remaining members to each serve a term as determined by the Board Chair at the time of Committee appointment. A quorum of the Committee shall consist of a majority of the members.

Responsibility:

The Committee is to serve as the Board's primary work group to address such issues as, but not necessarily limited to, Board member orientation and training programs, Executive Director's performance plan and evaluation, legislative and/or regulatory initiatives, strategic vision and planning, agency mission, agency education programs, and agency outreach programs.

Meetings:

The Committee generally meets at least two (2) times each fiscal year, with additional meetings as deemed necessary by the Committee. Fewer meetings may be approved by the Board under extenuating circumstances. The Chair may request the Executive Director to have Department staff members be present at meetings of the Committee to provide information and/or expertise regarding the business matters, issues, and discussion topics of the Committee.

Minutes:

The minutes of each Committee meeting are to be prepared and distributed for review to Committee members. Minutes will be approved at the next scheduled Committee meeting.

Specific Duties:

1. Provide guidance to the Director for the development of an orientation program for new members appointed to the Board of Wildlife Resources. Orientation for new members shall be conducted as soon as practicable following their appointment.
2. Coordinate with the agency Director, the Secretary of Natural Resources, and the Governor's Office (as necessary) to develop the job elements and performance expectations that will comprise the annual performance plan for the agency Director.
3. Develop the performance evaluation instrument to annually conduct the Director's performance evaluation. This evaluation shall be conducted in October of each year.
4. Solicit recommendations from the Board and the Director regarding specific legislative initiatives for the agency to submit for consideration by the Secretary of Natural Resources and the Governor.
5. Review and periodically assess the agency's mission statement and provide recommendations regarding needed changes, updates, or other modifications.
6. Coordinate the development and implementation of an operational strategic vision and planning document for the Department that will serve as the foundation to establish program priorities and resource allocations.
7. Review and periodically assess the Department's educational programs to determine that these programs continue to be aligned with the agency's mission and strategic vision/plan. Recommend changes if needed.
8. Review and periodically assess the Department's outreach programs (to constituents and other aspects of the general public) to determine that these programs continue to be aligned with the agency's mission and strategic vision/plan. Recommend changes if needed.
9. Recommend, as needed, additional training/continuing education for all members of the Board to ensure that the Board is well-positioned to meet its obligations (fiduciary responsibility) and its expectations (loyalty to mission).
10. Review all Board policies and recommend changes to the full Board.