

Stakeholder Evaluation for Canaan Valley National Wildlife Refuge

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Introduction

The National Wildlife Refuge System, managed by the U.S. Fish and Wildlife Service (FWS), is the largest system of public lands in the world dedicated to wildlife conservation. There are over 545 national wildlife refuges nationwide, encompassing 95 million acres. As part of the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57, USC688dd), each refuge is developing 15-year comprehensive conservation plans (CCPs). Each CCP describes a vision and desired future condition for the refuge and outlines goals, objectives, and management strategies for each refuge’s habitat and visitor service programs. The CCP process for Canaan Valley National Wildlife Refuge (Refuge) in Davis, West Virginia was initiated in 2006. This planning process provides a unique opportunity for public input and involvement.

Public involvement is an important part of the CCP process. Participation by parties with a stake in the resource (stakeholders) has the potential to increase understanding and support and reduce conflicts. Additionally, meaningful public participation in a decision process may increase trust (Burby, 2003) and provide satisfaction in terms of both process and outcome for management and the public. Public meetings are a common way to obtain input from community members, visitors, and potential visitors. An “Issues Workbook” is another tool the FWS uses to obtain public input and participation early in the planning process. Sometimes, however, these traditional methods do not capture the full range of perspectives that exist. A *stakeholder evaluation* is a way to more fully understand community preferences and opinions related to key topics in refuge planning. It can also help refuge staff understand how changes in management affect individuals in terms of their preference for services and experiences. Secondly, a process such as this can address “social goals” such as fostering trust in regulating agencies and reducing conflict among stakeholders (Beierle, 1998). As part of the CCP planning effort at Canaan Valley National Wildlife Refuge, the FWS sponsored a stakeholder evaluation conducted by the Policy Analysis and Science Assistance Branch of U.S. Geological Survey, Fort Collins Science Center the winter of 2006–2007.

Purpose of the Stakeholder Evaluation

The stakeholder evaluation was intended to answer the following questions:

- Which Refuge management issues are most important, and to whom?
- How do opinions about what is most important to stakeholders overlap or conflict?
- Why do stakeholders emphasize specific issues, and what values are driving this?
- What potential solutions do stakeholders have for addressing important issues?



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This information will be used by the Refuge to help guide development of their CCP as they strive to balance stakeholder desires with their charge to manage the unique wetlands and uplands of the Canaan Valley for wildlife conservation.

Meeting with Stakeholders

The first step in the stakeholder evaluation was to identify the key groups and individuals with an interest or role in the Canaan Valley National Wildlife Refuge CCP process. We developed this initial list through an extensive search of websites, planning documents, and local newspaper articles from 2002–2005 related to the Refuge and its planning. Seven categories of stakeholders were identified: (1) individuals (not affiliated with a specific stakeholder group); (2) local businesses; (3) non-governmental organizations; (4) academia; (5) Federal government (including FWS Regional and Refuge staff); (6) State government; and (7) local government. We “ground-truthed” this list with Refuge staff and collectively identified specific individuals that represent those stakeholder groups. We invited the 100 identified stakeholders to meet with us one-on-one at Canaan Valley State Park.

We met with 63 stakeholders in late winter 2006–2007. The meeting consisted of two parts: (1) an exercise called *Q-Sort* (McKeown and Thomas, 1988) followed by (2) an in-depth follow-up discussion about the exercise and issues of concern. *Q-Sort* is a method aimed at prioritizing key issues, identifying prevailing perspectives that exist in the community, and identifying areas of consensus (general agreement) and conflict (general disagreement). What makes *Q-Sort* an effective tool for evaluating stakeholder perspectives is that it is not necessary to engage a large number of individuals, so long as the group represents the diversity of stakeholder perspectives. This is because the goal is to summarize overall perspectives, not individually held perspectives.

For the *Q-Sort* exercise, each stakeholder was given a set of 47 statements (printed on small cards) about key refuge issues and asked to sort and rank these statements from “strongly agree” to “strongly disagree.” These statements were drawn from in-depth analysis of FWS planning documents; 13 years of local newspaper articles; and public comments from the Refuge’s 2002-2003 Compatibility Determinations, Refuge meetings and open houses held in 2006–2007, and the Issues Workbook distributed to the public in 2006. Initially, there were over 300 statements related to 7 key management issues: (1) watershed/habitat protection, (2) access, (3) hunting, (4) land acquisition, (5) environmental education, (6) economic development, and (7) process (defined as concerns related to communication, public involvement, planning, trust in agencies, etc.). For the most part, we did not reword these statements from their original sources; they appeared verbatim on the cards. The individual sorts for all of the stakeholders were analyzed using statistical methods relying primarily on correlation and factor analysis (see McKeown and Thomas, 1988, for more detail on *Q-sort* data analysis).

The follow-up discussions allowed us to have a richer understanding of stakeholders’ preferences and opinions regarding Refuge issues. Specifically, we learned why certain issues were important to them. From these “why’s,” we were able to understand the values stakeholders likely hold toward natural resources and the environment. To identify these values, we used the following value “types” from other researchers (King, 1966; Kellert, 1993):

- Aesthetic value – sees the beauty of nature and has an emotional attachment.
- Moralistic value – has an ethical concern and a spiritual reverence for wildlife and nature.
- Ecological/Scientific value – recognizes the interdependence of wildlife, habitats, and ecological processes in nature and the importance of studying these relationships.
- Recreational value – benefits from directly interacting with wildlife and nature in the outdoors.
- Social value – recognizes the societal benefits from wildlife and nature to quality of life.
- Utilitarian value – views wildlife and nature for the benefit of humans.
- Commercial value – considers the economic benefits or costs associated with wildlife and nature.
- Negative value – holds negative emotions toward wildlife and nature.

Lastly, through the follow-up discussions, stakeholders offered solutions to key issues. From these solutions we identified recurring themes represented.

Stakeholder Perspectives

Five prevailing perspectives exist related to these key Refuge issues: Ecological Preservation; Recreational Access; Traditional Wildlife Management; Wildlife First, Recreation Second; and Economic Development (Table 1). These perspectives can be thought of as unique points of view or “conversations” that exist around the key issues mentioned above.

Ecological Preservation Perspective

This perspective emphasizes protecting wildlife and habitats. Wetland protection is especially important. Strong positive rankings of the statements, “Since the Refuge comprises the largest wetland in West Virginia, monitoring and protecting water quality is of primary importance” and “I value the role the Refuge plays in conserving and restoring West Virginia’s streams and rivers” reflect this attitude. Stakeholders with this perspective feel it is important to maintain plant and habitat connections between Refuge lands and adjacent public lands. This perspective places a greater emphasis on managing for habitat and wildlife than on managing for recreational opportunities, including hunting. Stakeholders in this group are not opposed to public access, but believe that “minimizing the impact to wetlands should be the driving factor in determining access.” They do not support pursuing economic development at the expense of preservation. This sentiment is captured by a positive ranking of the statement, “It is important to minimize development pressures in and around the Refuge to prevent loss of wildlife and plant habitat.”

This group reports overall satisfaction with current opportunities for public input, and they feel that a public forum is not the place for biological decisions to be made.

Stakeholders with this perspective hold an *ecological/scientific* value related to wildlife and nature, with an emphasis on the benefit that wildlife and habitats contribute to the larger ecosystem and a desire to study these relationships. They also appear to value the *aesthetic* qualities of wildlife and nature, appreciating the beauty both provide and have a *moralistic* concern for and connection to wildlife and nature.

Recreational Access Perspective

Stakeholders associated with this perspective place the greatest emphasis on recreational access to the Refuge. They are interested in creating a recreational corridor through the Refuge that connects to other public lands. They embrace a larger landscape perspective that includes trail connectivity, while supporting continuous, looped, and easy trails on the Refuge geared toward families, the elderly, and the disabled. There is a strong belief that increasing access could be designed to minimize impacts to wetlands. One stakeholder said, “I believe you can minimize impact on wetlands and have hiking, biking, horseback riding, and hunting, if we have good, well-designed, well-built trails.” Another said, “If people can’t see it, touch or feel it in one way or another, they will have a hard time appreciating it, and they won’t care enough to protect it.”

Secondary to access is meaningful participation in Refuge planning. As the current planning process proceeds, stakeholders in this group want to know what is happening and want a chance to share their ideas, concerns, and recommended solutions to issues *before* decisions are made.

For most stakeholders holding this perspective, the desire for access is driven by their *recreational* value that emphasizes the physical and mental health benefits from outdoor activities. Most believe that outdoor experiences improve their quality of life (*social* value). Through outdoor recreation, they enjoy the *aesthetic* beauty of wildlife and nature.

Traditional Wildlife Management Perspective

This perspective supports traditional wildlife management, with an emphasis on managing game species such as deer, grouse, and woodcock. This perspective supports an increase in deer harvest (both for recreation and for protecting Refuge resources) and an increase in hunter access. Stakeholders in this group believe in the wildlife conservation mission of National Wildlife Refuge System, support the Refuge’s need to protect wetlands, and are in favor of land acquisition.

Table 1. Summary of stakeholder perspectives and values from Canaan Valley National Wildlife Refuge stakeholder evaluation. (Summary bullets based on 47 statements sorted by stakeholders.)

Perspective	Perspective Agrees That...	Perspective Does Not Agree That...	Values Held ^a
Ecological Preservation	<ul style="list-style-type: none"> The Refuge plays an important role in conserving, restoring and protecting wetlands. The Refuge needs to monitor and protect water quality that affects the region. Wetland protection should be driving force in determining access. Monitoring and controlling invasive species is important. Plant and habitat connections with other public lands are important. Land acquisition is important to help protect wildlife habitats. 	<ul style="list-style-type: none"> Federal land management is a problem; economic woes would be alleviated if more development allowed. Increasing access is more important than ecosystem health. Managing for game and increasing hunting access is of paramount concern. 	Ecological/Scientific Aesthetic Moralistic
Recreational Access	<ul style="list-style-type: none"> Trail connectivity to other public lands through use of a variety of old and or new trails, rails and boardwalks is important. Easy trails for young families, the elderly, and the disabled are important to the community. A well designed bike corridor can exist within the Refuge when using science and new technologies. Improved access will create appreciation of resources and support for Refuge. Feasibility studies by experts are important. The local community is eager to work as volunteers on building, monitoring and maintaining trails. Problems with poor communication and lack of trust must be addressed. Tourism, especially when it depends on federal lands, is in the best economic interests of the Valley. 	<ul style="list-style-type: none"> Mountain bikers have plenty of places to ride so don't need access to the Refuge. The "wildlife first" mission of the FWS should be the one and only guide for management decisions. If trails are degraded, closing them is the best answer to the problem. Federal land management is a problem; economic woes would be alleviated if more development allowed. Wilderness designation is desirable. 	Recreational Aesthetic Social
Traditional Wildlife Management	<ul style="list-style-type: none"> The "wildlife first" mission of the FWS should guide management decisions. The Refuge should manage for grouse and woodcock. Deer harvest should be managed to protect Refuge resources. Land acquisition to support management goals is important. Improving access is acceptable, especially by RR grades, as long as wildlife is protected. 	<ul style="list-style-type: none"> Federal land management is a problem; economic woes would be alleviated if more development allowed. Wilderness designation is desirable. Hunting should be limited in some parts of the Refuge. 	Utilitarian Recreational Ecological/Scientific
Wildlife First, Recreation Second	<ul style="list-style-type: none"> The "wildlife first" mission of the FWS should guide management decisions. Watershed and habitat protection are primary concerns. Land acquisition to support management goals is important. Reasonable access is acceptable, as long as resources are protected. Communication and relationship-building with the local community is important. It is important for the Refuge to provide research and logic behind management decisions. It is important to provide more education about the Refuge's unique habitats. 	<ul style="list-style-type: none"> Hunting, except for the purposes of managing deer populations, is a high priority. Federal land management is a problem; economic woes would be alleviated if more development allowed. Biking corridors through the refuge are vitally important links in the recreational trail system that connects Tucker County. 	Ecological/Scientific Aesthetic Social Recreational
Economic Development	<ul style="list-style-type: none"> Problems with poor communication and lack of trust must be addressed up front. Tourism, especially when it depends on federal lands, is not in the best economic interests of the Valley—need to also pursue industry. Access should be increased. The Refuge plays an important role in protecting wetlands. 	<ul style="list-style-type: none"> The Refuge should acquire more land. The Refuge is under-funded. The Refuge makes an important economic contribution to the Valley. 	Commercial Utilitarian Negative Aesthetic

^a Modified value types from Kellert (1993) and King (1966).

Stakeholders in this group have varied opinions about Refuge recreational access. Most appear to value the recreational uses of the Refuge, though some believe those uses should be limited to those that directly support the Refuge mission. Others support increased access and believe if trails are properly constructed, recreational use will not damage Refuge resources. Some believe that involving community members in

building and maintaining trails builds a core of people who care about the trail system, will monitor use, and will informally patrol the trails.

These stakeholders are concerned about development in the Valley and do not believe that tourism is the answer to the area's economic challenges.

While they recognize there have been strained relationships between the Refuge and the community, people with this perspective feel Refuge decisions should be centered on scientific information and not necessarily focused on public wishes.

This perspective holds a predominantly *utilitarian* value of natural resources, using resources for human benefit and consumption. Closely tied to this is a *recreational* value, as stakeholders benefit greatly from interacting with wildlife and nature in the outdoors. Additionally, this group holds *ecological/scientific* values toward wildlife and nature, recognizing an interdependence of wildlife with the larger ecosystem.

Wildlife First, Recreation Second Perspective

As with the ecological preservation perspective, watershed and habitat are primary concerns associated with this perspective. Stakeholders in this group agree most strongly with protecting wetlands and water quality, acquiring lands within the Refuge acquisition boundary, and controlling invasive species.

What makes this group unique is that they also feel access on the Refuge is important, so long as resources can be protected and the Refuge mission can be upheld. For example, they support "...new ideas for providing reasonable access while protecting fragile ecosystems...." They do not, however, agree with most statements related to mountain biking. In particular, the statements, "I support biking corridors through the Refuge. These corridors are vitally important links in the recreational trail system that connects Tucker County's communities, parks, and forests," and "I support low impact mountain biking on the Refuge" were rated lower by this group than by any other. However, in-depth conversations revealed more support for the idea of access for mountain bikes if the reasons behind putting in trails were in line with the Refuge mission *and* any trail access could be constructed, used, and maintained in a way that was compatible with wildlife and wetland resources. There is a sense in this group that the Refuge needs to uphold their mission to protect wildlife, but should be more open to providing access, so people will support the Refuge and better appreciate the resources the Refuge protects.

Equally important to this group is communication and relationship-building with the local community, including improved explanation of the management decisions that are being made. This group supports more and better environmental education efforts related to the Refuge so that community members better understand the Refuge's purpose and the resources it protects.

Hunting is not a high priority for this perspective. Additionally, stakeholders in this perspective do not see development, as compared with preservation, to be in the best interest of the Valley. They generally see the Refuge as part of the economic picture of the Valley and they believe that "By preserving wildlife resources, the Refuge maintains the scenic beauty and quality of life valued by those who live, visit, or vacation in the area."

This perspective holds an *ecological/scientific* value related to wildlife and nature, with an emphasis on the benefit that wildlife and habitats contribute to the larger ecosystem and the importance of studying these relationships. Stakeholders in this group also value the *aesthetic* qualities of the environment and an appreciation for the beauty it provides. Similarly, they value nature and wildlife for the quality of life it provides society as a whole (*social* value). Finally, this group values the *recreational* interactions with wildlife and nature.

Economic Development Perspective

A central concern for stakeholders with this perspective is maintaining and improving the economic vitality of the Valley. This perspective supports development, particularly industrial development, and sees the Refuge and other public lands as an impediment to growth. While stakeholders with this perspective believe some people are drawn to the area because of the Refuge and other public lands, in the long run the only way to ensure steady and high quality employment for local residents is to attract industry. This perspective does not

support further land acquisition, believing it will harm the local economy by cutting off opportunities for economic development.

As with other perspectives, stakeholders in this group believe communication and the opportunity to be involved in Refuge decision processes is important. As the planning process moves forward, they want to be informed about what is happening and have a chance to share their ideas and concerns.

This perspective also supports improved access to the Refuge. The reason for this seems to be that recreational access will attract more tourists, which will help the economy. There is a sense that Refuge staff could do more to make the Refuge attractive to tourists not only by improving access, but also by increasing their offering of educational programs.

This perspective holds a *commercial* value toward wildlife and nature, valuing the environment for its economic contribution and ability to bring dollars to the local community. Similarly, this group values wildlife and nature for the benefit to humans (*utilitarian* value). Because of the view that natural resources in the area may be impediments to development (and potentially lost economic benefits to the Valley), stakeholders with this perspective often hold a *negative* value toward wildlife and nature. Although those in this group are very interested in development and are not convinced that the Refuge can provide sufficient economic benefits, they live in the Valley because of its natural setting and beauty, and value the *aesthetic* quality of the Valley.

Areas of Consensus and Concern

Consensus can be defined as “general agreement” or “the judgment arrived at by most of those concerned” (<http://www.merriam-webster.com>). We use this as a general definition, recognizing that in reality the disagreement of one party can make a decision untenable. This evaluation reveals areas of common ground and areas where conflict is more likely that will require additional work to resolve differences. Specifically, we identified the following categories of consensus and concern (Figure 1):

- High Consensus/Low Concern – general agreement across perspectives; low importance of the issue; opportunities for good-faith efforts and low conflict.
- High Consensus/High Concern -- general agreement across perspectives; high importance of the issue; opportunities for collaboration and low conflict.
- Low Consensus/High Concern -- general disagreement across perspectives; high importance of the issue; greater potential for conflict.
- Low Consensus/Low Concern – there were no statements in this category.

We calculated the average score for each perspective for each of the 47 statements. We then classified each statement into one of the three categories, based on those scores. Neutral scores were considered as “general agreement,” under the assumption that the potential for consensus existed (no outright disagreement).

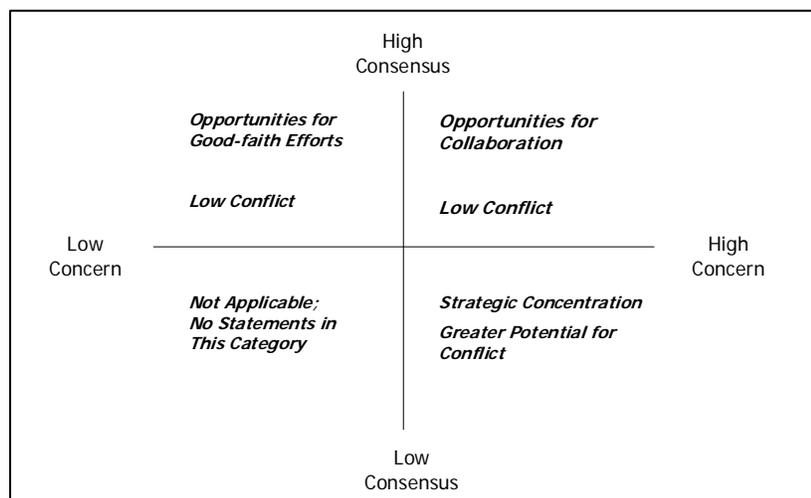


Figure 1. Model of consensus and concern.

High Consensus/Low Concern

The following truncated statements are designated “high consensus” because each perspective rated them similarly. They are “low concern” because the stakeholder rankings were low across perspectives. Thus, stakeholders tend to have consensus on these statements, but they are not ranked as very important under any of the perspectives.

Watershed/Habitat Protection

- The Refuge should help grassland bird populations recover.
- The Refuge should do more to protect threatened and endangered species.

Access

- We need better access for all, not just for die-hard fitness types.
- I support low-impact mountain biking on the Refuge.
- The Refuge should provide more self-guided walks through unique habitats.

High Consensus/High Concern

Statements in this category are “high consensus” because each perspective rated them similarly. They are “high concern” because the stakeholder rankings were high across perspectives. In some cases the statement was of little concern for most perspectives (it was ranked in the neutral range) but was of very high concern for one group. We included those statements in this category because it is possible that a statement of high concern to even one perspective will be important. The list below is truncated key statements that fall into this category.

Watershed/Habitat Protection

- It is important to protect the diverse wetlands of the Refuge.
- It is of primary importance to monitor and protect water quality on the Refuge.
- Control and eradication of invasive species *should* be a management priority for the Refuge.

Access

- Continuous, looped trails should be provided on the Refuge.
- A trail that crosses the Valley is important because close contact with our wetlands would help visitors care more for the resource.
- A connected trail system would support exceptional recreational opportunities and provide economic benefit to local businesses.
- Access should be improved through restoration of historic railroad grades to view habitat without leaving the trail system and avoid damage to the bogs.
- I support new ideas for reasonable access while protecting fragile ecosystems
- Bicyclists *don't* have many other places in the county to ride.

Hunting

- Woodcock hunting should *not* be banned on the Refuge.

Economic Development

- It is important to minimize development pressures in and around the Refuge to prevent loss of wildlife and plant habitat.
- Development, rather than preservation, would *not* be in the best interest of the Valley.

In looking at this list, there appears to be agreement that watershed and habitat protection on the Refuge is important across perspectives. Interestingly, there is consensus on many statements related to access. There is also consensus that it is important to minimize development pressures in and around the Refuge, even considering that one perspective emphasizes economic development.

Low Consensus/High Concern

Statements in this category are “low consensus” because they were ranked differently across perspectives. They are “high concern” because the stakeholder rankings were high (whether stakeholders agreed or disagreed) across perspectives. The following list is truncated key statements under this category:

Watershed/Habitat Protection

- The Refuge should manage for recovery of the great forests that once covered the area.
- It is important to maintain plant and animal habitat connections between Refuge and other public lands.
- I value the role the Refuge plays in conserving and restoring West Virginia's streams and rivers.

Access

- I support biking corridors through the Refuge—they are important links in the recreational trail system.
- The Refuge should be for wildlife and not a playground for tourists.
- I support the Refuge's purpose. It is important to resist the desire to turn the Refuge into a National Forest "land of many uses."

Hunting

- The Refuge should increase deer harvest.
- I value most that this Refuge is one of few places in the state to hunt woodcock.

Economic Development

- We will never have a decent tax base if the government is not stopped from grabbing up all our land.
- Tourism should be balanced with industry.

Process

- The most important issue in this planning process is to establish a meaningful method of creating dialogue between the Refuge and local community.
- Refuge staff should meet with a committee of local interests to recommend solutions before decisions are made.
- It is important for Refuge to provide research, evidence, and logic behind management decisions.

It is clear that stakeholders have varied opinions on the importance that should be placed on watershed and habitat resources. There is not agreement across perspectives on the value of deer harvesting or the role it should play in habitat protection. There are also fundamental differences regarding balancing access and the Refuge system mission of wildlife conservation. Additionally, consensus does not exist on the role public lands and tourism should play in the local economy. Finally, while most perspectives recognize the importance of good communication, there is disagreement on the *ways* in which the Refuge should engage with the public in this planning process.

Suggested Solutions

After stakeholders completed the Q-Sort, we asked them, “For those issues of most concern to you, what solutions do you see to addressing those?” We summarized their suggested solutions by the 7 key issues used throughout this stakeholder evaluation: watershed/habitat protection, access, hunting, land acquisition, environmental education, economic development, and process.

Watershed/Habitat Protection

- Coordinate and partner with other entities to address wildlife and habitat issues and to expand expertise.

Access

The largest number of suggested solutions relate to access. Also, 14 participants marked exact locations for their access solutions on maps (Figure 2). Suggested solutions include these:

- Increased access will provide unique experiences that will improve appreciation of the Refuge and its resources.



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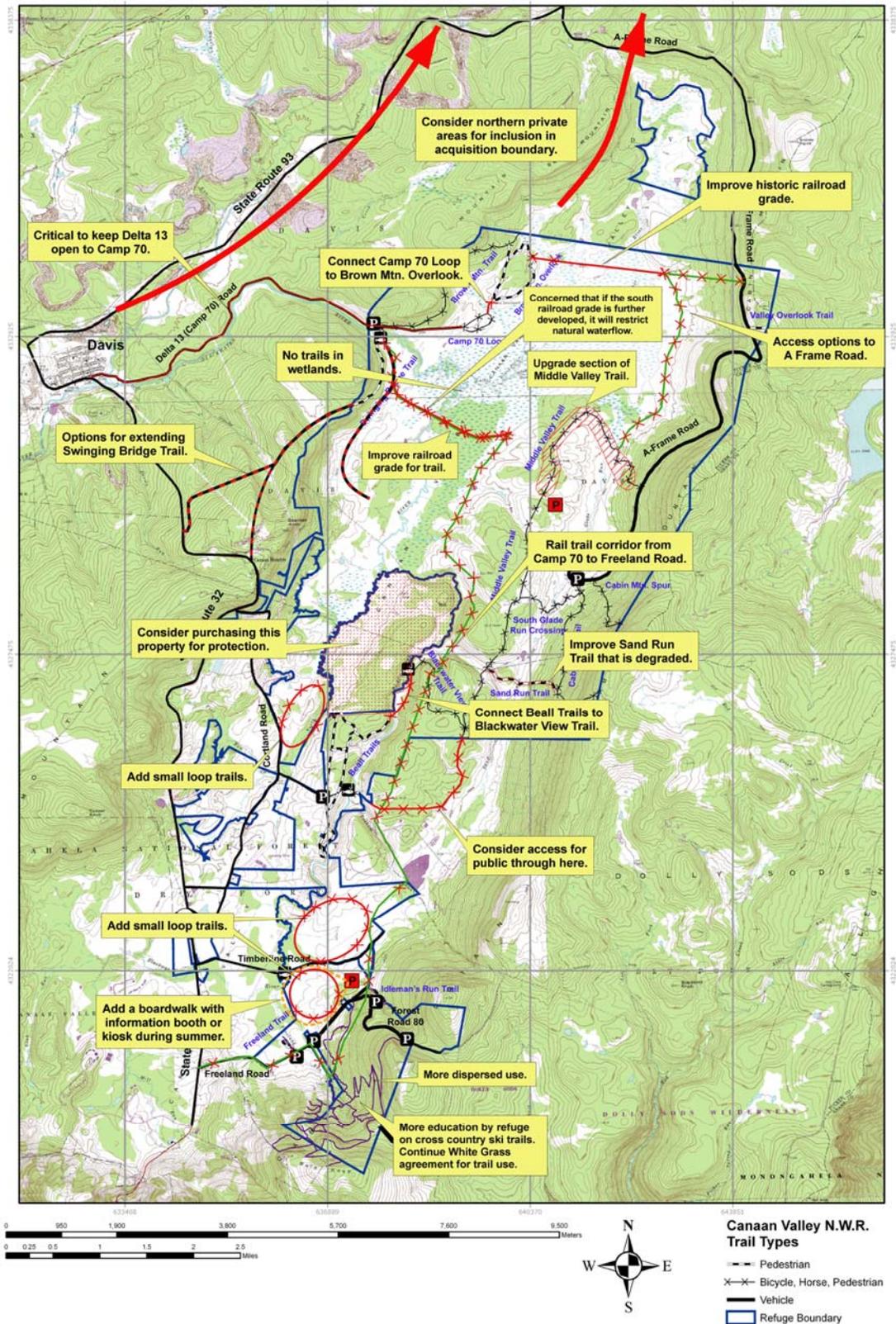


Figure 2. Map showing access solutions and locations provided by 14 stakeholders.

Protect wetlands in the process through seasonal openings and closures.

- Develop longer trails providing connectivity to other public lands.
- Develop shorter looped trails for the elderly, disabled, and young families.
- Consider combinations of existing railroad grades, existing roads/trails, and new trails or boardwalks.
- Offer reasonable off-trail use for all.
- There is a need for feasibility studies by experts to determine best access choices.
- Use community members (they are willing) to physically work on access projects.

Hunting

- Increase deer harvest in areas adjacent to the Refuge through cooperation with Canaan Valley State Park and Timberline Homeowners.
- Designate the Refuge as a special hunt area (e.g., youth hunt, archery, “earn a buck”) to further control deer populations.

Land Acquisition

- Expand the administrative boundary.
- Improve partnerships with nonprofit organizations to work on land deals and exchanges.
- Land acquisitions should focus on low wetlands, but let the higher desirable uplands be developed.

Environmental Education

- It is important for the Refuge to rely more on Refuge staff and less on volunteers to staff the visitor contact station and to provide education and interpretation.
- The environmental education message should focus on explaining the mission of the Refuge system (and how this differs from other land management agencies).
- Educating children on the uniqueness of the Refuge resources is important, not only so they recognize the value of the refuge, but also that they understand that the Refuge is accessible and “open” to visitors.
- New program opportunities should be similar to popular ones that have been offered in the past (e.g., Rachel Carson plays, photography class, etc.).
- Provide brochures to real estate offices and local establishments and erect interpretive signs.

Economic Development

When stakeholders mentioned smart development, they focused on both economic issues and environmental concerns. These thoughts reflect the ongoing discussion in the community about what type of development is likely to bring economic health to the Valley. The following suggestions are representative:

- The Refuge should be an active participant in monitoring water quality effects of increased development.
- It would be good to know how much tourism contributes to the local economy so that there is a better sense of how much to promote tourism.
- The Refuge should work more closely with local and county economic development agencies to promote itself.
- Let people know how maintenance equipment purchases benefit the community.
- Local contractors should be hired for Refuge work.

Process

The second largest number of suggested solutions relate to the decision making process. Stakeholders across all perspectives offered solutions, for example:

- Refuge manager and other Refuge staff should consider living in the Valley and spend more time integrating themselves into the community.

- Refuge staff should be trained in communication and public relations.
- The staff needs to rely less on volunteers and be more willing to work weekends when visitation is likely to be highest.

The theme of communication was raised many times. Solutions included the following:

- Go to county commissioner meetings.
 - Develop a partners program to work with local landowners.
 - Past decision processes have eroded the trust between the community and the Refuge and much work must be done to repair that trust—with open and frequent communication being the first step.
 - Find better ways to communicate the policies and rules that guide planning processes.
- Suggested solutions addressing the lack of understanding of ongoing Refuge research include these:
- The Refuge needs to be more open in explaining the purpose of research.
 - Outside contractors should be hired to conduct some research because there might be important research questions that are outside of the scope of expertise of current Refuge staff.
 - I would like to see more communication and cooperation among the federal, state, and local land management entities in the Valley.

Summary

This stakeholder evaluation provides meaningful results that have bearing on the planning activities for Canaan Valley National Wildlife Refuge. The process provides stakeholders (including FWS planners and Refuge staff) with important information on the diversity of stakeholder perspectives and the values underlying these perspectives. This detailed information can potentially improve the substantive quality of the CCP, because it clarifies and quantifies stakeholder interests and perspectives, and it identifies areas of consensus as well as areas of potential conflict.

The identified stakeholder perspectives provide a better understanding of the “conversations” regarding key Refuge issues for all stakeholders. Because tightly held values are the basis for these perspectives, it is important to note that there is no right or wrong perspective.

The 5 stakeholder perspectives appear to effectively capture the predominant points of view regarding those issues, and the underlying values further support those distinctions. For example, the Ecological Preservation perspective has a primary focus on wetland and watershed protection. This emphasis is driven by their value for the preservation of the watershed, wetland protection, and the water quality of the headwaters that feed the Blackwater River. This group also expressed their emotional attachment to the beauty of the environment.

Conversely, the Economic Development perspective has the economic vitality of the Valley as its primary focus. This group values wildlife and nature for the benefits that it can provide to humans. Still, they may view natural resources as impediments to economic growth and development.

The Recreational Access perspective focuses on access, with an emphasis on protecting resources through use of cutting-edge design and technology for trail development. Stakeholders with this perspective value wildlife and nature through outdoor recreational opportunities. Stakeholders with this perspective appreciate the resources that the Refuge protects, but feel the lack of access to these resources threatens their personal quality of life.

The Wildlife First, Recreation Second perspective appears to lie somewhere in between the Ecological Preservation and the Recreational Access perspective regarding resource protection. Stakeholders in this group agree that access is important but should not compromise the Refuge resources or the fundamental mission of the Refuge management systems (wildlife conservation). At the heart of this perspective are multiple values of wildlife and nature. They value the underlying science of the Canaan Valley ecosystem as well as its aesthetic beauty. They also value the Refuge for its recreational opportunities.

The Traditional Wildlife Management perspective emphasizes game species management (primarily deer, woodcock, and grouse). They support resource protection and improved access to the Refuge, driven primarily by their desire for hunting opportunities.

While the values that underlie these diverse perspectives are different, there is a great deal of overlap between perspectives. Also, there is consensus across perspectives on many issues, even though the reasons for the importance of the issues may be different. This finding is important. For example, there is high consensus on key aspects of watershed and habitat protection: controlling invasive species, wetland protection, and water quality monitoring and protection. There is also high consensus about access to the Refuge. While some perspectives favor more access than others, there is much consensus about improving basic access, such as building a more connected trail system or restoring historic railroad grades. No group is against the idea of developing new ideas for reasonable access if resources can be protected. These areas of consensus may be good starting points for resolving these issues, again bearing in mind that the reasons for support vary.

There are other issues, however, where consensus is not as high. While there is general agreement that increased access to the Refuge would engender appreciation and support, there is less agreement on the *extent* of that access. Similarly, most groups agree that improved communications and interactions by Refuge staff throughout the planning process are important. But, opinions on the *ways* to engage in productive dialogue are varied.

As part of this discussion, it is important to address the *decision space* of the Refuge. A decision space is the set of possible decisions that are allowed for a community decision process. The decisions that the Refuge makes regarding its management must be in accord with the reasons it was established and the mission of the National Wildlife Refuge System. Canaan Valley National Wildlife Refuge was established to “preserve its unique wetlands and to protect the fish and wildlife resources of the Valley.” The mission of the Refuge System is wildlife conservation. These two aspects clearly shape the decision space for the Refuge. However, there is room for collaboration within this space, since most stakeholders seem to recognize that “Wildlife First” does not mean “Wildlife Only.” An important part of collaborating within this decision space is good communication and a transparent process. Three of the five perspectives see good communication and interaction between the community and the Refuge as paramount, not only for the current planning process, but for future decisions as well.

The “outcome” of a decision-making process, according to many studying public participation (Beierle, 1998; Burby, 2003) is more than just the decision or recommendation that is made. There are “social goals” that go beyond the decision and are important to all parties. These include (Beierle, 1998)

- informing and educating the public,
- incorporating public values and preferences into decision making,
- increasing the quality of the decisions,
- fostering trust in the agency, and
- reducing conflict among stakeholders.

These “social goals” were often raised during the course of this evaluation by all stakeholders. In addition to specific information about stakeholders, this stakeholder evaluation provides another opportunity in this public participation process for ongoing discussions and improved relationships through continuous referral to evaluation results.

References

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