

# To List or Not to List? What to Do About the Greater Sage-Grouse

by

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The greater sage-grouse (*Centrocercus urophasianus*), found in Western Canada and the United States has experienced drastic decreases in their populations over the last three decades. Reasons for their decline include habitat loss and fragmentation due to natural causes but also due to ranching, farming, mining, urban development, and fossil fuel extraction. Despite widespread decreases in their populations over their entire geographic range, the U.S. Fish and Wildlife Service declined to list the species as endangered under the Endangered Species Act in 2015. The Canadian government, on the other hand, has listed this species as endangered under their equivalent Species at Risk Act. Because of these conflicting management agendas, this species' status remains highly contentious, especially as oil, gas, mining, farming and ranching in both the United States and Canada continues to overlap with the greater sage-grouse and their habitat.

Your goal is to work through the complicated economic and biological interplay around this issue in order to ultimately suggest a globally acceptable status for the greater sage-grouse. Throughout this case study you should think critically about this international issue that involves large corporations, government agencies, activist groups and scientists. In order to reach this goal, you will showcase your work in three different student deliverables: a presentation, a debate, and a synthesis report. You will work in groups of two to five students for all three deliverables. Each group will represent a stakeholder with a vested interest in the greater sage-grouse, whether due to conservation concerns or economic concerns pertaining to current management policies and land use restrictions. You will have to think broadly about how best to conserve this species while still meeting the needs of your represented stakeholder. The stakeholders you may be assigned to are:

- EcoJustice (Canada)
- Nature Canada
- Defenders of Wildlife (USA)
- The Nature Conservancy (USA)
- Ranchers (Canada)
- Mining companies (Canada)
- Oil and gas companies (USA)
- Wind energy companies (USA)

In your final student deliverable, the synthesis report, you will analyze and review all information regarding biological and economic impacts for the greater sage-grouse and all involved stakeholders with your group. Most importantly, you will suggest an international conservation status resolution and management plan for the greater sage-grouse based on your synthesis.



Figure 1. A greater sage-grouse male struts at a lek to attract a mate.  
Credit: Jeannie Stafford/USFWS, CC BY 2.0.

## Objectives

- Identify and summarize a stakeholder's views on the conservation status of the greater sage-grouse.
- Connect a stakeholder's views and their relevance to the greater-sage grouse population management and conservation.
- Critically analyze and synthesize greater sage-grouse conservation viewpoints by various stakeholders with a wide spectrum of economically and biologically grounded mandates.
- Defend and argue for and against a stakeholder's views related to management and conservation of species using non-technical, informed, logical and scientific arguments.
- Propose a new management protocol that re-evaluates the global conservation status of the species by amalgamating relevant local and international biological and economic factors.

## Student Deliverable 1 – Town Hall Presentation

In your groups, gather research about your stakeholder and develop a presentation for a mock town hall meeting that addresses conservation strategies of the greater sage-grouse in light of your stakeholder's core values or economic viability.

Items to consider:

- What data does your stakeholder group have to support this viewpoint?
- Introduce your stakeholder and describe your stakeholder's viewpoint on the conservation status of the greater sage-grouse.
- Prepare your presentation for a broad audience as if you were presenting at a real town hall meeting (e.g., other stakeholders, local community representatives, government scientists, and of course, members of the public).
- Your presentation should include at least two figures, tables and/or maps, that are properly cited from external sources.
- At least three external references must be used in the presentation and added to the end of the presentation in APA format.

Your presentation will be graded by your instructor and they will also be peer-reviewed. Use the grading rubric included at the end of this document (“Town Hall Meeting Presentation Rubric”) to organize your presentation. You should take detailed notes on other stakeholders' presentations in order to best prepare for the second student deliverable, the debates.

## Student Deliverable 2 – Debates

This is an organized debate during class time. The stakeholder groups will debate in rounds of two. You will not know which group you are debating until after the town hall meeting, but at least a week before the debates. As a group you should decide which questions you will ask the opposing group and keep in mind that you want to ask questions that are thoughtful and challenging for the opposing group (not “yes” or “no” questions). Thus, each group should be well prepared and have a good understanding of other groups' viewpoints prior to the debates. In order to best prepare for your debates, you should review your notes from the previous student deliverable, the presentations, where you have been presented with insight into what the opposing stakeholders' viewpoints are. You are also encouraged to do some background research on the viewpoints and arguments that the opposing stakeholders presented so that you are best prepared to debate against these. You are encouraged to be creative in your preparation of points for these debates and not to be worried about asking contentious questions that may ruffle some feathers. It is likely that not all groups will agree with you, but it is your job to be convincing and make a solid argument!

Each debate will be divided into three sections:

1. *Opening statements:* Each of the two stakeholder groups in the debate has two minutes for their opening statement. Each group is allowed a single PowerPoint slide to showcase their main points.
2. *Question and rebuttal periods:* After the opening statements, your group will ask a question to the opposing stakeholder. The question is followed by a four-minute rebuttal period by the opposing group. During the rebuttal

period, you should allow the opposing group to answer your question, but you can also ask follow-up questions. After four minutes, the opposing group will ask your group a question and you have another four minutes to debate.

3. *Closing statements:* After the two four-minute rebuttal periods, each group has one-minute to give their closing statement. Your closing statement should be a reiteration of your stakeholder's stance, while also summarizing weak arguments brought up by the opposing group during the question and rebuttal period. Do *not* just reiterate your opening statement!

Your group debates will be scored out of 5 points with 1 point allocated to each of the following: opening statement, questions, rebuttal, closing statement, and overall preparedness. Note that each stakeholder group is allowed to refer to their notes at any point during the debates. Stakeholder groups that are participating in the debates will be provided with feedback from both instructors and their peers. In addition to using the scoring sheet provided for the debates (see "Debate Scoring Sheet"), here are some examples and suggestions on how to approach the preparation for the debates:

- If you are representing oil and gas companies, is it in your stakeholder's best interest to have the greater sage-grouse listed as endangered? If the sage-grouse is listed as endangered, this could threaten your company's access to drilling on land protected as sage-grouse habitat. What policies does your group propose to conserve this species (if you believe that is a priority) while at the same time advancing economic growth of your company? Be prepared to defend and support your arguments with thorough research and data.
- If you are representing Nature Canada, your stakeholder is a conservation group interested in protecting the greater sage-grouse as well as their habitat from further decline. Is it in your stakeholder's best interest to have oil, gas and mining companies drill on the same land that the sage-grouse utilizes for mating and rearing their offspring? What status should the greater sage-grouse have in this instance? Be prepared to defend and support your arguments with thorough research and data.

### *Student Deliverable 3 – Synthesis Report for USFWS or Environment Canada*

Co-write a 15-page synthesis report based on your group and other stakeholders' research. Your report should be written with your group members and should combine all the information around the greater sage-grouse population management and conservation issues and stakeholders involved. This synthesis report should be written for local government representatives (e.g., representatives of the Ministry for Environment Canada or US Fish and Wildlife Service) who will include your report in international efforts to evaluate the status of greater sage-grouse populations and help manage them in both Canada and the United States.

The goals of this report are to:

- Amalgamate and review all relevant information (current policy, management strategies, biological information, etc.) around greater sage-grouse conservation and population management in Canada and the United States.
- Re-evaluate the conservation status of the species in both countries.
- Design a new management protocol for greater sage-grouse that aligns with the conservation status your group has proposed.

Your group's decision should be based on research from all stakeholders involved, backed up with scientific evidence, and written for a wide audience. The synthesis report should follow the format of a report written by a third party (impartial) consultant company. An example of a similar, although more detailed, report can be found at <<https://www.for.gov.bc.ca/hfd/library/documents/bib106871.pdf>>. The following sections are suggested:

- I. Introduction and purpose.
- II. Background information on the greater sage grouse.
- III. Population risk assessment in key areas.
- IV. Recommended species status.
- V. Recommended management approaches.
- VI. Effect on recommended status and management on involved stakeholders.

The decision about the conservation status of a species can be made based on various criteria ranging from assessments of the largest anthropogenic or natural risks that face the species or projected declines modeled by wildlife biologists. Projected economic losses/gains of local businesses or companies can also be included. The report should make recommendations for how the proposed species' status and management plan will impact all stakeholders with vested economic interest in greater sage-grouse conservation.

Your report should present data sourced from at least ten published technical reports, peer-reviewed, primary literature, and government findings reports. Sources that are *not* acceptable include websites that do not cite primary literature or whose addresses do not end in .gov or .gc domains. If you are unsure whether your source matches these criteria, please ask either your librarian, your instructor or your teaching assistants. Your report should also include at least two figures, tables or maps, that are properly cited from external sources. For more details on expectations for this part of your group project, please refer to the rubric attached to the end of this document (“Synthesis Report Rubric”).

### *Resources*

These are not required readings but may offer a good place to start in order to get a better scope of the greater sage-grouse issue.

- The Cornell Lab of Ornithology fact page: <[https://www.allaboutbirds.org/guide/Greater\\_Sage-Grouse/id](https://www.allaboutbirds.org/guide/Greater_Sage-Grouse/id)>.
- The U.S. Fish and Wildlife greater sage-grouse website: <<https://www.fws.gov/greatersagegrouse/>>.
- The Alberta greater sage-grouse recovery plan: <<https://open.alberta.ca/dataset/f0f4cc27-408d-4130-b6eb-12bc6d99a482/resource/13e7632e-f357-4ce0-80f3-211919a92d43/download/2013-sar-albertagreatersagegrouse-recoveryplan-2013-2018.pdf>>.
- Article from a scientist at the Nature Conservancy: <<http://blog.nature.org/science/2015/10/02/sage-grouse-dance-decision-birds-conservation-endangered-listing-esa/>>.

## Town Hall Meeting Presentation Rubric

Presentations should be 10–12 minutes long followed by a three-minute question period. The maximum allowed time for the presentation and the question period is 15 minutes. Scores are on a scale of 1 to 5 as follows:

- 1: Ineffective use of relevant information or lack of relevant information.
- 2: Use of relevant information is present but is presented vaguely or incompletely.
- 3: Use of relevant information is present but not presented in the best possible or most logical/effective manner.
- 4: Use of relevant information meets expectations.
- 5: Use of relevant information surpasses expectations.

Circle the appropriate score for each category below.

Stakeholder group: \_\_\_\_\_

*Presentation focus:* Are the viewpoints of the stakeholder clear? Are the priorities clear?

1                      2                      3                      4                      5

Comments:

*Target audience:* Is the information presented at the town hall meeting communicated in a way that a general audience could understand it?

1                      2                      3                      4                      5

Comments:

*Relevance of data:* Do the data/variables/figures included in the presentation support the stakeholder's viewpoints? Are tables and figures used appropriately to support these viewpoints?

1                      2                      3                      4                      5

Comments:

*Sources:* Are the references used in the presentation relevant and appropriate? Are at least three references used? Are tables and figures from outside sources cited properly? Is reference slide included?

1                      2                      3                      4                      5

Comments:

*Organization and visual presentation:* Is the information clearly and concisely presented? Is the presentation visually appealing (not too much text on slides)? Is the presentation organized logically and does it flow well? Is the information presented free of typos and grammatical errors?

1                      2                      3                      4                      5

Comments:

Any additional comments:

Total points (sum of all the points circled above): \_\_\_\_\_ /25

## Debate Scoring Sheet

Each debate is divided into three sections: opening statements; question and rebuttal period; and closing statements. Each stakeholder group may have one PowerPoint slide to showcase their main points during the two-minute opening statement. After the opening statement, each group will have a chance to ask a question to the opposing stakeholder. For each question that is asked, a four-minute rebuttal period is allowed for each stakeholder group. Debates end with a one-minute closing statement by each stakeholder group. Debates will be scored out of 5 points with 1 point allocated to each of the following categories: opening statement, questions, rebuttal, closing statement, and overall preparedness. Use of notes is allowed. Each debate will be marked using this sheet (two stakeholder groups per sheet).

### *Opening Statement*

Comment on the opening statements from both groups. Was the opening statement well-constructed and clear? Were the stakeholder's viewpoints clearly presented? Did they incorporate the greater sage-grouse issues effectively? Why or why not?

Stakeholder Group: _____  (__/1)	Stakeholder Group: _____  (__/1)
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### *Question*

Comment on the questions posed by both groups. Were the questions on point? Did the stakeholder use the opening statement from the opposing group to point to weaknesses in opposing stakeholder's viewpoints effectively? Why or why not?

_____  (__/1)	_____  (__/1)
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### *Arguments During Rebuttal Period*

Were the arguments logical and did they demonstrate group's knowledge and effective analysis of key issues regarding the greater sage-grouse? Were the arguments made by each group supported by data and how effective was the use of data in developing arguments?

_____  (__/1)	_____  (__/1)
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### *Closing Statement*

Was the closing statement well-constructed and clear? Did the group reiterate their stance and point out weaknesses in opposing stakeholder's stance effectively?

_____  (__/1)	_____  (__/1)
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### *Preparedness*

Were the debates well-coordinated and were all members prepared and working well as a group during the debates?

_____  (__/1)	_____  (__/1)
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## Synthesis Report Rubric

You will be scored on a scale of 1 to 5 scale for the following categories. Here is a description of the scaled values:

- 1: Ineffective use of relevant information or lack of relevant information.
- 2: Use of relevant information is present but is presented vaguely or incompletely.
- 3: Use of relevant information is present but not presented in the best possible or most logical/effective manner.
- 4: Use of relevant information meets expectations.
- 5: Use of relevant information surpasses expectations.

Student names: \_\_\_\_\_

*Synthesis:* Is all the information and data well-synthesized and complete?

1                      2                      3                      4                      5

Comments:

*Proposed Status:* Has the species' status been re-evaluated? If a new status is proposed or old status is confirmed, is it well-supported by the data presented?

1                      2                      3                      4                      5

Comments:

*Management Proposal:* Is a management protocol proposed and is it impartial (third party)? Does it align with the proposed conservation status presented?

1                      2                      3                      4                      5

Comments:

*Relevance of data:* Do the data/variables included in the report support the arguments/status made? Are tables and figures used appropriately to support the arguments/status?

1                      2                      3                      4                      5

Comments:

*Target audience:* Is the report presented in a way that non-biologists would understand?

1                      2                      3                      4                      5

Comments:

*Sources:* Are the references used in the report relevant and appropriate? Are tables and figures from outside sources cited properly? Are at least ten references used? Are the references formatted in APA style?

1                      2                      3                      4                      5

Comments:

*Organization:* Is the report clearly and concisely written within 15 pages? Is the report free of spelling and grammatical errors? Is the report organized logically and does it flow well?

1                      2                      3                      4                      5

Comments:

Additional comments:

Total points (please sum all the points your circled above): \_\_\_\_\_ / 35