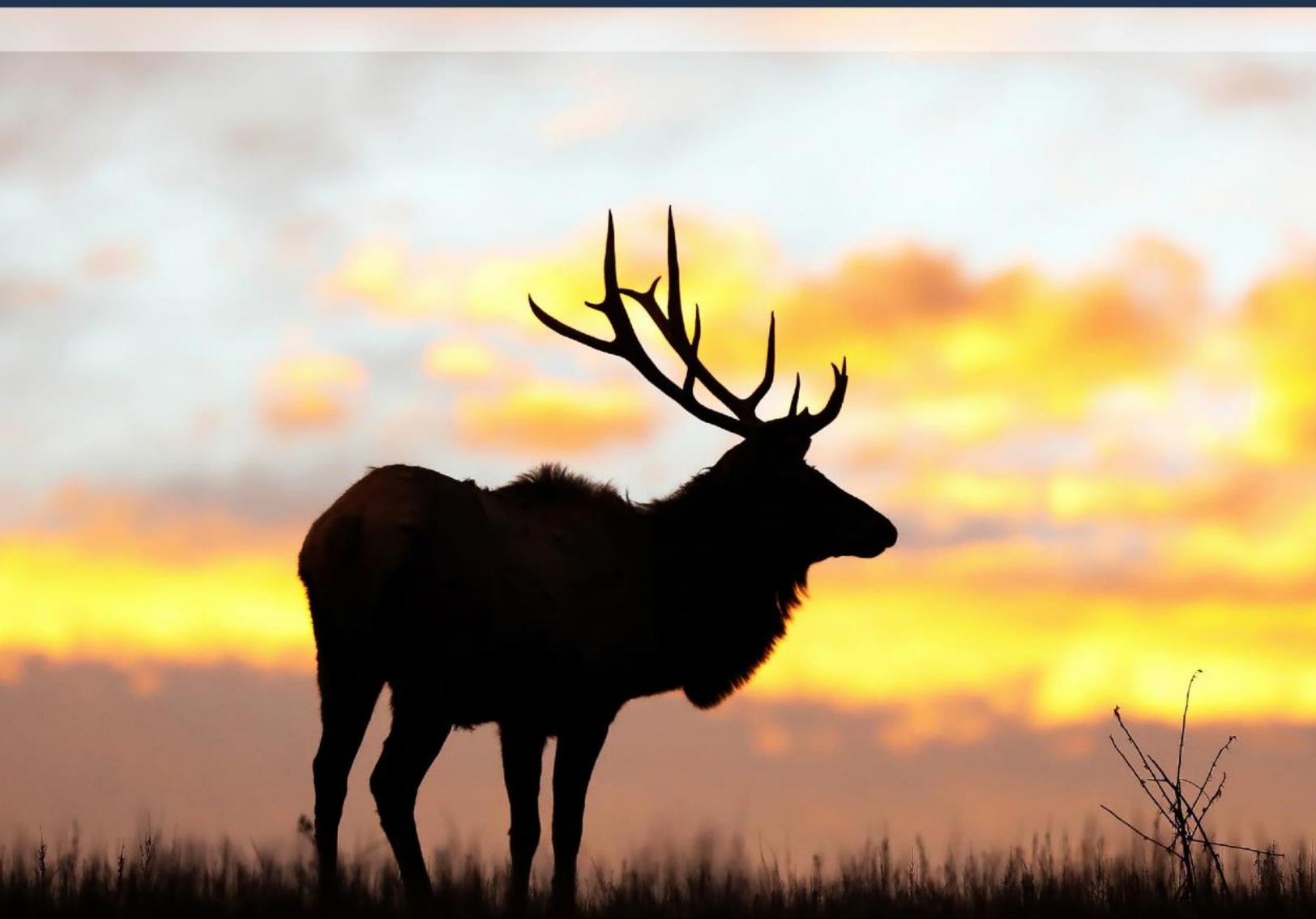


CHRONIC WASTING DISEASE PLANNING COLLABORATIVE PROCESS IN WYOMING

JULY 2020



Ruckelshaus Institute
Collaborative Solutions



Chronic Wasting Disease Planning Collaborative Process in Wyoming

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The Ruckelshaus Institute, a division of the Haub School of Environment and Natural Resources at the University of Wyoming, advances the understanding and resolution of complex environmental and natural resources challenges and supports stakeholder-driven solutions to environmental challenges by conducting and communicating relevant research and promoting collaborative decision making.

TABLE OF CONTENTS

Executive Summary	2
1. Introduction	3
2. Process Overview	4
3. First Public Process Meetings: Problems and Options	7
4. Description of Working Group Process	8
A. Steering Committee Role and Formation	8
B. Selection of Working Group Participants	8
C. Charter	8
D. Process	8
5. Results of Working Group Process: Interests and Recommendations	11
A. Interests	11
B. Recommendation Formulation	11
C. Consensus Recommendations and Sub-Recommendations	12
RECOMMENDATION 1: REDUCTION OF ARTIFICIAL CONCENTRATIONS	12
RECOMMENDATION 2: CERVID REMAINS	12
RECOMMENDATION 3: EDUCATION AND COMMUNICATION	12
RECOMMENDATION 4: HABITATS AND CWD	13
RECOMMENDATION 5: CERVID AND CWD MANAGEMENT ACTIONS	13
RECOMMENDATION 6: CWD AND MIGRATORY HERDS	14
RECOMMENDATION 7: SURVEILLANCE AND MONITORING	14
RECOMMENDATION 8: RESEARCH	14
RECOMMENDATION 9: MEAT PROCESSING	15
D. Consensus Recommendations and Sub-Recommendations with Major Reservations	15
RECOMMENDATION 1: REDUCTION OF ARTIFICIAL CONCENTRATIONS	15
RECOMMENDATION 3: EDUCATION AND COMMUNICATION	16
RECOMMENDATION 5: CERVID AND CWD MANAGEMENT ACTIONS	16
RECOMMENDATION 8: RESEARCH	16
E. Recommendations and Sub-Recommendations with No Consensus	17
RECOMMENDATION 1: REDUCTION OF ARTIFICIAL CONCENTRATIONS	17
RECOMMENDATION 2: CERVID REMAINS	18
RECOMMENDATION 5: CERVID AND CWD MANAGEMENT ACTIONS	19
RECOMMENDATION 8: RESEARCH	21
6. Conclusion	25
Appendices	26
Appendix A: Agendas for Public Meetings	27
Appendix B: Suggested Management Options from Initial Public Meetings	29
Appendix C. Notes from Second Set of Public Meetings	48
Appendix D. Working Group Charter	51
Appendix E. Agendas for Working Group Meetings	62
Appendix F: Working Group Final Recommendations and Sub-Recommendations	71

EXECUTIVE SUMMARY

In late 2018, the Ruckelshaus Institute of Environment and Natural Resources at the University of Wyoming entered an agreement with the Wyoming Game and Fish Department (WGFD) to facilitate a collaborative process to explore management options and seek consensus regarding strategies to reduce the prevalence of Chronic Wasting Disease (CWD) in Wyoming's ungulate populations.

The process approved by WGFD consisted of four phases:

1. Open meetings in five locations across Wyoming to solicit public input exploring the issues around CWD in Wyoming and management options for a Working Group to consider.
2. Convene a Working Group consisting of relevant stakeholder representatives to test consensus around the options suggested by the public and draft recommendations to WGFD.
3. WGFD drafted an updated CWD Management Plan based on the Working Group's recommendations and presented this draft plan to the public in a second set of open public meetings in the same five locations as phase 1 to clarify the plan and seek additional public input.
4. Following second round of public input, the Working Group modified the draft recommendations and tested for consensus. The Working Group presented their final recommendations to WGFD leadership and to the Wyoming Game and Fish Commission.

At the conclusion of the Working Group's efforts, they created 55 draft recommendations and sub-recommendations out of the 273 options received from the public. All language in the final recommendations was created and vetted by the Working Group over four 2-day meetings. The result was 39 consensus recommendations (receiving agreement at levels 1, 2 or 3), 7 recommendations that received consensus with major reservations (one or more participants were at level 4), and 9 recommendations that did not receive consensus (one or more participant agreed at level 5).

This final report describes WGFD's CWD collaborative process and its outcomes. Appendix A provides the agendas for the public meetings. Appendix B provides an overview of management options developed in the initial public meetings for the Working Group to consider. Appendix C provides notes from the second set of public meetings. Appendix D provides the Working Group Charter. Appendix E provides agendas for the Working Group meetings. Appendix F presents the draft recommendations and level of consensus for each from the Working Group to WGFD.

Additional materials and information can be found at:

<https://wgfd.wyo.gov/Wildlife-in-Wyoming/More-Wildlife/Wildlife-Disease/CWD-in-Wyoming-Wildlife/CWD-Working-Group>

1. INTRODUCTION

Chronic wasting disease (CWD) is a classic “wicked” situation: extremely contentious and extremely complex. The Wyoming Game and Fish Commission communicated its desire that the agency reduce the prevalence of CWD in Wyoming’s wildlife herds. However, the presence of CWD in Wyoming’s ungulate herds could require big changes (e.g., modifying harvest structures), which might conflict with public interests. Another contentious issue related to CWD centered around the role of feedgrounds in creating artificial concentrations of animals that can further the spread of CWD. Deliberation with the public about these issues was essential to receive public support for long-term management strategies. Communication regarding CWD was likely to challenge assumptions: where previously the impact of CWD was not highlighted, new information indicated otherwise. Additionally, there were big questions regarding this disease: At what scale should management actions take place? If actions are experimental and previously untried, how long should they be continued to gauge their effect appropriately?

The Wyoming Game and Fish Department (WGFD) decided to address this complex issue by convening a statewide public process to explore ways to decrease the prevalence of CWD in Wyoming. The objectives of the collaborative process, which was designed and led by the Ruckelshaus Institute, were to:

- a) Collaboratively learn about CWD with the public and internally: how the disease manifests itself; effects on individual animals, herds, and populations; where the disease is prevalent; sources of environmental transmission; and many other aspects. In addition, explore not only what is known about CWD, but with what degree of certainty.
- b) Learn what options are available to address and decrease the disease in Wyoming wildlife populations.
- c) Provide information to the public regarding what is known about CWD, what management options are available, and anticipated consequences of possible management approaches.
- d) Provide WGFD leadership with recommendations that would have the best chance of reducing CWD in Wyoming.

The agency convened this process with the acknowledgement that the Wyoming discourse regarding chronic wasting disease often touches on subjects related to feedgrounds. However, because there are many other subjects related to feedgrounds in Wyoming, and because of the diversity of types and locations of feedgrounds, Director Nesvik charged the Working Group to tackle chronic wasting disease state-wide. The agency is currently exploring ways to engage the public in a collaborative process that will address Wyoming’s feedgrounds later in 2020.

2. PROCESS OVERVIEW

After deliberations with Wyoming Game and Fish Department's leadership and its internal CWD Management Team and presentation to the Wyoming Game and Fish Commission, the Ruckelshaus Institute initiated a four-phase process (Table 1). This process combined a series of public and Working Group meetings to learn about CWD and craft recommendations for WGFD leadership. This process is based on the principles laid out in “Getting to Yes”¹ with the modified acronym PrIIOCTA:

- Identify the **P**roblems/issues
- Identify stakeholder **I**nterests
- Explore relevant **I**nformation (science, technology, regulatory frameworks, etc.)
- Draft management **O**ptions
- Weigh the options against **C**riteria (in this case the Interests)
- Explore **T**rade-offs related to the options
- Finally, test level of consensus and **A**greement.

All meetings in this process were convened by WGFD and facilitated by Dr. Jessica Western of the Ruckelshaus Institute. The four phases in this collaborative process include:

Phase 1 (May–June, 2019)

First set of meetings to share information and solicit public input on management options. Meetings were held in Laramie, WY (May 28); Casper, WY (May 29); Sheridan, WY (May 30); Worland, WY (June 3); and Pinedale, WY (June 4). See description below for more information.

Phase 2 (July–September, 2019)

First set of Working Group meetings to evaluate public input, make draft recommendations and explore levels of agreement (consensus). Two, two-day meetings took place in Lander, WY (July 23–25; September 10–12); and one in Casper, WY (August 20–22). See description below for more information.

Phase 3 (December 2019)

Second set of public meetings to review and discuss Working Group recommendations and WGFD’s draft CWD Management Plan. All meetings were facilitated by the Ruckelshaus Institute per the following schedule:

Pinedale	Laramie	Sheridan
December 2, 2019	December 10, 2019	December 12, 2019
6:00 pm to 9:00 pm	6:00 pm to 9:00 pm	6:00 pm to 9:00 pm
The Pinedale Library, Lovatt Room	Laramie Game and Fish Regional Office	Sheridan Best Western, Snow Goose Room
155 S. Tyler Ave.	1212 S. Adams	612 North Main Street
Pinedale, WY 82941	Laramie, WY 82070	Sheridan, WY 82801

¹ “Getting to Yes” (3rd edition) Roger Fisher, William Ury, and Bruce Patton. 2011. Penguin New York, New York.

Worland
 December 3, 2019
 6:00 pm to 9:00 pm
 Worland Community Center
 Complex
 1200 Culbertson Avenue
 Worland, WY 82401

Casper
 December 11, 2019
 6:00 pm to 9:00 pm
 WGFD Regional Office
 Pronghorn Room
 3030 Energy Lane
 Casper, WY 82604

Phase 4 (February–March, 2020)

Final Working Group meetings reviewed the results from the public meetings and assessed whether recommendations to WGFD needed to be amended. Any recommendations that were changed, eliminated, or added were again tested for consensus. WGFD used these recommendations to finalize their CWD Management Plan, version 3, and presented to leadership and to the Wyoming Game and Fish Commission in July 2020. The Commission approved the management plan without any changes.

Figure 1. CWD Working Group timeline

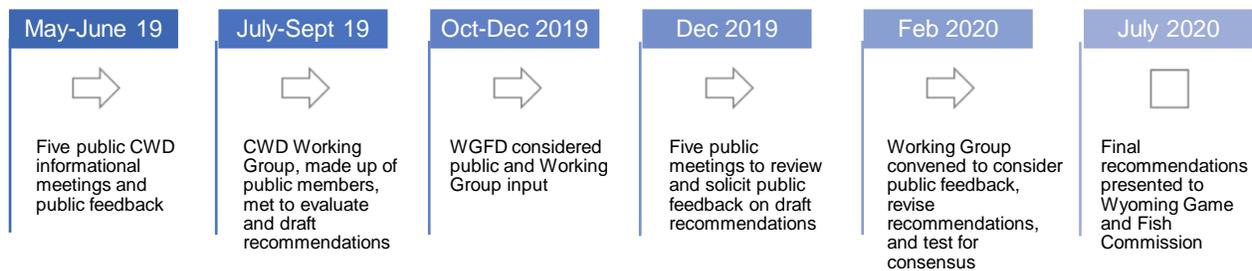


Table 1: Process matrix outlining tasks in each PrIOCTA phase for either the public or the Working Group

WGFD Chronic Wasting Disease Collaboration Process Matrix

PrIOCTA phase	Public Involvement Task	Working Group Task	Result	Meeting Date
Problems – Phase 1	Identify problems.		List of problems categorized by theme for Working Group.	May/June 2019
Interests – Phase 2		Identify interests.	Articulate reasons why CWD is important.	July 2019
Information – Phase 2		Explore relevant information.	Identify the information needed to fully tackle CWD.	July 2019
Options – Phase 1	Identify management options.		List of management options for WG to use to craft draft recommendations.	May/June 2019
Criteria – Phase 2		Use Working Group interests to explore trade-offs.	Use Interests as the criteria against which draft recommendations will be evaluated.	July 2019
Trade-offs – Phase 2		Build consensus around draft recommendations.	Evaluate the trade-offs related to draft recommendations.	August and September 2019
Agreement – Phase 2		Test level of consensus for each draft recommendation.	Explore level of agreement for each recommendation.	August and September 2019
Agreement – Phase 3 and 4	Review and provide comments on the draft plan.	Review public comments and amend recommendations if necessary.	Final CWD Management Plan version 3.	December 2019 (public); February 2020 (Working Group).

3. FIRST PUBLIC PROCESS MEETINGS: PROBLEMS AND OPTIONS

WGFD convened the first public meetings in May and June 2019 in Laramie, Casper, Sheridan, Worland, and Pinedale, facilitated by the Ruckelshaus Institute (see Appendix A for workshop agenda). The objectives of these meetings were to:

1. Introduce the Chronic Wasting Disease collaborative process and its purpose.
2. Provide information regarding the current knowledge regarding CWD.
3. Provide local information regarding CWD.
4. Provide the CWD Working Group with ideas to consider in developing management options for CWD.
5. Work in break-out groups to generate management options to reduce the prevalence of CWD.
6. Discuss next steps.

A total of 146 people attended the five workshops, representing interests ranging from agriculture, hunters, and outfitters to local residents concerned with CWD. In each of the public meetings, members of WGFD provided information regarding CWD, after which participants were divided into break-out groups. Each group was asked to identify issues the Working Group should discuss and answer the question: “What ideas would you like the CWD Working Group to consider in developing management options for CWD in Wyoming?” Responses were captured from the breakout groups on flipchart sheets and compiled into a spreadsheet. All workshop meetings concluded with open question and answer time.

This process yielded a total of 273 management options identified by the public, categorized into 50 themes (Appendix B).

Figure 2: CWD public meeting in Laramie



4. DESCRIPTION OF WORKING GROUP PROCESS

A. Steering Committee Role and Formation

The initial steering committee consisted of several WGFD staff who are also on WGFD's internal CWD Management Team, as well as the process facilitator, Jessica Western. Once the Working Group participants were selected and confirmed, the two co-chairs of the Working Group also joined the steering committee. The role of the steering committee was to contribute input on the formation and direction of the Working Group, provide support and feedback to the co-chairs and the Ruckelshaus Institute, and communicate with Director Nesvik as needed. The role of the co-chairs was to work together to lead the Working Group through meetings in order to reach a set of consensus recommendations. Co-chairs' role is to represent the Working Group in the steering committee to ensure the process reflects the needs of the entire group, and to raise any issues the group has with the facilitator, the convener, or the process, thereby ensuring the legitimacy of the groups' outcomes. The co-chairs worked with the Ruckelshaus Institute to provide input and direction at various points throughout the process, as well as to communicate with Director Nesvik when necessary. They also presented the Working Group's outcomes to the Commission. Co-chairs participated as full Working Group members, including communicating interests and voting on options.

B. Selection of Working Group Participants

WGFD put out notices via a variety of media requesting applications for membership to the Working Group. The agency received 107 applications.

The steering committee used the following criteria to select the participants from the pool of applicants. The list of participants was then forwarded to WGFD for approval. Applicants needed to be able to meet all six criteria to the greatest extent possible:

1. Be willing and able to share information with/from the Working Group and the public as well as the organizations, groups, affiliations, and businesses they represent.
2. Attend all Working Group meetings and participate in local CWD public meetings.
3. Have the ability and willingness to use scientific, social, economic, and technical information in the deliberations and recommendation process.
4. Have the ability and willingness to negotiate in good faith during the Working Group process.
5. Applicants self-selected their stakeholder type at the time of application and are evaluated based on that selection.
6. Guiding Principle for selection: Who can affect the outcome and who will be affected by the outcome?

C. Charter

The charter was drafted by the Ruckelshaus Institute, reviewed and amended by the Steering Committee, and finally reviewed and amended by the Working Group. All participants signed the document, conveying their approval of the Charter with their signatures (Appendix D).

D. Process

The final CWD Working Group selected by the steering committee consisted of 32 stakeholder representatives, and worked to craft recommendations over the course of three two-day meetings in July, August, and September 2019 (see Appendix E for meeting agendas). At the beginning of the

first and second meeting the CWD Working Group spent considerable amount of time discussing CWD with scientists, and discussing other states' CWD management plans with managers from Colorado, Montana, and Wisconsin. In addition, WGFD provided more information on a number of subjects, for example how ungulates are currently managed in Wyoming.

The Working Group then took the options the public suggested at the May and June 2019 meetings to draft recommendations for the next WGFD CWD management plan (Version 3). After discussing and compiling each recommendation and sub-recommendation, all recommendations and sub-recommendations were tested for consensus by the Working Group to explore the level of agreement with each one (Appendix F). WGFD then drafted the next CWD Management Plan based on the Working Group's recommendations in October and November 2019. This draft plan was presented for comments and input to the public in five meetings around Wyoming (see page 5). During the Working Group's last meeting in February 2020, they reviewed the comments received from the public, made changes to the recommendations where desired and tested for consensus where recommendations had been altered.

At the conclusion of the Working Group's efforts, they presented WGFD with 55 recommendations. Thirty-nine of these recommendations received full consensus (receiving agreement at levels 1, 2 or 3), seven recommendations received consensus with major reservations (one or more participants were at level 4), and nine recommendations that did not receive consensus (one or more participant agreed at level 5) (see page 11 for consensus testing process).

Table 2: CWD Working Group participants

First Name	Last Name	Affiliation	Role
Justin	Caudill	State Agency	Participant
Kent	Connelly	Local Government	Participant
Millie	Copper	Sportsperson	Participant
Joshua	Coursey	Conservation NGO	Co-Chair
Jeff	Daugherty	Conservation NGO	Participant
Nick	Dobric	Conservation NGO	Participant
Luke	Esch	State Agency	Participant
Garret	Falkenburg	Landowner or Agricultural Community	Participant
Jim	Freeburn	General Public	Participant
Sy	Gilliland	Outfitter	Participant
Kristen	Gunther	Conservation NGO	Co-Chair
Dave	Gustine	Federal Agency	Participant
Karinthia	Harrison	General Public	Participant
Larry	Hicks	Wyoming. State Legislature	Participant
Martin	Hicks	WGFD	Participant
Lyle	Lamb	State Agency	Participant
Libby	Lankford	Landowner or Agricultural Community	Participant
Bruce	Lawson	Sportsperson	Participant
Tony	Lehner	Local Government	Participant
Jim	Logan	State Agency	Participant
Janet	Marschner	Sportsperson	Participant
Steve	Martin	Sportsperson	Participant
Dax	McCarty	Outfitter	Participant
Laura	Meadows	Conservation NGO	Participant
Shane	Moore	General Public	Participant
Richard	Pallister	Sportsperson	Participant
Andrew	Pils	Federal Agency	Participant
Mike	Schmid	Wyoming Game and Fish Commission	Participant
Brant	Schumaker	Scientist	Participant
Dan	Smith	WGFD	Participant
Joe	Tilden	Local Government	Participant
James	Wright	Federal Agency	Participant

5. RESULTS OF WORKING GROUP PROCESS: INTERESTS AND RECOMMENDATIONS

A. Interests

The Working Group first convened in July 2019. As part of the PrHIOCTA process, the Working Group developed a list of participants interests related to CWD, outlining the reasons why finding options to reduce the prevalence of CWD in Wyoming was important to them. Based on these results, the Ruckelshaus Institute compiled a list of draft interest statements which were later shared with the group. These interests were used later in the process to evaluate the final recommendations put forth by the Working Group in February 2020:

1. Healthy wildlife is important to our state economically, for example in relation to tourism, wildlife watching, outfitting, hunting and fishing, and agriculture.
2. CWD could have cascading ecosystem effects on our landscapes and result in loss of wildlife.
3. CWD could threaten numbers of hunters important to maintain the conservation ethic, and causes great suffering to animals.
4. CWD could reduce the potential for hunting for future generations.
5. CWD may be a health threat to humans and livestock and requires careful disposal of cervid carcasses and parts to reduce the probability and rate of transmission.
6. CWD has the potential to affect hunting management in a way that could decrease my hunting opportunities.
7. CWD has the potential to decrease the sustainability of Wyoming's cervid herds.

B. Recommendation Formulation

Using the options recommended in the public meetings (Appendix B), the group worked together to develop draft recommendation and sub-recommendation language. All the language was created by the Working Group, after which it was evaluated to ensure the recommendations met as many interests as possible. To explore the extent to which recommendations met those interests, the group went through the process of testing for consensus.

The group tested each recommendation and sub-recommendation using the five-finger approach, whereby participants used the following numbers to indicate their level of agreement with each recommendation and sub-recommendation:

- 1- Endorsement – Member likes it
- 2- Endorsement with minor point of contention – Basically, member likes it
- 3- Agreement with minor reservations – Member does not oppose
- 4- Stand aside with major reservations – Formal disagreement, but will not block the proposal/provision
- 5- Block – Member will not support the proposal

Consensus means that, at a minimum, all participants assigned the recommendation with a 1, 2, or 3. If a participant rated a recommendation with a 4, then the recommendation is still consensus, but with major reservations. If a participant rated a recommendation with a 5, then it was listed as “No Consensus.” Thus, recommendations with lower scores received more agreement from the group, whereas recommendations with higher scores received less agreement.

Below is a list of the recommendations that emerged from the Working Group discussions. The recommendations are organized by level of consensus (that is, full consensus, consensus with major reservations, or no consensus).

Note: Regarding recommendation 5.2: the original language addressed “experimental strategies to significantly increase harvest beyond established management guidelines and evaluate the efficacy of such actions over the long term”. This sub-recommendation required a considerable amount of work for the group. The Working Group decided to formulate all possible options and test them for consensus for the public and WGFD to consider. The result was six options for 5.2, each receiving a different level of consensus.

C. Consensus Recommendations and Sub-Recommendations

RECOMMENDATION 1: REDUCTION OF ARTIFICIAL CONCENTRATIONS

- 1.1 We recommend the Wyoming Legislature provide the WGF Commission the authority to regulate the intentional private feeding of wild cervids, unless otherwise specified in law or authorized by the WGFD, exempting agricultural practices.
- 1.2 We recommend WGFD collaborate at a local level to reduce artificial points of cervid concentrations where possible.
- 1.3 WGFD should work closely with municipalities and counties to eliminate artificial feeding and/or to reduce density of cervids, unless otherwise specified in law or authorized by the WGFD.

RECOMMENDATION 2: CERVID REMAINS

We recommend a multi-prong approach to addressing the proper disposal of cervid remains and carcasses.

- 2.3 We recommend the Wyoming legislature provide authorization for use of existing funds to be used by local solid waste operators to properly dispose of cervid remains to reduce CWD prion prevalence.
- 2.4 We recommend the Wyoming Legislature provides statutory authority to the Wyoming Game and Fish Commission to regulate the use of cervid urine.

RECOMMENDATION 3: EDUCATION AND COMMUNICATION

- 3.1 We recommend WGFD create a thoroughly articulated and deliberate CWD communication plan. The first priority of this communication plan is to build public support to be able to implement the recommendations from the CWD Plan. This plan should target all stakeholders to include, but not limited to general public, hunters, hunter education, travel and tourism (chambers), meat processors, taxidermists, outfitters, landowners, state and federal agencies, tribes, and elected officials. The communication plan should address all CWD related issues including: transportation (interstate and intrastate) and disposal of carcasses (e.g. quarter and go), CWD pathology basics, artificial point sources, transmission, potential management strategies, importance of testing, human health, surveillance, up-to-date science, not feeding wildlife and the implication feeding has with spreading CWD, and the essential role of hunting in disease management, unknowns, etc. Pursue this outreach plan with local organizations and NGOs. This communication plan needs to be very carefully thought through in order to avoid

misperceptions. Involve all Working Group members. WGFD will create materials that are easily usable by other entities and organizations.

RECOMMENDATION 4: HABITATS AND CWD

Combine habitat management and research to support cervid health.

- 4.1 Incorporate CWD consideration in WGFD's Strategic Habitat Plan to improve habitat and promote better distribution of cervids

RECOMMENDATION 5: CERVID AND CWD MANAGEMENT ACTIONS

We recommend the WGFD consider experimental application of CWD suppression strategies utilizing an adaptive management framework with consideration to the WAFWA's "Recommendations for Adaptive Management of CWD in the West" document. Management strategies should be implemented for a minimum of 10 years with a robust monitoring program to estimate prevalence with statistically significant sample sizes at least every 5 years. This would support a regional effort to gather valuable data to contribute to broader understanding of CWD suppression strategies. All management recommendations generated by this Working Group should be considered for experimental application and evaluation under this framework.

- 5.2 Option 2:** Alter the timing of buck harvest in order to increase harvest of mature bucks, taking advantage of seasonal behaviors.
- 5.2 Option 3:** Reduce cervid populations to measurably decrease densities within an area of concern (e.g. herd unit, hunt area, portion of a hunt area). Maintain reduced densities for the appropriate amount of time to adequately evaluate effects on CWD (i.e. greater than 10 years). This may require a sustained increase in female harvest. Density and harvest goals must be clearly articulated and developed with public input prior to and during implementation.
- 5.2 Option 5:** Utilize a robust monitoring program to identify areas with a high density of CWD positive cervids (i.e. "hot spots"). Develop and implement lethal removal strategies to maximize removal of cervids (male and female) around locations of known "hot spots", including but not limited to hunter harvest (preferred), targeted agency removal, and other designated methods.
- 5.3 Encourage a multifaceted approach to use experimental design or management strategies to reduce CWD prevalence. Acknowledge relative study time frames and need for continually engaging the public to gain informed support.
- 5.4 WGFD will consider CWD in the adjustment of harvest and population objectives and associated management strategies to manage cervid numbers (male and female) in areas of concern.
- 5.5 Utilize a combination of voluntary and mandatory testing in areas where specific CWD management is being applied in order to obtain statistically valid sample sizes to evaluate the efficacy of any such management strategy.
- 5.6 Develop an adaptive monitoring plan based on prescribed management for a time frame of 10 years (to be assessed at 5-year intervals) for all cervids.
- 5.8 We recommend WGFD cooperate with landowners to increase hunter access for CWD management.

RECOMMENDATION 6: CWD AND MIGRATORY HERDS

We recommend that management actions are implemented in migratory cervid herds to reduce disease transmission risk and keep CWD prevalence at low or reduced levels.

- 6.1 Support systematic monitoring across the state to detect “hot spots” and CWD prevalence information.
- 6.2 Consider issuing licenses and associated hunting seasons in relation to migratory herds that are intended to specifically address CWD management actions.

RECOMMENDATION 7: SURVEILLANCE AND MONITORING

Support surveillance efforts necessary to detect changes in CWD prevalence. Use sample sizes collected over a maximum of a 3-year time frame as per the WGFD-CWD [Surveillance Plan](#) (see WGFD website).

- 7.1 Utilize various licensing options to increase sample size in hunt areas where statistically significant sample sizes are needed (i.e. reduce price per license for female harvest, late season, etc.).
- 7.2 WGFD to create non-monetary incentives to increase CWD sample sizes where needed.
- 7.3 Analyze and mine data for population and disease demographic information including male:female ratio, gender specific disease prevalence, survival rates, and pre and post management.
- 7.4 Pursue increased funding to support testing, monitoring, and additional laboratory capacity.

RECOMMENDATION 8: RESEARCH

We recommend the WGFD enhance its CWD research and testing capacity by diverse means to enable science-based cervid management.

- 8.1 Continue to rigorously pursue collaborative genetic research programs with state and federal agencies, universities, and private entities to better understand the role genetics plays in CWD in cervid populations and potential management implications. This should include but not be limited to monitoring frequency of genotypes in cervid populations and the fitness traits associated with these genotypes.
- 8.3 Investigate the relative importance of direct versus indirect transmission of CWD prions.
- 8.4 Assist in the validation of experimental assays for CWD prion detection (e.g. PMCA, rt-quic, and field testing).
- 8.5 Evaluate regional differences in CWD dynamics.
- 8.6 Pursue funding for collaborative CWD research and management efforts. Explore funding sources including but not limited to private, non-profits, general state funds, grants, federal sources, CWD management stamp, non-consumptive users, Wyoming Governor’s Big Game License Coalition, and Commissioner's license.
- 8.8 Incorporate CWD data collection into current and future research where appropriate.

- 8.10 Begin a research project at feed, mineral, water, and salt sites working with willing landowners to explore techniques to reduce CWD transmission.
- 8.11 We recommend WGFD collaborate on research on how environmental prion contamination correlates with disease prevalence and transmission.
- 8.13 Pursue habitat research on CWD to include 1) how cervid habitat selection affects CWD prevalence, and 2) how habitat improvements affect population demographics and distribution in the face of CWD.
- 8.14 We recommend the WGFD continue to collaborate nationally and internationally regarding CWD strategies and management actions and associated outcomes and research in order to adaptively manage CWD.

RECOMMENDATION 9: MEAT PROCESSING

- 9.1 Recommend the Wyoming Department of Health and Wyoming Department of Agriculture work with pertinent stakeholder groups to develop recommendations for meat processors.
- 9.2 Recommend the Wyoming Department of Health and Wyoming Department of Agriculture work with pertinent stakeholder groups to develop recommendations for safe donation of game meat.

Figure 3: Working Group testing for consensus September 2019 in Lander



D. Consensus Recommendations and Sub-Recommendations with Major Reservations

This section lists the seven recommendations and sub-recommendations that received consensus with major reservations. The reservations of each participant are below the related recommendation.

RECOMMENDATION 1: REDUCTION OF ARTIFICIAL CONCENTRATIONS

We recommend WGFD takes action to reduce artificial points of concentrations.

Garrett Falkenburg: “Overall language in one of the last draft final recommendation language, the wording gives examples of artificial points of concentration. There are a lot of them and so therefore it would disqualify a lot of agricultural operations, and it would take them away from their ranching and farming work. The wording says ‘WGFD take action to reduce’ is way too harsh for me. It sounds like they {WGFD} are going to force their way onto private lands.”

RECOMMENDATION 3: EDUCATION AND COMMUNICATION

3.2 We recommend WGFD explore hiring a third-party communications contractor to help implement the outreach plan.

Josh Coursey: *“I do not believe that a 3rd party is fiscally responsible and carrying this message forward to the public. WGFD is the experts on this and the leader of its messaging and should own this. Members of this Working Group can assist in getting this message out there but the allocations of dollars to this effort is irresponsible in my opinion and in poor judgement. Those dollars could be used elsewhere where they could be more beneficial in education/awareness or on the ground where they can make an impact.”*

RECOMMENDATION 5: CERVID AND CWD MANAGEMENT ACTIONS

5.2: Specific management decisions should be determined at the local level and tailored to the population unit. Ensure education and outreach in order to gain and maintain public support for the CWD management actions. The following management recommendations are supported by this Working Group and should be considered either alone or in combination.

Garrett Falkenburg: *“I have problem with the last sentence saying, ‘recommendations are supported by this Working Group.’ By looking down through the different options below, one can see that is not the case. My recommendation would be to change the wording or delete the last sentence.”*

Larry Hicks: *“Overall language ‘The following management recommendations are supported by this Working Group and should be considered either alone or in combination.’ I do not agree that all of the management decision should be considered.”*

5.2 Option 4: Where possible, reduce areas of artificial concentration of cervids (feed, mineral, salt, water etc.) by working with landowners, producers, local, state and federal agencies.

Garrett Falkenburg: *“This option reads an awful lot like 1.4 general language. It even expands to include my salt and mineral. Both are very, very important to ag. It’s sad that there are is way to actually confirm or deny that ingredients in my mineral have anything to do with CWD.”*

Sy Gilliland: *“This option is seems to point a finger at AG operations. This is a wildlife disease and the solutions haven’t been scientifically proven. In a scientific setting we have to identify and prove the transmission causes. Then try to figure out options that can be worked through with full cooperation with the AG community. If we start down this road without solid science then we could be causing hardship on AG and our feedgrounds.”*

RECOMMENDATION 8: RESEARCH

8.2 We recommend WGFD pursue research (e.g. a survey) to determine public attitudes on CWD.

Larry Hicks: *“Time and money are limited commodities and just surveying ‘the public’ which the vast majority do not know or care about CWD is waste of both time and money.”*

Josh Coursey: *“A survey to gauge the awareness or support of CWD and its related content from whatever demographic is also fiscally irresponsible. We know from past work that many are unaware of CWD and its magnitude of impact. Let’s use these resources to move forward a well designed PR campaign that is informative and encourages folks to be engaged to the issue and solicits their support to help further the messaging to reach and educate more.”*

8.15 We recommend WGFD collaborate in research and evaluation of a CWD vaccine.

Laura Meadows: *“To date, no vaccine has ever been developed for a transmissible spongiform encephalopathy, including Scrapie which is economically important worldwide and has been identified for over 200 years. Creating a vaccine for a transmissible spongiform encephalopathy would, at the very least, be extremely difficult as the agent is a protein identical to host proteins at the binding site level. The likelihood of developing such a vaccine is very low. Resources, both funding and personnel, could be better spent on achievable population management objectives.”*

Brant Schumaker: *“To date, no vaccine has ever been developed for a transmissible spongiform encephalopathy like CWD. Creating a vaccine for a transmissible spongiform encephalopathy would, at the very least, be extremely difficult as the agent is a protein identical to host proteins. The concept of a CWD vaccine is that the misfolding of the prion may induce a conformational change that could expose a unique epitope that may allow antibodies to be developed to the misfolded prion protein. To date, challenge studies with this vaccine have actually accelerated the development of clinical CWD. While it is interesting to consider the idea of vaccinating our way out of CWD, the likelihood of developing such a vaccine is, in my educated opinion, a low probability and funding could be better spent on achievable population management objectives.”*

8.16 Study the effects of competition among cervid species on CWD prevalence.

Larry Hicks: *“The group massages this statement when in fact the whole concept was to kill elk to save deer. They used CWD as a surrogate to push a for-gone conclusion that elk are the problem. I can’t speak for everywhere but so far we have not been able to document that elk eat mule deer in my part of the state. There are higher priority research needs! Lets start with trying to understand transmission how and when that occurs as well as the source of the prions.”*

E. Recommendations and Sub-Recommendations with No Consensus

The following is the list of seven recommendations and sub-recommendations that did not receive full consensus, with the reasons for no consensus rating from related participants.

RECOMMENDATION 1: REDUCTION OF ARTIFICIAL CONCENTRATIONS

1.4 WGFD will work collaboratively with public stakeholder Working Groups to evaluate feeding practices of elk at feed grounds where possible to reduce risk and minimize negative impacts on elk population.

Garrett Falkenburg: *“Agriculture in the state of Wyoming has no interest to abolish feed grounds. First, they keep the forage damage on private lands to a minimum. Second, it helps keep haystack damage to a minimum. Third, it helps keep elk from raiding feed lines put out for cattle. 4th While elk and cattle comingle on feedlines is when diseases such as brucellosis are transmitted. Wyoming Ag cannot lose our brucellosis free status furthermore I do not believe that the wildlife viewing public has any interest in seeing starving elk, nor does the elk hunting sportsman want to give up sport hunting opportunities because of herd reduction.”*

Justin Caudill: *“My issue with this recommendation is that WGFD should utilize the best science to drive any evaluations of feeding practices associated with feed grounds. Questions and data needs can be defined through local work groups/stakeholders, but decisions should be determined by WGFD using the best available science related to elk populations and their needs.”*

Kent Connolly: *“Elk feed grounds are going to be looked at by a Working Group from what G and F says, us recommending anything will diminish that effort and most likely be in conflict and make the issue worse. Stop any feed ground and you’re just taking it from a high-profile area and killing them or moving the*

issue to any area that will create competition for mule deer AKA Sage junction and the Cokeville area in Lincoln County. Mother nature and people dictate the need for feed grounds. The sportsman regularly step-in and feed in the impacted areas of the west and will not let them starve to death. The City feeding will become your new feed ground in certain areas, Jackson's streets will look like some Colorado's cities."

Larry Hicks: *"I do not believe this has to be done by collaborative public stake holder groups. This is a recipe for the anti-feed ground groups to leverage their position and push an agenda and use CWD as a surrogate to accomplish what they have advocated for a long time. The WGFD is more than capable of conducting monitoring and adjusting management as need without providing the anti-feed ground folks a platform to advocate from."*

Steve Robertson: *"My vote was centered on my struggle to understand the science behind preemptively culling or starving a cervids population that may or may not have a prevalence CWD. Not knowing what we don't know makes me question the cost/ benefit of such."*

"I understand the dependency relationships between habitat and wildlife, and that of the predator, and the prey. I also understand the associated concept of carrying capacity. Recognizing the unique wildlife management issues in western Wyoming such as limited habitat for wildlife winter range, wildlife distributions, private land, stock grower, roads/ traffic, winter backcountry recreation, and threatened and endangered predator, all these issues are critical considerations to attempting to forecast the impact of CWD and formulating a contingency management plan."

"Supplemental feeding has provided a very successful conservation program for over a hundred years in Western Wyoming. It has influences all the issues mentioned above. I believe it could be an important management tool should CWD ever have a prevalence in the area elk herds. It could provide a winter outdoor laboratory to study the disease, daily surveillance for detection and quick removal of infected animals."

"I feed elk for the WYGF&F Department for a number of years. I know when properly implemented calf recruitment rates can be dramatically improved through supplemental feeding. I believe this could well be a management key to help stabilize and sustain area elk populations should CWD become prevalent in western Wyoming."

RECOMMENDATION 2: CERVID REMAINS

2.1 We recommend WGFD works with individuals/NGOs/businesses to facilitate proper disposal of cervid remains/carcasses through funding partnerships.

Mike Schmid: *"I struggle even with funding partnerships on how the average person living in rural communities across Wyoming are going to be able to afford this, even if it is free will they take the time to do it. In the small town I live in the closest approved site is a 75 mile round trip to dispose of a carcass. The other option is a 90 mile round trip and the carcass has to be in a body bag before it will be accepted. Will they be paid for 3-5 hours of their time to haul these to an approved landfill? If not, the reality is very few people are going to do this. They are well aware that these animals spend 1/2 of their life wintering around these communities. They know these animals have been urinating, defecating and dying on this landscape for decades, well before CWD was even a concern. They know the prions live in the soils for many, many years, there is no logic here. I feel it is a waste of money and time and that money could be better utilized in other ways to benefit wildlife"*.

2.2 We recommend WGFD work with DEQ, local solid waste operators, and WYDOT to properly dispose of carcasses statewide and provide information about proper disposal sites.

Mike Schmid: *“Again, no logic in all this effort and a total waste of dollars that will not slow the spread of CWD at all. Let’s just take the WYDOT function of picking up and disposing of dead carcasses that have been hit by motorists. Let me be clear, I agree picking up the carcasses from the highway must be done. It is unsightly, it can draw other animals to them that may be hit, it could cause a predator hunter to break the law and shoot from or across the highway in an attempt to take that predator and so on.*”

“WYDOT has been placing carcasses in areas close to where these animals have been hit for years, I think they should continue to do so. It saves them time and money and has worked for quite some time. If they pick up a carcass close to an approved landfill then by all means dump it there, but if they have to make a special round trip of 50-100 miles it make no sense to me at all.”

“We know that prions are spread through saliva, feces, urine, spinal fluid and brain matter. Most or all of these substances are spread all over the highway when an animal is hit, then it is washed into the surrounding soils when the next rain or snowmelt happens. What has been gained? Nothing, now as a result we have prions where they were hit and at the landfill. It makes more sense to leave them close to where they have been hit, just place them out of sight. That is what we ask our hunters to do when they take an animal in the backcountry, leave all head, spinal and entrails at the sight of the kill, why would this be any different?”

“The other issue that concerns me is once we pick up that road killed animal in a machinery bucket and placed in a WYDOT dump truck we now have two contaminated pieces of equipment. If WYDOT does not go through the process of disinfecting that equipment the next time they pick up a load of dirt in that bucket and place it in that dump truck that dirt is now contaminated and those prions are placed where ever that dirt is dumped.”

“One last scenario. If a motorist hits lets say two animals and one dies on the highway or shoulder of the road and the other jumps the right-of-way fence and dies on the other side within sight of the WYDOT crew, are they required or do they have the authority to pick it up? If they don’t, what have we accomplished?”

RECOMMENDATION 5: CERVID AND CWD MANAGEMENT ACTIONS

5.1 Research suggests the greatest potential for successful CWD management actions occurs when prevalence is low. Therefore, CWD management is recommended at all prevalence levels, but local options to implement more aggressive management should be pursued once statistically valid prevalence reaches/exceeds 5%.

Larry Hicks: *“Most problematic of all the recommendation. First it states ‘Research suggests the greatest potential for successful CWD management actions occurs when prevalence is low.’ ‘Greatest potential for success’ is ambiguous! I am not sure what success is, if it means killing 50% of the population and almost all the mature bucks maybe the cure is worst than the disease. How is this successful when even in these areas that have applied this remedy CWD is still spreading, the units still have CWD prevalence at lower rates, I am convince that most of the deer hunting public has a different definition of success and this statement does not capture it. Also, the use of the terminology ‘when prevalence is low’ what exactly is low, the group choose 5% based on limited input from researchers, the Colorado Game and Fish Commission choose 10%, the 5% is an arbitrary number.*”

“Also, the statement lack specificity on how this would be applied. Is it at the herd unit level, hunting unit level, population segments within hunting unit, or at selected hot spots in a hunting unit. It is to broad a brush without limiting it as a management prescription to be selectively used only in hot spots.”

“Also, it is very problematic using the 5% prevalence rate. Is this prevalence in the population or is it prevalence within the sample size these numbers could be substantially and statistically different. This is not

clear in the statement is it the population or the sample data. We do not have a calculated prevalence rate within the population. Currently we only have it as a percent within the sampling data which will have a higher rate than the general population. Let me explain! Research has shown that mountain lion predation has a higher percentage of CWD animals than the general population, road kill also has a higher percent CWD than general population. What these have in common is that both are selecting animals that are mentally facultatively deficient (they are stupid because of brain deuteriation). If this is the case then we would expect these same deer to have a higher rate of human harvest (because they are stupid) than the general deer population. This brings me back to my original question is the 5% based on a biased sample or is the recommendation based on 5% prevalence within a random sampling and at what level.

“Most importantly the hunting public in some of the more popular particularly the high use Baggs herd unit and the Wyoming range trophy units will not support the drastic reduction in deer population, reduced bucks: doe ratio, and reduction in older age class bucks that this recommendation calls for. To put it bluntly this will cause a shit storm if the department decided to move forward with this recombination in many of the hunting units in the state.”

5.2 Option 1: Increase mature buck harvest in order to lower CWD prevalence from current levels by a percentage deemed appropriate through local processes and with consideration to the [WAFWA document](#).

Kent Connolly: *“We don't have enough information to hang our hat on any data including WAFWA, Colorado has the worst track record in the west with its rate of spread and we discussed it like it was the best ever done? and states like Texas hunt every horn site with a good CWD result and Utah to some extent.”*

Larry Hicks: *“Until we know why mature bucks have a higher prevalence rate than does we should not implement harvest strategies without trying to find out the answers. We sample bucks at a rate of 10:1 or higher than does. Is this a sampling error? When ask the question Mike Miller from Colorado said we do not know why bucks have a higher rate of detection. Maybe we should do some limited experimental design harvest and sampling to try and answer this question before we just start killing all the mature bucks. Once again, I am convinced this recommendation is unacceptable without some very specific and very limited application. It is too broad and lacks specificity on how it would be implemented by the department. WAFWA recommendation should be considered but not used as the be all do all. With CWD they are predicated on ‘the best guess’ method. They are predicated on what we know and what we know is we do not know much about CWD. I will not go into the list of all the thing we do not know but it is substantial to say the least. One example is how many different ways can CWD be transmitted?”*

5.7 Consider options to refund license fees for cervids that test CWD positive in areas where an experimental management strategy is in place.

Justin Caudill: *“My issue with this recommendation is due to reservations centered around any type of license refund having the potential to put WGFD in a tight spot on several levels; where will the funding come from, how much will it cost WGFD in refunds for a single year for a specific area - how many years will this continue in that specific area, who is responsible for the meat if it is found to positive for CWD. I would support WGFD in performing science based experimental management strategies to adjust harvest objectives or the sex ratios of a given heard unit, or adjusted timing and or season of a hunt but not license reimbursement.”*

Kent Connolly: *“Creates to much overhead, too much government and we are having trouble funding schools the legislator will kill it.”*

Millie Copper: *“If an experimental management strategy is in place, anyone applying for this license should be well aware of the CWD risk. Personal responsibility to know where you are hunting and what you are purchasing, or applying for, is important.”*

“Also, listening to Hank and the costs associated with each CWD, including additional testing needed for each positive result, refunding the license fees doesn't make sense to the bookkeeper in me.”

“I would be in favor of an option where all hunters could purchase something like insurance. This could work similar to travel insurance with an airline or car rental. Something like the Access Now contribution at the end of putting in for purchase or draw entry. I'd envision this to be a nominal amount (\$5 or \$10) and would co-occur every cervid license the hunter purchased or received a successful draw. This adds an extra layer to the personal responsibility, allowing people to be fully aware they need to make this purchase in order to have the possibility of a license refund.”

“With the insurance (I'd call it something other than insurance) the hunter could have a refund if receiving positive CWD result. The money accumulated from people purchasing the insurance could cover the cost of those who test positive. A certain amount of this money could also go toward helping other CWD costs for testing and/or research.”

Rick Pallister: *“I wanted to make certain that refunding licenses was a viable and efficient process for WGFG. When Scott Enberg suggested it was possible and more efficient than re-issuing licenses, then my subsequent vote should have been recorded as 3.”*

“I still have reservations about refunding or re-issuing licenses to hunters who knowingly purchase licenses for hunt areas known to have high prevalences of CWD, or may have a special CWD management option in place. I would like to avoid the perception that we just allow people to keep on killing animals until they get the result they want. However, if this strategy is considered by the WGFD and CWD Working Group as the best option, I will be supportive.”

Larry Hicks: *“G&F should list the hunt units with CWD and note that any animal taken that tests positive may not be fit for human consumption. We need to place the burden of responsibility on the hunter not the department for their decision to hunt in a known unit with CWD. It's their choice and their for their liability.”*

Sy Gilliland: *“If we make sure all hunters are fully aware that animals being hunted in these units are highly likely to be infected then they understand the possible consequences. The department should never place themselves in a situation of sending the signal they are selling a product instead of a hunting opportunity. As an outfitter I am very concerned that a client that kills a CWD infected animal could request a refund. We must all stay the course that Wyoming is home to hunting wild free ranging animals and not providing a product.”*

RECOMMENDATION 8: RESEARCH

8.7 We recommend WGFD explore the possibility of creating an additional dedicated license with revenue specifically earmarked for CWD research and management.

Garrett Falkenburg: *“I am not in favor of the WGFD making another tag or license. It just complicates the license system. Rather I would be more in favor of a fee increase on the conversation stamp with a portion of it being earmarked for CWD.”*

Justin Caudill: *“While I really like how this recommendation sounds because it will generate a lot of good will and public support. In reality it will generate a small too modest amount of funding for CWD research and management. Also, this new license would be a source of competition against the other dedicated licenses creating revenue for other worthy causes.”*

Kent Connolly: *“Too much overhead again and government and would only target areas that would drive hunting numbers down, we need the deer taken. Why would you hunt a high area given the policy that you shouldn't eat it. Leads to more illegal dumping which is VERY high right now.”*

Steve Martin: *“The G&F already has too many of these types licenses available. It is not a good idea and we should look at other ways to generate funds like a stamp. These types of licenses will not generate enough funds to help with research or management.”*

Millie Copper: *“Initially I was in favor of this. It sounds like a wonderful option to create funds for CWD expenses. Then Senator Hicks explained how the funding for WGFD currently works. Nick and several others explained how special licenses work and can impact hunting opportunities for others. With this information, I can't support a dedicated license which could reduce hunting opportunities for the average person.”*

Rick Pallister: *“I simply think there are better places and strategies with which to raise the necessary funds, including Congress and the Wyoming Legislature.”*

Laura Meadows: *“I cannot support removing licenses that are currently available to the public and transferring those opportunities to a high bidder situation.”*

Nick Dobric: *“There are lots of ‘specialty’ tags out there and they are becoming increasingly controversial to the general hunting public. The current allotment of Commissioner tags, etc mentioned in 8.6 should allow for generating funds specific to CWD without creating an additional specialty tag.”*

Dan Smith: *“I have major reservations with creating a license with revenue specifically earmarked for CWD research. The vast majority of funding for the WY Game and Fish Department comes from license sale dollars. The Department has a budgeting process that is very fiscally responsible and will allocate funds from existing budgets for high priority projects like research and management of CWD. To start earmarking specific dollars to specific projects opens the door for other interests to seek designated licenses taking away from the Department's ability to prioritize their own budget; a slippery slope. I favor allowing the Department to prioritize their funding as they see fit and budget appropriately.”*

Andrew Pils: *“I voted a ‘4’ because I believe there are already too many special licenses available. Adding more would take away opportunity from hunters applying in the draw, plus potentially place more pressure on certain units that already absorb increased pressure from the special licenses currently available. I would prefer to explore options for securing funding for CWD management and research from existing special licenses, rather than creating new ones.”*

Kristen Gunther: *“I oppose the creation of a dedicated license, both because it would be another special tag to manage on the department side and on the grounds of protecting equity in hunter opportunity.”*

Libby Lankford: *“I don't like another ‘special tag’ it takes out of the tag supply number that people can draw for. I'd rather just use an already existing special tag to give to NGOs to raffle and have them donate a portion or something along those lines. Also, I don't like the reissue or refund of tags at all because people*

know the risk of putting in for high CWD prevalence hunt areas. I think we as adults can weigh the risk and reward.”

Bruce Lawson: *“I chose not to support or agree with consensus item 8.7 as I believe that the WGFD already has too many set aside type licenses and I don’t support the creation of additional set aside licenses. Other means of generating revenue for CWD management should be pursued by the Wyoming Game and Fish Commission.”*

Larry Hicks: *“All ready to damn many special set aside license issued.”*

Josh Coursey: *“We simply have too many special licenses now and this opens a can of worms for the next cause or effort to think that this is part of the fiscal solution. Frankly put, if there was a specialty license made available for a cause specific effort, CWD would not make my top 5 list.”*

Sy Gilliland: *“This is not needed and if additional funding is needed and it is lets go for an across the board license fees increase. If the department still feels it needs a dedicated funding stream then lets raise the cost of a conservation stamp and dedicate those funds. I would never ever want to see a CWD stamp that would send a horrible signal to hunters.”*

8.9 Evaluate the effect of predators/large carnivores at a local level on CWD prevalence, transmission, and management implications.

Kent Connolly: *“States that have high numbers of predator's taken like Utah and Texas don't have the issue like states that limit it or ban it like COLORADO. Letting them 1/2 kill animals and kill them will only increase the number of domestic animals that are taken, we have to many conflicts now increasing it will not be taken lightly by the sportsman or the public of Wyoming.”*

Larry Hicks: *“It is politically unacceptable to increase predators as a mechanism to reduce or manage CWD, not to mention public surveys have indicated that the preferred method of harvest was by hunter not G&F personnel. I am pretty sure that if ask that over whelming the hunting public would say they prefer to harvest the animals versus predators. People want to hunt?”*

Sy Gilliland: *“This idea is a terrible idea. What this says is let’s annihilate a herd by increasing predators. So, then we have impacted not only the deer herds but also the livestock operations in those areas. I believe the cure is way worse than the cause when it comes to manipulating higher predator populations as a possible CWD management tool.”*

8.12 Conduct field studies to determine if artificial cervid aggregation is increasing CWD prevalence (e.g. underpasses/overpasses, water holes, feed grounds, etc).

Kent Connolly: *“Under passes work if not for deer it’s a safety issue for humans. Removing Feed grounds, water holes etc., will just intensify them on private property and cities plus move them were they starve or get run over. All migratory animals congregate at the STOP OVER area's as documented in the Corridor data which the Task force on Corridor's says to protect and we are going to say spread ‘em out and screw up the corridors. I don't think we will make policy that dictates how animals migrate. But we can save animals and people's lives.”*

Millie Copper: *“My only issue with 8.12 is the inclusion of feed grounds as an example. While I may personally believe the feedgrounds are a potential CWD issue, in 1.4 we made a point of pulling in a*

stakeholder Working Group to specifically work with feed grounds. I believe leaving this as an issue to be focused on in a separate group, and looked at for more than CWD, is necessary.

“I’ll admit, I had no idea how controversial the feed grounds were until this Working Group! Holy buckets. Removal of feed grounds from the example would move me to a 2 on this recommendation.”

Larry Hicks: *“With all the other research needs this seems to be low priority. Even if the research was conclusive are we really going to bull doze all the stock pond, demolish the wildlife under and over pass’s and banning the placing of salt on rangelands for livestock. Not likely.”*

Laura Meadows: *“Correlating microscale habitat features (either natural or artificial) with prevalence that is calculated on hunt area scale is a very difficult to impossible task. A study such as this, although the results of which would be undoubtedly valuable, does not seem feasible with currently available tools.”*

Sy Gilliland: *“My problem with this recommendation is several. So we have spent a ton of money building overpasses/underpasses for the benefit of wildlife and reducing vehicle collisions. We are going to continue doing this regardless because its the right thing to do. We have invested significant amounts of money and effort developing water in our very arid state for the benefit of wildlife and our AG community. So that isn’t going to change either because once again its the right thing to do. Our western elk herds only exist in hunt able numbers because of feed grounds. If we quit feeding we would lose a solid 80% of our public land elk herds and cause major impacts upon the AG community. Elk leaving their traditional wintering area would end up on private land and onto our limited mule deer wintering areas. So all the examples used in 8.12 are really horrible ideas and shouldn’t even be considered.”*

6. CONCLUSION

The subject of chronic wasting disease is critical to a state like Wyoming. The interests related to cervid populations are varied, and deep. The consequences of CWD can have economic, ecological, and social ramifications for Wyoming, its residents, institutions, communities, and businesses. The Ruckelshaus Institute salutes Wyoming Game and Fish Department for its decision to engage in such a thorough collaborative process, allowing the public to have as much access to the deliberations as possible, while also allowing a very diverse group of people to dive deep into the technical, scientific, and policy ramifications related to this subject.

The proceedings of this Working Group were lively and reflected the depth of information that needed to be deliberated as well as the emotions that were felt. A number of participants in the Working Group and members of the public expressed, for example, what they felt when watching cervids slowly die of this disease. This was one motivation for participants to spend so much time and effort on this process.

The Group worked extremely hard on a great number and diversity of issues. Participants exemplified openness, honesty, and bravery. It is not easy to stand up for the lone opinion and the thoughtfulness, bravery, and persistence of those who raised their minority opinions helped the proceedings greatly. The respect, active listening and good faith efforts to understand where fellow participants were coming from was equally helpful. The support of Director Nesvik and the Wyoming Game and Fish Commission for this process provided a solid foundation from which to work, and a clear goal towards which to work. Lastly, the indefatigable efforts of Wyoming Game and Fish staff Justin Binfet, Janet Milek, Scott Edberg, Mary Woods, Hank Edwards, and Brad Hovinga, and co-chairs Josh Coursey (Muley Fanatics) and Kristin Guenther (Wyoming Outdoor Council) provided the group with excellent information, guidance, and support.

We hope this collaborative process has provided the State of Wyoming with a solid foundation in terms of knowledge and relationships to continue to work together to decrease the prevalence of chronic wasting disease in Wyoming.

Jessica M. Western
Sheridan, Wyoming
July 24, 2020

APPENDICES

- A. Agendas for Public Meetings
- B. Suggested Management Options from Initial Public Meetings
- C. Notes from Second Set of Public Meetings
- D. Working Group Charter
- E. Agendas for Working Group Meetings
- F. Working Group Final Recommendations and Sub-Recommendations

Appendix A: Agendas for Public Meetings



CHRONIC WASTING DISEASE PUBLIC WORKSHOPS

Website: <https://wgfd.wyo.gov/Wildlife-in-Wyoming/More-Wildlife/Wildlife-Disease/CWD-in-Wyoming-Wildlife/CWD-Working-Group>

Agenda Workshop 1 of 2, 6 – 9 pm
 May 28, Laramie, May 29, Casper, May 30, Sheridan
 June 3, Worland, June 4, Pinedale

Objectives:

1. Introduce the Chronic Wasting Disease collaborative process and its purpose.
2. Provide information regarding the current knowledge regarding CWD.
3. Provide local information regarding CWD.
4. Provide the CWD Working Group with ideas to consider in developing management options for CWD.
5. Discuss next steps.

6:00 pm	Introductions to People and Process.	Scott Edberg/Jessica Western
6:15	Current Knowledge regarding CWD	Mary Wood and Hank Edwards
6:45	CWD Impacts to Deer	Justin Binfet
7:00	Local CWD information	Local WGFD representative
7:10	CWD Management	Mary Wood
7:20	CWD Questions	WGFD

7:35 Breakout Groups:

What are ideas you would like the CWD Working Group to consider in developing management options for CWD in Wyoming?

8:25	Report Back	Jessica Western
8:35	Questions and Discussion	Jessica and WGFD
8:55	Next Steps	Jessica Western
9:00	Adjourn	Scott Edberg/Jessica Western



CHRONIC WASTING DISEASE PUBLIC WORKSHOPS

Agenda Workshop 2 of 2, 6 – 9 pm

December 2, Pinedale

December 3, Worland

December 10, Laramie

December 11, Casper

December 12, Sheridan

Second Workshop Objectives:

Second Workshop Objectives:

1. Present and discuss main strategies from Draft CWD Plan
2. Discuss implementation and next steps

6:00 **Welcome – Scott Edberg**

6:15 **Presentations and Discussion of Main Strategies in CWD Plan**

- | | |
|-------------------|---|
| • Jessica Western | Collaborative process |
| • Scott Edberg | WGFD process to integrate recommendations into plan |
| • Hank Edwards | Information regarding CWD |
| • Hank Edwards | Surveillance and monitoring |
| • Justin Binfet | Disease management |
| • Brad Hovinga | Feedgrounds |
| • Justin Binfet | Other Topics |

9 pm **Adjourn**

Appendix B: Suggested Management Options from Initial Public Meetings

Problem (Theme)	Issue (Subtheme) <i>N/A = No subtheme identified</i>	May/June Public Process Break-out Group Results: Management Options
1. Artificial Concentration	1.1 Agricultural	1.1.1 Rotate Crops to distribute deer.
		1.1.2 Limit salt sources.
		1.1.3 Target deer in concentration area, i.e. agricultural fields.
		1.1.4 Target concentrations of deer in agricultural fields early in season.
		1.1.5 Focus efforts to remove dead deer from agricultural fields.
		1.1.6 Consider salt-blocks – make unavailable to wildlife.
	1.2 Reduce/Remove	1.2.1 Potential role of feedgrounds.
		1.2.2 Feed grounds – is there a way to prevent?
		1.2.3 Montana is going to sue Wyoming when CWD gets to feed grounds.
		1.2.4 Feed grounds need to be discussed.
		1.2.5 Are habitat management areas acting like feed grounds: other concentrations of animals?
		1.2.6 Hypocrisy of regulating public/feeding of wildlife with continuation of elk feed grounds and support for feed grounds.
		1.2.7 Removal of artificial food sources
		1.2.8 Reduce concentration of animals – artificial food sources/hot spots.
		1.2.9 Reducing artificial concentration points, stock H2O points, etc.

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
1. Artificial Concentration cont'd	1.3 Save Feed Grounds	1.3.1 Leave feed grounds alone – no action.
		1.3.2 Feed grounds: add more to spread elk out more.
		1.3.3. Save our feed grounds at all costs.
	1.4 Townies	1.4.1 Feeding town deer: abolish.
		1.4.2 Are larger urban areas contributing to high prevalence?
2. Cervid Remains	2.1 Carcass Removal	2.1.1 Carcass removal program
		2.1.2. Transportation in state from Hunt Area to Hunt Area
		2.1.3 Growing carcass disposal/landfill disposal of carcasses. Cost. Leaving carcass in the field. Make carcass disposal free
		2.1.4 Carcass disposal in field and at home.
		2.1.5 Strict carcass disposal regulations within the state.
		2.1.6 Address Carcass removal
		2.1.7 Disposal options for carcasses.
		2.1.8 Transportation of carcasses/processed meat.
		2.1.9 Controlling movement of dead animals/parts.
		2.1.10 Proper carcass disposal.

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
2. Cervid Remains cont'd	2.1 Carcass Removal cont'd	2.1.11 Proper carcass disposal – out of field.
		2.1.12 Department should consider guidelines for the public to dispose carcasses. Consider incentives.
		2.1.13 Dispose in landfill.
		2.1.14 Proper disposal.
		2.1.15 In higher prevalence areas require entire carcass to go to landfill.
		2.1.16 Need to address carcass disposed in areas where there is landfill restrictions or no landfills.
		2.1.17 Incinerator facility/carcass disposal.
		2.1.18 Consider carcass disposal/issue.
		2.1.19 Management of carcasses – ultimate disposition
		2.1.20 Limit carcass movement to areas with no/low prevalence.
		2.1.21 Certification of CWD-free waste.
	2.2 Regulations	2.2.1 Are we going to change regulations to address hunters having to dispose CWD positive animals?
		2.2.2 Make carcass disposal easier in those areas with landfill restrictions.
		2.2.3 Regulate use of deer parts (e.g. urine, etc.).
		2.2.4. Carcass and equipment monitoring, restrictions.

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
<i>2. Cervid Remains cont'd</i>	<i>2.2 Regulations cont'd</i>	2.2.5 Centralized carcass disposal/management: removal regulations for high prevalence areas.
		2.2.6 Ban deer urine.
3. Communication	3.1 CWD Prevalence	3.1.1 In application packet list CWD prevalence by hunt area, not simply presence/absence.
		3.1.2 More updated information in hunter safety classes
		3.1.3 Increase info to public, taught in hunter safety, talk and inform NGO groups, social media.
		3.1.4 Maintain transparency and information provision to the public.
		3.1.5 More CWD information.
		3.1.6 Social media: Ongoing work with other states. Links to website for info. Public field monitoring.
	3.1.7 CWD deer and elk distinction – need to message to the public.	
	3.2 N/A	3.2.1 CWD results should specify license number in the letter hunters receive for positive results.
4. Education	4.1 N/A	4.1.1 Better education on handling of carcasses.
		4.1.2 Need education regarding prevalence and impacts of CWD. Then consider management action.
		4.1.3 Education for hunters on how to minimize spread of disease.
		4.1.4 CWD education pre/post management plan to hunting and general public.
		4.1.5 Educate the non-hunters about CWD and herd management.

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
4. Education cont'd	4.1 N/A cont'd	4.1.6 Is there a way to sell CWD management to the general hunting public?
		4.1.7 Educate public about signs of disease in animals – earlier removal.
		4.1.8 More education – all avenues available to get the word out and get support: 1. Convince the public there is a problem. 2. Use public health epidemics as example.
		4.1.9 More public info and education!
		4.1.10 Education, work with landowners increase late season licensing, improve hunter access to focus management.
		4.1.11 Public should be informed about what to do with sick/dead animals.
		4.1.12 Educate taxidermists on CWD signs.
		4.1.13 Communication and education with the public on all/any management.
		4.1.14 Education of public.
		4.1.15 Educate hunters on what to leave in the field.
5. Genetics	5.1 N/A	5.1.1 Genetic mapping to better understand susceptibility and resistance.
		5.1.2 Genetic links to survivability differences deer vs. elk? Why do some big deer survive while others die?
		5.1.3 Genetic modification of deer for resistance.
		5.1.4 Will animal adapt over time?
		5.1.5 Genetics – mapping, study resistance.

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
5. <i>Genetics cont'd</i>	5.1 <i>N/A cont'd</i>	5.1.6 Accept genetic bottleneck -> resistance.
6. Habitat	6.1 N/A	6.1.1 How can we address habitat degradation?
		6.1.2 Habitat: good seasonal habitat to spread out animals – manipulation of habitat – tie in with research – population manipulation.
		6.1.3 Habitat.
		6.1.4 Look at environmental prevalence.
		6.1.5. Study plant uptake.
7. Hotspots of Prions	7.1 N/A	7.1.1 Target hotspots in herds that do not migrate (all deer, not just clinical)
		7.1.2 Reduce hotspots
		7.1.3 Test for hotspots, environmental and plant.
		7.1.4 Most transmission environmental.
8. Human Health	8.1 N/A	8.1.1 Be transparent about info known about CWD transmission to humans. Make that data more available through WGFD avenues.
		8.1.2 Are we creating fear (health concerns) or undue wasting problems. And economic concerns.
		8.1.3 Human safety concerns.
		8.1.4 Concerns with current information about the disease – how do we effectively apply management actions with unknown results/impacts?
		8.1.5 Human safety concerns.

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
8. Human Health cont'd	8.1 N/A cont'd	8.1.6 Consider human health – potential for species cross-over.
		8.1.7 Human health implications.
		8.1.8 Continued research and education on human health.
9. Landowners	9.1 N/A	9.1.1 Landowner incentive to allow access
		9.1.2 Giving landowners an active role in responsibility of managing herds, transmission, disposal, etc. (Increasing landowner coupons to give incentive.)
		9.1.3 Landowner participation required for desired harvest levels and sampling efforts – consequences for not participating.
		9.1.4 Allow landowners to be involved in recording/observation of deer/CWD.
10. Management	10.1 Buck Harvest	10.1.1 Harvest bucks at higher rates
		10.1.2 Sacrifice area with season structure e.g. late season to target bucks – long-term.
		10.1.3 Management should target larger mature bucks.
	10.2 Determine Threshold	10.2.1 Develop statewide goal for CWD prevalence.
	10.3 Experiment	10.3.1 Continue with 5-year objective reviews, but take a closer look at CWD.
		10.3.2 Look at females to male ratios and manage for ratios that are favorable for disease management.
		10.3.3 We have to attempt something in order to learn about the disease.
		10.3.4 Satellite to (sting?) sites.

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
10. Management cont'd	10.3 Experiment cont'd	10.3.5 Apply WAFWA management plans in one location all together to see if parts of each work together to reduce CWD.
		10.3.6 Management: Control area where all cervids are removed and an exclusion fence is created to allow area to allow all prions to degrade.
		10.3.7 Experimental design: different levels or types of management.
		10.3.8 Try limited population control on trial bass to see if it works.
		10.3.9. Stick with hunting season structure (late deer hunting) (N. Fork) that public likes, use as experiment. ID area where to use experiments/structure.
		10.3.10 Look at harvest rates of bucks, does and season lengths.
	10.4 Focused harvest	10.4.1 Should consider focused, high intensity harvest in high CWD prevalence areas. Consider designating small hunt areas to focus harvest.
		10.4.2 Increase licenses in high prevalence areas over a set period to observe a noticeable impact. 5, 10 15 years?
		10.4.3 Kill them all if there is application in small – have to get public buy-in.
		10.4.4 Increase harvests/licenses in social groups ("hot spots")
		10.4.5 Reduce densities.
		10.4.6 Cull targeted areas/s.
		10.4.7 Cull statewide.
		10.4.8 Remove sick deer.
10.4.9 Be specific in culling – target sick deer.		

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
<i>10. Management cont'd</i>	<i>10.4 Focused harvest cont'd</i>	10.4.10 Focus potential management strategies in areas of increased prevalence.
		10.4.11 Use public for ungulate density decrease efforts – potential.
		10.4.12 Allow hunters to shoot positive deer without tagging or calling warden
		10.4.13 Focus efforts in low or no prevalence areas to keep them low.
		10.4.14 Base potential management in areas of 95% confidence interval
	10.5 Funding	10.5.1 WGFD pay a processing fee.
	10.6 General	10.6.1 Contain/control the spread of CWD
		10.6.2 Multiple approaches
		10.6.3 Management is necessary.
	10.7 Keep Status Quo	10.7.1 Keep herd management at status quo- no action.
		10.7.2 No eradication efforts
		10.7.3 Status quo with minor changes.
	10.8 Late Harvest	10.8.1 Late season deer season – point restriction 3 point or more
		10.8.2 Post rut deer hunt.
	10.9 Look at other plans	10.9.1 Look at existing studies and knowledge from former CWD plans, try to implement.

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
<i>10. Management cont'd</i>	<i>10.9 Look at other plans cont'd</i>	10.9.2 Management plan similar to Colorado – mandatory testing.
		10.9.3 Other states: what has/hasn't worked.
	10.10 Monitoring	10.10.1 Monitoring management strategies for long periods of time.
		10.10.2 Continue monitoring and refining ability to defeat spread.
	10.11 Moose	10.11.1. Pay attention to moose.
	10.12 Mule Deer	10.12.1. Consider targeting mule deer groups or population segments which employ a resident (non-migratory) life history/strategy for more aggressive harvest strategy.
	10.13 Pronghorn	10.13.1 Pronghorn and CWD
	10.14 Public Reaction	10.14.1 Won't come back to hunt in CWD areas.
		10.14.2. Assurance that population management will have positive impact on prevalence.
	10.15 Refund/New tag	10.15.1 Helping hunters who harvest positive deer – tags are refunded
		10.15.2 Harvesting a CWD animal and having the opportunity to harvest at least one more
		10.15.3 Additional hunting licenses if cervid is positive.
		10.15.4 Hunters should get another license if they harvest a positive animal.
		10.15.5 Reissue tag to hunter that harvests CWD deer.
10.15.6 Reissue tags to hunters who harvest CWD positive deer.		

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
10. Management cont'd	10.15 Refund/New tag cont'd	10.15.7 Look at additional licenses with CWD positive results.
		10.15.8 Replacement tag for hunter animals that test positive.
		10.15.9 Re-issue licenses with CWD positives.
		10.15.10 License refund/replace for positive test harvest.
		10.15.11 Hunters that harvest positive animals in targeted areas are issued another license valid for that area free of charge.
	10.16 White Tail Deer	10.16.1 Allow unlimited harvest of WTD.
		10.16.2 Decreasing white tail densities in general.
		10.16.3 Sympatric WTD populations should be considered as a contributor to CWD and for increased harvest.
		10.16.4. If WTD prevalence is higher than MD then focus management on WTD.
		10.16.5 Liberalized harvest should incorporate youth hunters.
		10.16.6 Non-resident harvested deer (high priority).
		10.16.7 Denature prion in environment.
		11. Migration
11.1.2 CWD plan should emphasize importance of migration corridors to allow animals to disperse to low density areas.		
11.1.3 Migration routes: long term effects and spread of CWD		

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
11. Migration cont'd	11.1 N/A cont'd	11.1.4 Determine prevalence between local deer and migratory deer in same area.
		11.1.5 Initiate study of prevalence in migratory deer in 164 compared to resident deer. Track migratory deer.
12. Minerals	12.1 N/A	12.1.1 Alternative research: minerals
		12.1.2 Mineral supplements research: copper, Zinc, magnesium
		12.1.3 Mineral blocks/supplements?
		12.1.4 Mineral deposits and correlation with CWD.
13. Predators	13.1 Increase hunt	13.1.1 Increase predator populations
		13.1.2 Predator license quota balance – less lions/predators harvested by public.
		13.1.3 Increase mountain lion and bear populations.
		13.1.4 Study stress related effects of lions/predators: PTSD?
		13.1.5 Predator control – increase predator quotes, trapping quotas?
		13.1.6 Predator management/stress reduction.
		13.1.7 Predator management in relation to MD management.
		13.1.8 Manage predators during periods of low populations.
	13.2 Use predation	13.2.1 Study predators dispersing ungulates to lower prevalence.

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
13. Predators cont'd	13.2 Use predation cont'd	13.2.2 Role of wolf predation on CWD transmission.
		13.2.3 Lion harvest more conservative to help manage the disease (if targeting CWD positive deer).
		13.2.4 Increase wolves in a high CWD prevalence areas (tolerate predation and scavenging) – study impacts.
		13.2.5 Consider predator management/quotas, increase densities in specific areas.
14. Regulations	14.1 N/A	14.1.1 Review regulations – to reduce potential fines.
		14.1.2 Standards of game processing to reduce cross-contamination.
15. Research	15.1 Better testing, larger sample sizes	15.1.1 Increase sampling.
		15.1.2 Better sample sizes for prevalence estimates: otherwise difficult to be accountable to the public.
		15.1.3 Improve tests.
		15.1.4 Improve sample sizes.
		15.1.5 Need for better testing.
		15.1.6 Research on CWD detection in fecal samples (presence of disease).
	15.2 Big Horn Basin	15.2.1 Control group at parting of the waters (20 mile radius).
	15.3 Environmental	15.3.1 Better environment testing to better understand CWD in the environment (soil, plants)
15.3.2 Different testing methods: feces, soil – can we utilize these for more testing?		

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
15. Research cont'd	15.3 Environmental cont'd	15.3.3 Study if environmental contaminants from ag (e.g. herbicides) have synergistic effect (has it been studied?).
		15.3.4 More research on correlations between prevalence of CWD and environmental factors.
	15.4 Funding purpose	15.4.1 Increase/Need funding.
		15.4.2 Working group should pursue additional funding to determine why prevalence is higher/lower in different hunt areas.
		15.4.3 Increase funding for more research on CWD
		15.4.4 Increase research funding and education.
		15.4.5 More \$\$\$\$!
		15.4.6 Donation for CWD research when purchasing license.
		15.4.7 Greater resource of funding (feds)
		15.4.8 GF stamp for CWD
		15.4.9 Place more funding to CWD research and management, needs to come from general fund. Broad financial SW implications. Funding future issues for Department.
		15.4.10 Funding – sustainable.
		15.4.11 Lobby legislators for support and funding
15.4.12 Department should seek out alternative funding opportunities.		
15.4.13 Consider funding source for CWD research/checks that does not rely on hunters (conservation groups, government).		

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
15. Research cont'd	15.4 Funding purpose cont'd	15.4.14 20% of resident licenses allocated for special draw + (\$200.00) same as non-resident all increased funds from this fund CWD research.
		15.4.15 Volunteer donation with purchase of tag.
		15.4.16 Licenses increase of \$ 2.00 to send \$\$ to CWD research.
		15.4.17 Need to task legislature with funding for testing of targeted areas (hunters don't pay).
	15.5 General	15.5.1 Research long-term
		15.5.2. Research of correlation between deer and elk: collar elk/deer – Looking at internal function – test specific groups – where do the animals contract the disease? – what are they eating? – change of diet, seasonal.
		15.5.3 Immune system – correlation with poor weather, lack of food, etc. and increasing CWD prevalence.
		15.5.4 Research (general) and genetics.
		15.5.5 More research.
		15.5.6 More research!
		15.5.7 More research on CWD fundamentals.
	15.6 Genetics	15.6.1 Plan needs to pursue research on genetic factors that influence animal susceptibility/immunity.
		15.6.2 If research identifies genetic resilience, reduce harvest on these deer.
	15.7 Lichen	15.7.1 Need more research (lichen association with CWD).

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
<i>15. Research cont'd</i>	15.8 Literature	15.8.1 Worldwide synopsis of known peer-reviewed literature.
	15.9 Males	15.9.1 Modeling mature males with CWD
	15.10 Nutrition	15.10.1 Nutritional research
	15.11 Prions	15.11.1 Pursue research on modifying/destroying CWD prion.
		15.11.2 Find out what will kill prion then come up with fix . (culling is not working). (Supplement feeding of deer to cure). Develop/use vaccine in feed (supplemental feeding).
		15.11.3 Concentration of prions – better to concentrate, spread out?
		15.11.4 Need to determine rates of prion sloughing.
		15.11.5 Denaturalization and re-naturalization of proteins and related pure research.
	15.12 Social Science	15.12.1 Public survey (consumptive/non-consumptive) at CWD attitudes.
	15.13 Transmission	15.13.1 Understand transmission and why higher prevalence of bucks.
		15.13.2 More research about transmission.
		15.13.3 Track transmission to species outside of cervids.
	15.14 N/A	15.4.1 Impact environmental services.
		15.4.2 Air quality/inventory.
		15.4.3 Study controlled herds

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
16. Testing	16.1 Citizen Science	16.1.1 Reporting tool – concentration of (living or dead) animals (citizen science).
	16.2 Decrease test turn-around time	16.2.1 Increase test turn-around time.
		16.2.2 More work toward higher efficiency and access to testing – shorter turn-around times.
		16.2.3 Fast turnaround samples for hunters.
	16.3 Field Test	16.3.1 Research for an immediate field test that can be collected by hunters?
		16.3.2 Work to develop a simple field test so hunters can check if animals are positive or negative at harvest site.
		16.3.3 Easier testing availability/self-sample
		16.3.4 Increased sampling: provide all hunters with CWD kit. Make it reward based.
		16.3.5 Quicker testing options for harvests.
		16.3.6 Field test kit?
		16.3.7 Rapid field test, to make decision on processing/consumption.
16.3.8 Make sampling convenient.		
16.3.9 Train hunters/volunteers to sample harvested deer.		
16.3.10. Ability to do test and slaughter by hunters.		
16.3.11 Find easier ways to test.		

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
16. Testing cont'd	16.4 Considerations	16.4.1 Collect data: High quality baseline, Statewide data collection, Don't infer from small samples, Mandatory testing - Check stations or field check - Logistics? Who checks? Keep checks yearly or every other year - Identify location of kill.
		16.4.2. Use volunteers? NGOs, Public. For sampling: Very focused season. After monitoring and after original hunting season, Include females in harvest plan, Culling vs. harvest, More PR from Game and Fish – be transparent on why harvesting or culling, Mandatory checks – incentives? Non-invasive sampling? Fecal? Vegetation? One deer. Sample more than lymph node. Fecal, urine, saliva.
	16.5 Lead Research facility	16.5.1 Having a lead facility: 1 facility to do main research on CWD among all states.
	16.6 Mandatory harvest test	16.6.1. Mandatory harvest-check statewide all species
		16.6.2 Mandatory testing.
		16.6.3. Increase sampling, maybe mandatory.
		16.6.4 Mandatory Sampling: Turn in sample or be penalized - Kits to hunters/25% etc. - Volunteers/federal employees in the field - Covers all Cervids – Work with businesses – Education to pull samples – Hunter Education re. sampling.
		16.6.5 Mandatory check in: leaving doe/cow heads in field limits what can be sampled.
		16.6.6. Mandatory sampling and harvest reporting (increase license price to pay for sampling or offset cost with CWD stamp, similar to feedground elk stamp).
		16.6.7. Mandatory testing should be implemented for hunter harvested mule deer.
16.6.8. Mandatory sampling or provide incentives to increase sample sizes.		
16.6.9. Mandatory sampling of harvested animals so you can get good data.		
16.6.10 If sampling is mandatory, come up with way to cover cost. Check points for hunters.		

Problem (Theme)	Issue (Subtheme)	May/June Public Process Break-out Group Results: Management Options
16. Testing cont'd	16.6 Mandatory harvest test cont'd	16.6.11 Look at benefits of mandatory testing: incentives vs. regulation.
		16.6.12. Require every tag filled to test for CWD: Mandatory check-ins – volunteers to help collect samples. Carcass test negative before being accepted into a processor Or ear-tag/collar resident deer (towny deer) to study and design experiments to control Chronic Wasting Disease.
	16.7 Targeted testing	16.7.1 Check targeted herd units
		16.7.2 For sampling, pick one area to focus on, set up check points.
		16.7.3 Focus testing on specific areas where deer are concentrated (town).
	16.8 Test and cull	16.8.1. Live test and cull.

Appendix C. Notes from Second Set of Public Meetings

Notes from WGFD CWD second set of public meetings, December 2019

Category	Location	Comment
Disease Management	Pinedale	No management action.
Disease Management	Pinedale	Consistent message on use of bleach to kill prions.
Disease Management	Worland	Is it better to implement CWD harvest management strategies in herds with high prevalence or low prevalence (citations of research)?
Disease Management	Worland	Could it be an effective management strategy to capture and test live animals for CWD? Then cull positives e.g. Rocky Mountain National Park?
Disease Management	Worland	Could the Department use trained volunteers to help with CWD sampling during hunting seasons?
Environmental Transmission	Sheridan	Fears that Feds will use de-concentration of water and minerals on public lands to decrease cattle numbers.
Environmental Transmission	Casper	Rather than reduce points e.g. guzzlers, have more to spread out animals. E.g. work with oil and gas companies on this.
Environmental Transmission	Laramie	Look at herd reduction in hotspots and related environmental contamination longevity.
Feedgrounds	Worland	Feedground Working Group should have members from across the state not exclusively members from counties with feedgrounds.
Feedgrounds	Casper	Look at what helps to reduce CWD for feedgrounds and concentrations on private lands elsewhere.
General	Pinedale	Skeptical of prions.
General	Pinedale	Concern of over-harvest – Is the cure worse than the disease?
General	Casper	See U. of San Diego 2015 study.
General	Laramie	Use “detected,” “non-detected,” and “unsuitable” language.
Harvest Strategies	Pinedale	Concern that public acceptance of harvest management strategies may not be implemented fast enough to address the disease.
Harvest Strategies	Worland	Need to ensure adequate access to private lands when implementing harvest strategies so density reduction doesn't only occur on public lands.
Human Health	Pinedale	More human health concern/transmission research.

Information Needed	Pinedale	Percentages on CWD statewide hunt area map and location of elk feedgrounds
Information Needed	Pinedale	Provide more information on the plan prior to meetings.
Information Needed	Pinedale	Application (open-ness) for selection of CWD/FG collaborative.
Information Needed	Pinedale	How does the public help fund CWD management?
Information Needed	Worland	Would like to see CWD prevalence data by hunt area in regulations or application materials.
Information Needed	Casper	Put directions re. lymph node removal in a brochure.
License Reimbursement	Pinedale	Concern for license refunds for CWD positives.
License Reimbursement	Worland	Is WGFD going to reimburse licenses if a positive is harvested?
License Reimbursement	Worland	In areas where specific disease management strategies are implemented could hunters get replacement licenses for CWD positive harvested deer to encourage participation?
License Reimbursement	Worland	Need an incentive to get hunters to sample and properly dispose of carcasses, etc.
License Reimbursement	Sheridan	If positive animal, reissue license.
Overview	Worland	Is CWD detection more accurate in elk by examining obex instead of retropharyngeal lymph nodes?
Remains	Pinedale	Partner with crematoriums to incinerate carcasses.
Sampling	Pinedale	Sample for prions in feedgrounds.
Sampling	Sheridan	Sample at meat processors.
Sampling	Sheridan	Higher levels of CWD studies in captivity.
Sampling	Laramie	Mandatory sampling in areas where you don't see CWD and in limited quota areas.
Sampling	Laramie	Mandatory sampling for one season all deer and elk for the whole state.
Testing	Sheridan	Mobile testing
Testing	Sheridan	Research to decrease time to get test results.
Testing	Casper	In places where CWD is very prevalent, have mandatory testing.
Testing	Laramie	Aging animal heads required in Nebraska at test stations (and testing).

COMMENTS on WGFD Handout

- Casper Has anyone looked at the health effects of a high CWD diet on the predators eating CWD prey? I could fall into that category since a large part of my diet for the past 40 years has been elk meat from Area 7. Do I need to worry and should I donate my organs to WGFD when I expire?
- Laramie In general I am in favor of what the WGFD decides on trying. I understand this is and will be an ongoing process for many years. I don't like it but realize this is something that must be dealt with!!
- Laramie I do like the common sense approach that the WGFD is taking towards CWD. Thank you for having the public's input on this issue. I felt the presentation was informative and easy to understand. I will get on the website and go all the way through the plan and then comment more on the website.
-

Appendix D. Working Group Charter

Chronic Wasting Disease Working Group Group Charter

FINAL

1. BACKGROUND AND PROJECT DESCRIPTION

Chronic wasting disease (CWD) is a chronic, fatal disease of the central nervous system in deer, elk, and moose. CWD belongs to a group of diseases called transmissible spongiform encephalopathies caused by abnormal proteins called prions. First documented in southeast Wyoming in 1985, the disease is now found in the majority of the state. There is growing evidence that CWD can impair deer and elk populations in areas with a high proportion (prevalence) of infected animals.

In response to increased concerns regarding CWD in Wyoming's cervid (deer, elk, and moose) populations, the Wyoming Game and Fish Department (Department) will convene a public process to update management recommendations in the Department CWD management plan. This process will utilize public meetings to solicit public input and work with the Ruckelshaus Institute to convene a CWD Working Group.

2. PURPOSE

The CWD Working Group will explore CWD scientific information, cervid management, and public input to evaluate management options to minimize CWD in Wyoming's cervid populations. The Working Group will create recommendations to the Department for incorporation into a revised CWD management plan.

3. PRODUCTS AND OUTCOMES

Under this Charter, the Working Group will provide recommendations for CWD management options that local Department managers may consider. Those recommendations will be utilized by the Department to create a revised CWD management plan.

4. GEOGRAPHIC AREA

Recognizing this is a cross border issue; however, this effort will be primarily developing CWD recommendations to benefit Wyoming cervid populations with an eye towards other western cervids.

5. WORKING GROUP MEMBERSHIP AND REPRESENTATION

The Working Group is representative of persons with interests in Wyoming's cervid herds. Although it is recognized that Working Group members have multiple interests and may participate in discussions from various perspectives, Working Group members broadly represent the following organizations and interest groups:

- Local Government
- Governor's Office
- Legislator
- Agriculture and landowner community
- Wyoming Game and Fish Department
- Outdoor media
- Outfitting businesses
- Federal agencies
- State agencies
- Sportspeople
- Conservation NGOs
- Scientists
- General public
- Wyoming Game and Fish Commission

Working Group members will be expected to represent the interests of: (1) themselves, (2) organizations that have authorized the Working Group member to represent them, or (3) groups of constituents from a similar stakeholder group. Ideas presented within Working Group discussions will not be assumed to be the official position of the organizations or groups represented unless specifically stated to be so. Working Group members have the responsibility to keep the organizations and interest groups they represent informed about the actions and outcomes of the Working Group's process.

Each organization and interest group is represented by one or more Working Group members. In the event that a Working Group member cannot attend a meeting, they may be represented by an alternate member of their choosing without concurrence of the Working Group. Alternate group members are encouraged to attend Working Group meetings along with the primary group members, but should be fully briefed by the primary group member before attending any meetings as the sole representative.

Members are appointed by the Director of the Department. Term of membership on the Working Group will be through December 31, 2020. Reappointments will be made by the Director. Service on the Working Group by any group member will be at the discretion of the member's constituent organization or interest group.

All expenses, including but limited to travel, lodging, meals are at the expense of the Working group member unless otherwise provided by the Department.

Membership is as follows:

First Name	Last Name	Affiliation	Alternate
Justin	Caudill	State Agency	Jon Cecil
Kent	Connelly	Local Government	Robert King
Millie	Copper	Sportsperson	Joe Inglis
Joshua	Coursey	Conservation NGO	Joey Faigl
Jeff	Daugherty	Conservation NGO	Steve Robertson
Nick	Dobric	Conservation NGO	Madeleine West
Luke	Esch	State Agency	
Garret	Falkenburg	Landowner or Agricultural Community	Mitchell Falkenburg
Sy	Gilliland	Outfitter	Ambrosia Brown
Kristen	Gunther	Conservation NGO	John Burrows
Dave	Gustine	Federal Agency	Sarah Dewey
Karinthia	Harrison	General Public	Tim Metzler
Martin	Hicks	WGFD	TBD
Larry	Hicks	Wyo. State Legislature	Bo Biteman
Lyle	Lamb	State Agency	Randy Merritt
Libby	Lankford	Landowner or Agricultural Community	Tim Carpenter
Bruce	Lawson	Sportsperson	Nic Dobric
Tony	Lehner	Local Government	Rick Grant
Jim	Logan	State Agency	Steve True
Janet	Marschner	Sportsperson	Lee Stein
Steve	Martin	Sportsperson	
Dax	McCarty	Outfitter	Ambrosia Brown
Laura	Meadows	Conservation NGO	Andrea Barbknecht
Shane	Moore	General Public	
Richard	Pallister	Sportsperson	
Andrew	Pils	Federal Agency	Kerry Murphy
Mike	Schmid	Wyoming Game and Fish Commission	
Brant	Schumaker	Scientist	David Edmunds
Dan	Smith	WGFD	
Joe	Tilden	Local Government	Lloyd Theil
James	Wright	Federal Agency	Brad Jost

6. ROLE OF THE CO-CHAIRS AND STEERING COMMITTEE

Co-chairs will work together to lead the Working Group through meetings in order to reach a set of consensus recommendations. Co-chairs will work with the Ruckelshaus Institute to provide input and direction at various points throughout the process, as well as communicate with the Director when necessary. Co-chairs will participate as full Working Group members, including communicating interests and voting on options.

The steering committee will contribute input on the formation and direction of the Working Group, provide support and feedback to the co-chairs and the Ruckelshaus Institute, and communicate with the Director as necessary. Co-chairs or the Ruckelshaus Institute may convene the steering committee at any point they need guidance on a particular issue.

7. RESPONSIBILITIES OF THE WORKING GROUP

a) Conduct of Working Group Members

Working Group members will engage in open communication at the meetings. This means disclosing interests, needs, actions, and issues in a timely manner and committing to the purpose of the Working Group. The primary responsibility of the Working Group is to balance the interests related to ungulate populations throughout Wyoming in providing advice and recommendations. Working Group members will endeavor in good faith to develop recommendations that are satisfactory to all Working Group members. Working Group members will ensure that an integrated approach is taken in formulating recommendations by meeting together as needed to assure strong communication and collaboration among Working Group members.

b) Keeping Constituents Informed

Working Group members will engage in active communication with constituents about actions and outcomes of the Working Group. Active communication can include written, verbal, and electronic means of communicating. Members will have meeting summaries available to them for keeping constituents informed.

c) Representing Constituents

In developing recommendations, Working Group members will consider the interests of other group members as well as their own particular interest group when reviewing issues and recommendations. Working Group members will invite proposals from their constituents to present to the Working Group and will provide proposals from the Working Group to their constituents for feedback and input.

d) Attending Meetings

Each Working Group member is expected to attend on time and fully participate in each meeting, which includes being present for substantially all of the meeting. Working Group members shall read appropriate materials and arrive prepared to work. Materials presented for discussion should be distributed at least one week in advance of the meeting or longer, as is practical.

In the event that neither the primary Working Group member nor the alternate Working Group member is able to attend a meeting of the Working Group, and the primary Working Group member is not in agreement with any actions taken by the Working Group during their absence, that member has until the meeting summary review at the next meeting to register their dissatisfaction with actions taken. A reasonable amount of time will be devoted to old business at meetings. Email may be used to expedite this process.

e) Understanding and Abiding by the Charter

Working Group members are expected to read, fully understand, and conduct themselves in accordance with the requirements of this charter.

8. RESPONSIBILITIES OF THE FACILITATORS

The Working Group will be facilitated by faculty and staff of the Ruckelshaus Institute at the University of Wyoming. The roles and responsibilities of the Facilitators include:

- Facilitating meetings in a manner consistent with interest-based negotiations and this charter.
- Helping the Working Group stay on task and on process.
- Protecting Working Group members and their ideas from attack while ensuring that provocative issues are not avoided, but are discussed in a candid and respectful manner.
- Helping Working Group members to concisely describe their interests.
- Helping Working Group members find innovative and workable solutions.
- Helping Working Group members reach consensus.
- Providing for equitable participation by all Working Group members.
- Working, both at and between meetings, with Working Group members to assist in the free exchange of ideas between the Members and to resolve any impasses that may arise.
- Periodically surveying Working Group members to assess fairness, meaningfulness and efficiency of the process.
- Maintaining a list of significant topics on which the Working Group has reached consensus or have failed to reach consensus.
- Facilitate collaborative learning sessions with constituents before and after the Working Group has drafted amendments to the CWD management plan.
- Maintain a website.
- Assist in summarizing the work of the Working Group into a final report format to be signed by the Working Group Co-Chairs.

9. RESPONSIBILITIES OF WYOMING GAME AND FISH DEPARTMENT

- Organizing meeting logistics including location, room arrangement, food and evening socials.
- Notifying Working Group members of meeting dates, locations and logistics.
- Keeping meeting attendance records of all Working Group members.
- Hosting website with up to date agendas, meeting notes, and review documents.
- Convene collaborative learning sessions which gather input from constituents before and after the Working Group has drafted amendments to the CWD management plan and report information back to Working Group.
- Providing updates to Wyoming Game and Fish Commission and Director's office for dissemination to interested parties.

- Appointing a designated Department media spokesperson.
- Assist in summarizing the work of the Working Group into a final report format to be signed by the Working Group Co-Chairs.
- Incorporate Working Group recommendations into the CWD Management Plan for presentation to the Wyoming Game and Fish Commission.

10. DECISION PROCESS

The Working Group will operate by consensus of all members represented at the meeting. Consensus is the decision rule that allows collaborative problem solving to work. It is a way for more than two people to reach agreement. Consensus prevents domination by the majority, allows building of trust and the sharing of information, especially under conditions of conflict. Consensus does not mean that everyone will be equally happy with the decision, but all do accept that the decision is the best that can be made at the time with the people involved.

Consensus requires sharing information, which leads to mutual education and provides the basis for crafting workable and acceptable alternatives. Consensus promotes joint thinking of a diverse group and leads to creative solutions. Also, because parties participate in the deliberation, they understand the reasoning behind the recommendations and are willing to support them.

In making decisions, each Working Group member will indicate their concurrence on a specific proposal using a five-point scale. The scale allows Working Group members to clearly communicate their intentions, assess the degree of agreement that exists, and register their dissatisfaction without holding up the rest of the Working Group. The five-point scale is as follows:

1. Endorsement –Member likes it.
2. Endorsement with Minor Point of Contention – Basically, member likes it.
3. Agreement with Minor Reservations – Member does not oppose.
4. Stand aside with major reservations – Formal disagreement, but will not block the proposal/provision
5. Block – Member will not support the proposal.

If the reason for not being able to endorse a proposal is lack of information, the member must specify this and the information that is needed. Once the information has been obtained, the member must re-vote.

Facilitators will measure and record the Working Group’s consensus on a given proposal by open polling of the members present. The levels of consensus are:

- Consensus - All Working Group members present rate the proposal as a 1, 2 or 3.
- Consensus with Reservations – All Working Group members present rate the proposal as a 1, 2 or 3, except at least one Working Group member rates it as a 4.
- No Consensus - Any Working Group member present rates the proposal as a 5.

Any Working Group member that rates a significant proposal (i.e., a proposal that involves significant discussion and has the support or qualified support of a majority of Working Group members) as a 4 or a

5 is required to specify their dissention in a written statement for inclusion in the final written report. Dissenters who share the same basic concerns can use a single dissention statement. Dissenters will also identify themselves by name and organization on their dissention statements.

11. FINAL REPORT ON RECOMMENDATIONS

The Department will draft a final report of Working Group Recommendations with support from the Ruckelshaus Institute, to be submitted to the Director and signed by the Working Group Co-Chairs. The report will contain a detailed description of Working Group recommendations. Final recommendations submitted to the Director will include only the consensus recommendations with votes of 1 through 3 fingers. In cases where a member rated a particular proposal as a 4 or 5, their reservation statement will be included with the recommendation. The report will also contain the significant proposals that did not gain the consensus of the Working Group. These proposals will be listed separately from the Working Group recommendations and will be labeled as such. Working Group member dissention statements will be included with these proposals.

The Department will amend the current CWD Management Plan based on the recommendations of the CWD Working Group for review and approval by Department leadership and the Wyoming Game and Fish Commission.

12. AD HOC GROUPS

Ad Hoc subcommittees may be formed in order to address specific topics or issues. Work generated from these subcommittees will be reported back to the full Working Group. Subcommittees will follow the same ground rules for interaction as the full Working Group. Subcommittees may choose to bring in subject matter experts for a particular topic but must first inform the Working Group co-chairs before doing so.

13. GROUND RULES FOR INTERACTION

In order to have the most efficient and effective process possible, Working Group members will follow these basic ground rules:

Discussion Ground Rules During the Meetings

- Raise hand to be recognized by the Facilitator.
- Speak one at a time in meetings as recognized by the Facilitator. Everyone will participate, but none will dominate.
- Be concise and stick to the topics on the meeting agenda. Honor a two-minute time limit for statements and responses unless the Facilitator allows more time.
- Speak only on one topic per entry (no laundry lists).
- Speak to the whole group when talking.
- Avoid side conversations.
- Avoid off-topic questions.
- Treat each other, the organizations represented on the Working Group, and the Working Group itself with respect at all times.
- Refrain from interrupting.
- Monitor your own participation – everyone should participate, but none should dominate.

- Adhere to the agenda and time schedule with diligence.
- Put cell phones on “vibrate” and leave the room when a call is received. Only take necessary calls.
- Be prepared to start on time.
- Recognize that everyone’s interests are important.
- Avoid repetitiveness (i.e., one-track-mind behavior).
- Agree that it is okay to disagree, and disagree without being disagreeable.
- Avoid “cheap shots” and/or sarcasm.
- Refrain from hostility and antagonism.
- Leave personal agendas and “baggage” at the door; put personal differences aside in the interest of a successful Working Group.
- Focus on the problem, not the person.
- Minimize distractions through emails, texting, and other computer work.

Process Ground Rules Throughout the Stakeholder Process

- Adhere to the charter.
- Review information and stay informed.
- Work as team players and share all relevant information. Ask if you do not understand.
- Encourage free thinking. Offer mutually beneficial solutions.
- Encourage candid, frank discussions. Be honest and tactful. Avoid surprises.
- Openly express any disagreement or concern with all other Working Group members. Focus on the problem, not the person.
- Actively strive to see the other points of view.
- When communicating with the media, Working Group members will treat each other, the organizations represented in the Working Group, and the Working Group itself with respect.
- Follow through on commitments.
- Share information discussed in the meeting with the organizations/ constituents represented and bring back to the Working Group the opinions and actions of your constituencies as appropriate.
- Communicate the requirements of this charter with the organizations you represent to minimize the possibility of actions contrary to the charter.
- Commit to issues in which you have an interest.
- Support and actively engage in the Working Groups’ decision process.

14. PUBLIC PARTICIPATION AT GROUP MEETINGS

All Working Group meetings are open to attendance by the public. Members of the public attending the meetings may comment during the specified time at each Working Group meeting. Public comment periods will be specified in advance. Speakers will have time limits set by the Facilitators to allow as much participation as possible within the allotted time. The Working Group will not normally attempt to respond to public or media comments or questions at the meeting in which they were made. The Facilitators have the right to deny the floor to public speakers who are simply repeating previously delivered messages or who are unruly.

Final summaries of Working Group meetings will be available to the public upon request and will also be available on the Department's and Ruckelshaus Institute's website.

15. WORKING WITH THE MEDIA

Working Group members are free to speak with the media. When speaking to the media, members must make it clear they are representing themselves and not the Working Group at-large. If the Working Group member feels uncomfortable speaking with the media, they may refer the media to the Department communications director.

Concise talking points will be generated by the Working Group at the end of each meeting, summarizing the discussion and any decisions made. These talking points may be helpful in communicating with the media, as well as constituents.

16. SCHEDULE AND DURATION

The Working Group will meet periodically at times and locations as set by the Department and approved by the Working Group. The intent of the Working Group is to provide advice and recommendations to the Department. Duration of the Working Group is scheduled for one year. If additional time is needed this can be considered by the Department and Working Group members.

17. AMENDMENTS TO THE CHARTER

Changes to the charter can be made at any meeting of the Working Group by consensus.

Working Group participant signatures approving Charter. Two members signed later.

I agree to collaborate with my fellow Chronic Wasting Disease Working Group Members according to the Charter dates August 12, 2019.		
Signed, August 20, 2019		
Name		Signature
Justin	Caudill	
Kent	Connelly	<i>Kent Connelly</i>
Millie	Copper	<i>Millie Copper</i>
Joshua	Coursey	<i>Joshua W. D. Coursey</i>
Jeff	Daugherty	<i>Jeff Daugherty</i>
Nick	Dobric	<i>Nick Dobric</i>
Luke	Esch	<i>Luke Esch</i>
Garret	Falkenburg	<i>Garret Falkenburg</i>
Sy	Gilliland	<i>Sy Gilliland</i>
Kristen	Gunther	<i>Kristen Gunter</i>
Dave	Gustine	<i>Dave Gustine</i>
Karinthia	Harrison	<i>Karinthia Harrison</i>
Martin	Hicks	<i>Martin Hicks</i>
Larry	Hicks	
Lyle	Lamb	<i>Lyle Lamb</i>
Libby	Lankford	<i>Libby Lankford</i>
Bruce	Lawson	<i>Bruce Lawson</i>
Tony	Lehner	<i>Tony Lehner</i>
Jim	Logan	<i>Jim Logan</i>

I agree to collaborate with my fellow Chronic Wasting Disease Working Group Members according to the Charter dates August 12, 2019.

Signed, August 20, 2019

Name		Signature
Janet	Marschner	Janet Marschner
Steve	Martin	Steve Martin
Dax	McCarty	Dax McCarty
Laura	Meadows	Laura Meadows
Shane	Moore	Shane Moore
Richard	Pallister	Richard Pallister
Andrew	Pils	Andrew Pils
Mike	Schmid	Mike Schmid
Brant	Schumaker	Brant Schumaker
Dan	Smith	Dan Smith
Joe	Tilden	Joe Tilden
James	Wright	James Wright

Appendix E. Agendas for Working Group Meetings



**Wyoming Game and Fish Department
Chronic Wasting Disease Working Group
Meeting 1, July 23 - 25, 2019
Lander, WY**

Tuesday, July 23			
Time	Agenda Item	Who	Product/Outcome
12:00	Arrival and Lunch		
12:30	Working Group member introductions and agenda review. Introduce Dropbox with information e.g. management plans.	Co-Chairs Ruckelshaus Institute (R.I.)	Working Group members introduce themselves. Introduction to PrIIOCTA and process. Discuss Outcomes of this Meeting: Charter, Interests and Options.
1:15	Information session <ul style="list-style-type: none"> • Overall trends in CWD. • Information 	Mary Wood Hank Edwards	Learn about CWD. Discuss materials read in advance.
2:45	Break		
3:00	Welcome: Working Group purpose and mission and roles. Director Nesvik's charge to the Working Group.	B. Nesvik	Present the purpose and mission of the Working Group and roles of Working Group.
3:15	Discussion of public process results: Introduction to public management options.	Jessica Western	Members gain an understanding of how other stakeholders think about CWD in Wyoming.
4:15	Results from Survey	Mary Wood	
5:00	Adjourn		Members gain an understanding of how other stakeholders think about CWD in Wyoming.
6:00	Informal Meet and Greet		Cowfish Restaurant

Wednesday, July 24			
Time	Agenda Item	Who	Product/Outcome
8:00	CWD in Colorado	Mike Miller	Provide comparison for Working Group to consider.
10:00	Break		
10:15	Discuss and Decide on Charter	R.I.	Agreement on Charter.

11:00	Breakout Groups: Why is CWD important? Discussion of Working Group interests in three groups.	R.I.	Develop a list of specific interests of Working Group members and their constituents regarding CWD. This list will guide the Working Group in their deliberation.
12:30	Lunch		
1:00 pm	Large Group: Deep dive into Management Options from the public process: is anything missing? Ensure all relevant options are on the table.	R.I.	Provides an opportunity to explore the ramifications, trade-offs and concerns involved in management options among Working Group members. Finalize Options for Recommendations.
2:00 pm	Large Group: Organize themes of options into the order the Working Group wants to deliberate in upcoming meetings using Sticky Wall.	R.I.	Determine list of options the Working Group wants to deliberate in upcoming meetings.
3:30	Break		
3:45	Information Needs		Find out what information will be helpful to the Working Group for staff to put in Dropbox.
4:30	Adjourn for the day		

Thursday, July 25			
8:00 - 8:30	Recap of Process Finalize Charter (if necessary)	R.I.	Ensure Working Group understand process and work accomplished so far. Guidelines in Charter agreed on.
8:30 – 11:30	Draft Management Recommendations to be crafted by break-out groups and discussed in whole Working Group.	R.I.	Working Group clarifies drafts recommendations based on options presented during the public process through review and discussion of data/information. <ol style="list-style-type: none"> 1. Review the options. 2. Allow for a whole group general explorative discussion. 3. Break-out groups to draft options for recommendations 4. Groups draft options and find consensus options.
11:30 am	Public Comment	R.I.	Provide public input into Working Group process.
12:00 pm	Adjourn		



**Wyoming Game and Fish Department
Chronic Wasting Disease Working Group
Meeting 2, August 20-22, 2019
Casper, WY**

Tuesday, August 20			
Time	Agenda Item	Who	Product/Outcome
12:00	Arrival		
12:30	Working Group member introductions and agenda review. Process Review. Review Information Shared. Constituency Check-In.	Co-Chairs Ruckelshaus Institute (R.I.)	Working Group members introduce themselves and provide updates. Summarize previous meeting and provide overview of Working Group progress and next steps.
1:45	Break		
2:00	WGFD Presents Management of Cervids in Wyoming	Justin Binfet	Overview of how mule deer, white tail deer, elk and moose are managed in Wyoming, including CWD management.
3:00	WGFD presents Management Options for Working Group to Consider	Mary Wood	WGFD provides Working Group with management options based on best available information.
3:45	Break		
4:00	Public Health and CWD	Cody Loveland	Learn about CWD and public health considerations.
5:00	WGFD Data Information	Hank Edwards	WGFD CWD surveillance and monitoring data.
5:30	Adjourn		
6:00	Informal Meet and Greet		Yellowstone Garage

Wednesday, August 21			
Time	Agenda Item	Who	Product/Outcome
8:30	Mike Samuel	Mike Samuel	CWD in Wisconsin.
10:00	Break		
10:15	Review Results from Drafting Recommendations	R.I.	Provide overview of Recommendation work so far.

10:30	Putting it all Together: Evaluate and fine-tune Sub-recommendations and Recommendations	R.I.	The Working Group evaluates each draft recommendation against the interest criteria and, where necessary, re-words them to reach consensus and to facilitate implementation.
12:00	Lunch		
1 pm	Putting it all Together: Evaluate and fine-tune Sub-recommendations and Recommendations	R.I.	The Working Group evaluates each draft recommendation against the interest criteria and, where necessary, re-words them to reach consensus and to facilitate implementation.
3 pm	Break		
3:15 pm	Putting it all Together: Evaluate and fine-tune Sub-recommendations and Recommendations	R.I.	The Working Group evaluates each draft recommendation against the interest criteria and, where necessary, re-words them to reach consensus and to facilitate implementation.
5:00	Adjourn for the day		

Thursday, August 22			
8:00	Putting it all Together: Evaluate and fine-tune Sub-recommendations and Recommendations	R.I.	The Working Group evaluates each draft recommendation against the interest criteria and, where necessary, re-words them to reach consensus and to facilitate implementation.
11:30 am	Public Comment	R.I.	Provide public input into Working Group process.
12:00 pm	Adjourn		



**Wyoming Game and Fish Department
Chronic Wasting Disease Working Group
Meeting 3, September 10-12, 2019
Community Center, Lander, WY**

**Evaluate Recommendations and Propose Implementation.
Last Workshop to Draft Recommendations.**

Meeting Objectives:

1. Evaluate Sub-recommendations and Final recommendations.
2. Rank short and long-term recommendations.
3. Discuss Implementation: Task Allocation

Tuesday, September 10			
Time	Agenda Item	Who	Product/Outcome
10:00	Welcome Working Group member introductions and agenda review	Co-Chairs Ruckelshaus Institute (R.I.)	Working Group members introduce themselves. Meeting agenda is approved. Discuss Objectives.
10:15	Approval Meeting Notes Constituency check-in	R.I.	Working Group: (1) reviews outcomes and actions since last meeting; (2) discusses communication with constituencies.
10:30	Outline and Process for Draft Plan Writing	WGFD	
11:00	Review of Working Group Recommendation Evaluations so far.	Jessica Western	Provide overview of Recommendation work so far.
11:15	Putting it all Together: Evaluate Recommendations	R.I.	The Working Group evaluates each draft recommendation against the interest criteria and, where necessary, re-words them to reach consensus and to facilitate implementation.
12:00	Lunch		
12:30	Putting it all Together: Evaluate Recommendations		

2:00	Break		
2:15	Putting it all Together: Evaluate Recommendations		
3:30	Break		
3:45	Putting it all Together: Evaluate Recommendations		
5:00	Adjourn		
6:00	Informal meet & greet		Cowfish Restaurant

Wednesday, September 11			
Time	Agenda Item	Who	Product/Outcome
8:00	Finish evaluation of Recommendations	R.I.	Continue evaluating recommendations. Rank recommendations based on timing.
9:30	Public Comment	Co-Chairs	
10:00	Break		
10:15	Final Consensus Building and Consensus Testing.	R.I.	Final review and testing for consensus. Where consensus cannot be reached, this will be so noted.
12:00	Lunch and visit with Chief of the Wildlife Division.		
12:30	Final Consensus Building and Consensus Testing.	R.I.	Final review and testing for consensus. Where consensus cannot be reached, this will be so noted.
1:30	Final Consensus Building and Consensus Testing.	R.I.	Final review and testing for consensus. Where consensus cannot be reached, this will be so noted.
2:00	Break		
2:15	Final Consensus Building and Consensus Testing.	R.I.	Final review and testing for consensus. Where consensus cannot be reached, this will be so noted.
5:00	Adjourn for the Day		

Thursday, September 12			
Time	Agenda Item	Who	Product/Outcome
8:00	Public Comment	Co-Chairs R.I.	
8:30	Final Consensus Building and Consensus Testing.	R.I.	Final review and testing for consensus. Where consensus cannot be reached, this will be so noted.
10:00	Break		

10:15	Final review and final adjustments to Recommendations.	R.I.	Ensure all interests are met as much as possible and that recommendations are worded to facilitate implementation.
11:45	Wrap-up	R.I Co-chairs	Co-chairs adjourn the Working Group and report writing procedures are confirmed.
12:00	Adjourn		



Ruckelshaus Institute
Collaborative Solutions

**Wyoming Game and Fish Department
Chronic Wasting Disease Working Group
Meeting 4, February 5-6, 2020
Hilton Garden Inn, Casper, WY**

REVISED DUE TO WEATHER

**Finalize Recommendations Based on Public Comments
Last Workshop**

Meeting Objectives:

1. Discuss changes to sub-recommendations and recommendations based on public comments.
2. Finalize sub-recommendations and recommendations
3. Adjourning of the CWD Working Group

Wednesday, February 5			
Time	Agenda Item	Who	Product/Outcome
1:00	Welcome Working Group member introductions and agenda review	Co-Chairs Ruckelshaus Institute (R.I.)	Working Group members introduce themselves. Meeting agenda is approved. Discuss objectives.
1:15	Constituency check-in	R.I.	Working Group: (3) reviews outcomes and actions since last meeting, (4) discusses communication with constituencies.
1:30	Review Draft Plan	WGFD	
1:45	Review Public Comments	R.I.	
2:00	Public Comment	Co-Chairs	
2:30	Break		
2:45	Review Public Comments	R.I.	
3:00	Create list of recommendations to possibly amend.	R.I.	
3:15	Sequentially discuss, possibly change and test Recommendations for consensus	R.I.	
5:00	Adjourn	Co-Chairs	
5:30	Informal meet and greet		?

Thursday, February 6			
Time	Agenda Item	Who	Product/Outcome
8:00	Sequentially discuss, possibly change and test recommendations for consensus	R.I.	
10:00	Break		
10:15	Final consensus building and consensus testing.	R.I.	Final changes and testing for consensus.
12:30	Lunch and possible adjournment		
1:00	Visit with Director Brian Nesvik and Chief of the Wildlife Division Richard King		
1:30	Final consensus building and consensus testing.	R.I.	
2:45	Consultation with Working Group regarding feedground public process	Brad Hovinga	Ideas for an effective public process regarding feedgrounds.
	Discussion of next steps	R.I.	
2:55	Closing remarks by Co-Chairs	Co-Chairs	
3:00	Adjournment of CWD Working Group	Co-Chairs	

Appendix F: Working Group Final Recommendations and Sub-Recommendations

C= Consensus; M = Consensus with major reservation; N = No consensus

Recommendations and Sub-Recommendations	Participants at Consensus Level 4 and 5	Level of Consensus
RECOMMENDATION 1: REDUCTION OF ARTIFICIAL CONCENTRATIONS We recommend WGFD takes action to reduce artificial points of concentrations.	4: Falkenburg	M
1.1 We recommend the Wyoming Legislature provide the WGF Commission the authority to regulate the intentional private feeding of wild cervids, unless otherwise specified in law or authorized by the WGFD, exempting agricultural practices.	0	C
1.2 We recommend WGFD collaborate at a local level to reduce artificial points of cervid concentrations where possible.	0	C
1.3 WGFD should work closely with municipalities and counties to eliminate artificial feeding and/or to reduce density of cervids, unless otherwise specified in law or authorized by the WGFD.	0	C
1.4 WGFD will work collaboratively with public stakeholder Working Groups to evaluate feeding practices of elk at feed grounds where possible to reduce risk and minimize negative impacts on elk population.	4: Caudill 5: Falkenburg, L. Hicks, Connolly	N
RECOMMENDATION 2: CERVID REMAINS We recommend a multi-prong approach to addressing the proper disposal of cervid remains and carcasses.	0	C
2.1 We recommend WGFD works with individuals/NGOs/businesses to facilitate proper disposal of cervid remains/carcasses through funding partnerships.	5: Schmid	N
2.2 We recommend WGFD work with DEQ, local solid waste operators, and WYDOT to properly dispose of carcasses statewide and provide information about proper disposal sites.	5: Schmid	N
2.3 We recommend the Wyoming legislature provide authorization for use of existing funds to be used by local solid waste operators to properly dispose of cervid remains to reduce CWD prion prevalence.	0	C
2.4 We recommend the Wyoming Legislature provides statutory authority to the WGF Commission to regulate the use of cervid urine.	0	C

RECOMMENDATION 3: EDUCATION AND COMMUNICATION		
3.1 We recommend WGFD create a thoroughly articulated and deliberate CWD communication plan. The first priority of this communication plan is to build public support to be able to implement the recommendations from the CWD Plan. This plan should target all stakeholders to include, but not limited to: general public, hunters, hunter education, travel and tourism (chambers), meat processors, taxidermists, outfitters, landowners, state and federal agencies, tribal, and elected officials. The communication plan should address all CWD related issues including: transportation (interstate and intrastate) and disposal of carcasses (e.g. quarter and go), CWD pathology basics, artificial point sources, transmission, potential management strategies, importance of testing, human health, surveillance, up to date science, not feeding wildlife and the implication feeding has with spreading CWD and the essential role of hunting in disease management, unknowns, etc. Pursue this outreach plan with local organizations and NGOs. This communication plan needs to be very carefully thought through in order to avoid misperceptions. Involve all Working Group members. WGFD will create materials that are easily usable by other entities and organizations.	0	C
3.2 We recommend WGFD explore hiring a third-party communications contractor to help implement the outreach plan.	4: Coursey	M
RECOMMENDATION 4: HABITATS AND CWD Combine habitat management and research to support cervid health.	0	C
4.1 Incorporate CWD consideration in WGFD's Strategic Habitat Plan to improve habitat and promote better distribution of cervids.	0	C
RECOMMENDATION 5: CERVID AND CWD MANAGEMENT ACTIONS We recommend the Department consider experimental application of CWD suppression strategies utilizing an adaptive management framework with consideration to the "WAFWA Recommendations for Adaptive Management of CWD in the West" document. Management strategies should be implemented for a minimum of 10 years with a robust monitoring program to estimate prevalence with statistically significant sample sizes at least every 5 years. This would support a regional effort to gather valuable data to contribute to broader understanding of CWD suppression strategies. All management recommendations generated by this Working Group should be considered for experimental application and evaluation under this framework.	0	C
5.1 Research suggests the greatest potential for successful CWD management actions occurs when prevalence is low. Therefore, CWD management is recommended at all prevalence levels, but local options to implement more aggressive management should be pursued once statistically valid prevalence reaches/exceeds 5%.	5: Hicks	N

5.2: Specific management decisions should be determined at the local level and tailored to the population unit. Ensure education and outreach in order to gain and maintain public support for the CWD management actions. The following management recommendations are supported by this Working Group and should be considered either alone or in combination.	4: Falkenburg, Hicks	M
5.2 Option 1: Increase mature buck harvest in order to lower CWD prevalence from current levels by a percentage deemed appropriate through local processes and with consideration to the WAFWA recommendations .	5: Hicks, Connolly	N
5.2 Option 2: Alter the timing of buck harvest in order to increase harvest of mature bucks. E.g. taking advantage of seasonal behaviors.	0	C
5.2 Option 3: Reduce cervid populations to measurably decrease densities within an area of concern (e.g. herd unit, hunt area, portion of a hunt area). Maintain reduced densities for the appropriate amount of time to adequately evaluate effects on CWD (i.e. greater than 10 years). This may require a sustained increase in female harvest. Density and harvest goals must be clearly articulated and developed with public input prior to and during implementation.	0	C
5.2 Option 4: Where possible, reduce areas of artificial concentration of cervids (feed, mineral, salt, water etc.) by working with landowners, producers, local, state and federal agencies.	4: Gilliland, Falkenburg	M
5.2 Option 5: Utilize a robust monitoring program to identify areas with a high density of CWD positive cervids (i.e. "hot spots"). Develop and implement lethal removal strategies to maximize removal of cervids (male and female) around locations of known "hot spots", including but not limited to hunter harvest (preferred), targeted agency removal, and other designated methods.	0	C
5.3 Encourage a multifaceted approach to use experimental design or management strategies to reduce CWD prevalence. Acknowledge relative study time frames and need for continually engaging the public to gain informed support.	0	C
5.4 WGFD will consider CWD in the adjustment of harvest and population objectives and associated management strategies to manage cervid numbers (male and female) in areas of concern.	0	C
5.5 Utilize a combination of voluntary and mandatory testing in areas where specific CWD management is being applied in order to obtain statistically valid sample sizes to evaluate the efficacy of any such management strategy.	0	C
5.6 Develop an adaptive monitoring plan based on prescribed management for a time frame of 10 years (to be assessed at 5 year intervals) for all cervids.	0	C

5.7 Consider options to refund license fees for cervids that test CWD positive in areas where an experimental management strategy is in place.	4: Caudill, Robertson, Copper, Pallister, Connolly 5: Hicks, Gilliland, Brown	N
5.8 We recommend WGFD cooperate with landowners to increase hunter access for CWD management.	0	C
RECOMMENDATION 6: CWD AND MIGRATORY HERDS We recommend that management actions are implemented in migratory cervid herds to reduce disease transmission risk and keep CWD prevalence at low or reduced levels.	0	C
6.1 Support systematic monitoring across the state to detect “hot spots” and CWD prevalence information.	0	C
6.2 Consider issuing licenses and associated hunting seasons in relation to migratory herds that are intended to specifically address CWD management actions.	0	C
RECOMMENDATION 7: SURVEILLANCE AND MONITORING Support surveillance efforts necessary to detect changes in CWD prevalence. Use sample sizes collected over a maximum of a 3-year time frame as per the WGFD CWD Surveillance Plan.	0	C
7.1 Utilize various licensing options to increase sample size in hunt areas where statistically significant sample sizes are needed (i.e. reduce price per license for female harvest, late season, etc.).	0	C
7.2 WGFD to create non-monetary incentives to increase CWD sample sizes where needed.	0	C
7.3 Analyze and mine data for population and disease demographic information including male:female ratio, gender specific disease prevalence, survival rates, pre and post management.	0	C
7.4 Pursue increased funding to support testing, monitoring, and additional laboratory capacity.	0	C
RECOMMENDATION 8: RESEARCH We recommend the WGFD enhance its CWD research and testing capacity by diverse means to enable science-based cervid management.	0	C
8.1 Continue to rigorously pursue collaborative genetic research programs with state and federal agencies, universities and private entities to better understand the role genetics plays in CWD in cervid populations and potential management implications. This should include but not be limited to monitoring frequency of genotypes in cervid populations and the fitness traits associated with these genotypes	0	C

8.2 We recommend WGFD pursue research (e.g. a survey) to determine public attitudes on CWD.	4: Hicks, Coursey, Lehner	M
8.3 Investigate the relative importance of direct versus indirect transmission of CWD prions.	0	C
8.4 Assist in the validation of experimental assays for CWD prion detection (e.g. PMCA, rt-quic, and field testing).	0	C
8.5 Evaluate regional differences in CWD dynamics.	0	C
8.6 Increase emphasis on pursuing funding for collaborative CWD research and management efforts. Explore funding sources including but not limited to private, non-profits, general state funds, grants, federal sources, CWD management stamp, non-consumptive users, Wyoming Governor's Big Game License Coalition, and Commissioner's license.	0	C
8.7 We recommend WGFD explore the possibility of creating an additional dedicated license with revenue specifically ear marked for CWD research and management.	4: Dobric, Smith, Pils, Meadows, Guenther, Caudill, Lankford, Copper, Pallister, Connolly 5: Hicks, Lawson, Martin, Coursey, Gilliland, Brown	N
8.8 Incorporate CWD data collection into current and future research where appropriate.	0	C
8.9 Evaluate the effect of predators/large carnivores at a local level on CWD prevalence, transmission, and management implications.	4: Brown, Hicks, Connolly 5: Gilliland	N
8.10 Begin a research project at feed, mineral, water, and salt sites working with willing landowners to explore techniques to reduce CWD transmission.	0	C
8.11 We recommend WGFD collaborate on research on how environmental prion contamination correlates with disease prevalence and transmission.	0	C
8.12 Conduct field studies to determine if artificial cervid aggregation is increasing CWD prevalence (e.g. underpasses/overpasses, water holes, feed grounds, etc).	4: Connolly, Hicks, Meadows 5: Copper, Gilliland, Brown	N

8.13 Pursue habitat research on CWD to include 1) how cervid habitat selection affects CWD prevalence, and 2) how habitat improvements affect population demographics and distribution in the face of CWD.	0	C
8.14 We recommend WGFD continue to collaborate nationally and internationally regarding CWD strategies and management actions and associated outcomes and research in order to adaptively manage CWD.	0	C
8.15 We recommend WGFD collaborate in research and evaluation of a CWD vaccine.	4: Meadows, Schumaker	M
8.16 Study the effects of competition among cervid species on CWD prevalence.	1: Hicks	M
RECOMMENDATION 9: MEAT PROCESSING	0	C
9.1 Recommend the Wyoming Department of Health and Wyoming Department Agriculture work with pertinent stakeholder groups to develop recommendations for meat processors.	0	C
9.2 Recommend the Wyoming Department of Health and Wyoming Department Agriculture work with pertinent stakeholder groups to develop recommendations for safe donation of game meat.	0	C



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