



STRATEGIC DIRECTION FOR INFORMATION, EDUCATION AND OUTREACH EFFORTS OF THE INTERAGENCY GRIZZLY BEAR COMMITTEE



Final Report By:

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GLOSSARY OF ACRONYMS

BE	Bitterroot Ecosystem
CWI	Center for Wildlife Information
DOW	Defenders of Wildlife
GBOP	Grizzly Bear Outreach Project
IE&O	Information, education and outreach
IGBC	Interagency Grizzly Bear Committee
LWWF	Living With Wildlife Foundation
NC	North Cascades Ecosystem
NCDE	Northern Continental Divide Ecosystem
NGO	Non-government Organization
NWF	National Wildlife Federation
SCY	Selkirk-Cabinet-Yaak Ecosystem
VGF	Vital Ground Foundation
WMI	Wildlife Management Institute
YE	Yellowstone Ecosystem

EXECUTIVE SUMMARY

The Interagency Grizzly Bear Committee (IGBC) asked the Wildlife Management Institute (WMI) to review information, education and outreach (IE&O) efforts of the IGBC member agencies and their non-government organization (NGO) partners and develop recommendations to make future IE&O more strategic with respect to recovery, delisting and ongoing conservation of grizzly bears. WMI used online surveys, workshops in 4 of the 5 recovery ecosystems, reviews of planning documents and funding requests to compile information on the nature, strengths and weaknesses of current IE&O efforts; assess the importance of barriers to recovery and delisting that are a function of human attitudes, beliefs and behaviors; assess the effectiveness of current IE&O in addressing those barriers; and identify ways to make future IE&O most effective.

OVERARCHING FINDINGS AND RECOMMENDATIONS

IGBC member agencies and their NGO partners have a strong interest in using IE&O to advance recovery, delisting and conservation of grizzly bears. A wide range of tools are being used across the 5 recovery ecosystems to reach multiple audiences with messages about the status of grizzly bears, the need for recovery, the importance of securing attractants, ways to coexist safely with grizzly bears and other topics. IE&O programs vary widely depending on the circumstances in each ecosystem, the nature of the audiences, the level of interest and participation by NGOs and the resources available. Perceptions of the effectiveness of current efforts also vary widely, but the impact of IE&O is rarely measured.

A common issue identified by agency personnel and NGOs was insufficient time or resources dedicated to IE&O. Virtually every agency employee and many in the NGOs indicated the demands of other duties affected their ability to deliver IE&O related to grizzly bears. This issue is not unique to grizzly bears and almost any program area would benefit from additional personnel or funding. It is important for the IGBC to recognize, though, that without committing additional resources to IE&O or assigning more personnel time to work on this issue, gains in the effectiveness of IE&O to advance recovery and delisting will be incremental, not exponential.

The IGBC needs to improve coordination and support of IE&O across all 5 ecosystems through its overall I&E Subcommittee and ecosystem-level I&E working groups. This would help the IGBC develop clear, concise and consistent messages related to a number of issues such as use of bear spray or securing attractants. It would also reduce confusion that results when the public receives too many different, and sometimes conflicting, messages from various agencies or NGOs. Improved coordination could also identify additional partnership opportunities.

The IGBC can improve coordination by either assigning additional staff time or requesting WMI to assist with coordination under the existing cooperative agreement. To provide clearer direction, the IGBC should adopt a vision and guiding principles for IE&O and take action on the recommendations in this report. A recommended vision and list of guiding principle are:

Vision Statement

Information, education and outreach efforts of IGBC member agencies and their partners in the conservation community instill human attitudes, beliefs, and behaviors that enhance public safety, promote coexistence of people and bears, and support recovery, delisting and ongoing management of grizzly bears.

Guiding Principles

IE&O efforts of the IGBC member agencies and their partners in the conservation community should:

- *Focus on the highest priority issues affecting human safety; coexistence of people and bears; recovery, delisting and management in each ecosystem*
- *Be proactive and adaptive*
- *Be based on the best available science, knowledge, and experience*
- *Have realistic objectives and outcomes that can be, and are, evaluated in a cost-effective way*
- *Address the proper audiences*
- *Convey age- and audience-appropriate messages*
- *Use effective and efficient communication techniques and media*
- *Take advantage of partnerships and opportunities to leverage resources*

The IGBC benefits substantially from its relationships with NGOs including the Center for Wildlife Information (CWI), Grizzly Bear Outreach Project (GBOP), Living With Wildlife Foundation (LWWF), National Wildlife Federation (NWF), Defenders of Wildlife (DOW), and the Vital Ground Foundation (VGF). Partnership with NGOs allows agencies to leverage their limited IE&O resources and to reach some audiences or deliver some messages that the agencies cannot. The IGBC should maintain or expand these partnerships, yet avoid becoming so dependent upon NGOs that agencies either lose their identity with the public or IE&O programs suffer when economic factors impact the ability of NGOs to provide partnership benefits or services. The IGBC also needs to recognize that there are differences between the goals of the IGBC and some NGOs that may affect working relationships.

The IGBC needs to establish reasonable objectives for IE&O that can be measured in cost-effective ways to monitor and adapt programs. Objectives could be based on outputs, such as number of people contacted, students reached through hunter education classes or programs delivered. These are easier to measure, but do not provide as clear an indication of the impact of IE&O as objectives based on outcomes, such as a change in the number of people observed carrying bear spray in a National Park, reduced frequency of conflicts in an area, or changes in public opinion in sequential surveys.

Each ecosystem is at a different point on the recovery spectrum and has unique circumstances that must be factored into the design, execution and evaluation of IE&O. Each subcommittee needs to focus on the issues it faces and use messages and tools tailored to fit the audiences affecting recovery and delisting for that specific ecosystem. A “one-size-fits-all” approach to IE&O will not be effective.

ECOSYSTEM-SPECIFIC FINDINGS AND RECOMMENDATIONS

North Cascades (NC) Ecosystem

Current IE&O in the NC is focused on improving sanitation, creating awareness of the status of grizzly bears and reducing opposition to recovery based on misinformation. IGBC agencies in the NC rely heavily on the GBOP to provide IE&O. This partnership is one of the main strengths of IE&O in the NC. Weaknesses of IE&O in the NC include uncertainty about the future direction of recovery efforts; uncertainty about the presence of a viable grizzly bear population in the NC; inability to translate broad philosophical support for recovery in the large, urban population in the Puget Sound area into effective political or financial support; inability to overcome political resistance to recovery in the rural areas east of the Cascades; the challenge of working in a trans-boundary region; and the impacts of other endangered species issues on staff and resources.

The IGBC needs to assess how realistic it is in the current fiscal environment to advance recovery in the NC. If the IGBC wants to make progress consistent with its existing 5-year plan, future IE&O in the NC should continue to be based on a strong partnership between the IGBC and GBOP and should:

- Continue efforts related to sanitation and attractant management, but pursue alternative funding sources appropriate to reducing conflicts with black bears to enable redirection of IGBC funding to grizzly-specific IE&O.
- Explore the potential to secure private, philanthropic or foundation funding to produce and broadcast a video program or programs, hosted by Chris Morgan, about the need for, and value of, recovering grizzly bears in the NC.
- Continue to focus targeted outreach on specific, strategic audiences including the ranching and agricultural community, timber and energy-development industries, and local elected officials to develop an improved understanding of the concerns that lead to resistance to recovery and develop support for funding and actions needed to recover grizzlies in the NC.

Bitterroot Ecosystem (BE)

Current IE&O in the BE is focused primarily on sanitation in backcountry areas, in anticipation of eventual recovery of grizzly bears. However, plans to reintroduce grizzly bears have been stalled by the political environment resulting from reintroduction of wolves. The prolonged timeline for the current recovery approach through natural re-colonization, combined with other demands on staff, have relegated grizzly bears to a low priority in the BE.

The IGBC needs to let the BE subcommittee know what priority to place on recovery in the BE. If the IGBC wants to use IE&O to advance recovery through natural re-colonization, it should:

- Continue efforts related to sanitation and attractant management, but pursue alternative funding sources appropriate to reducing conflicts with black bears to enable redirection of IGBC funding to grizzly-specific IE&O.
- Increase IE&O on the importance of maintaining effective connectivity between the BE and other ecosystems.
- Emphasize the importance of bear identification in hunter education and outreach.

Selkirk-Cabinet-Yaak (SCY) Ecosystem

Current IE&O in the SCY is focused on reducing human-caused mortality to the small grizzly population in the ecosystem by reducing conflicts associated with unsecured attractants and reducing fear of, and opposition to, grizzly bear recovery. Strengths of the program include the presence of local, knowledgeable, respected agency employees who have credibility with the public, availability of good hands-on materials, involvement of GBOP and other NGOs, and constructive engagement of county officials. Weaknesses include declining funding to support local bear management specialists, a complex land ownership pattern and international setting, dispersed human population, lack of effective prohibitions of feeding bears in Idaho, local and seasonal populations for whom English is not their first language, difficulty reaching seasonal visitors, and disagreement over the number of bears in the ecosystem.

To maximize the strategic impact of IE&O in the SCY, the IGBC should:

- Maintain or increase efforts related to attractant management by agency employees and NGOs in local communities.
- Increase efforts focused on bear identification by black bear hunters and getting all hunters to carry and know how to use bear spray.
- Increase IE&O related to the importance of augmentation and maintaining linkage within the SCY and between the SCY and other areas.
- Leverage local interest and participation in the DNA study to increase awareness of the status of grizzly bears and support for recovery.

Northern Continental Divide Ecosystem (NCDE)

Current IE&O in the NCDE is focused on reducing bear-human conflicts associated with unsecured attractants, increasing human safety in grizzly bear habitat, and increasing awareness of the expanding number and distribution of grizzly bears. The complex land use patterns across the NCDE and expanding range of this growing population create a challenging environment for IE&O. Among the strengths of the program in the NCDE are a cadre of experienced, respected local FWP bear management specialists and seasonal “Bear Rangers” with the USFS, good scientific information about the size and trend of the population, generally positive public attitudes toward bears, a clear focus for management (delisting in the near term), good outreach materials, cooperation from waste management companies, and strong partnerships with several NGOs that provide support in an atmosphere not yet affected by litigation

over delisting this population. Weaknesses include the lack of means to measure the effectiveness of outreach, lack of coordination across the ecosystem and with other ecosystems, difficulty developing messages and reaching a diverse audience that includes both long-time residents and relative newcomers who are unfamiliar with bears, inadequate use of the internet and social media, and difficulty reaching front-country day users in Glacier National Park.

To maximize the strategic impact of IE&O in the NCDE, the IGBC should:

- Maintain or increase funding for full-time and seasonal field staff engaged in direct public contact and bear conflict management.
- Focus IE&O on securing attractants in general and small livestock in particular to reduce conflicts with bears in dispersed, rural settings and along the “dispersal front” of expanding grizzly range.
- Increase outreach to local communities, homeowners associations and county planning authorities with respect to securing attractants to reduce conflicts and increase public safety.
- Increase hunters’ and other recreationists’ knowledge about and use of bear spray.
- Increase public awareness of the presence of grizzly bears along the “dispersal front” and reasonable, appropriate steps residents can take to avoid conflicts.

Yellowstone Ecosystem (YE)

Current IE&O in the YE is focused on reducing bear-human conflicts associated with unsecured attractants, increasing human safety in grizzly bear habitat and during bear-human encounters, and reducing conflicts between big game hunters and grizzly bears. Among the strengths of IE&O in the YE are strong support from the YE Subcommittee; a clear direction for IE&O; enforceable rules; good interagency coordination; and a cadre of knowledgeable, local staff that have earned the respect of people in the YE. A number of NGO partners assist with IE&O in the YE, but disagreement over delisting this population undermines the relationship between agencies and some NGOs and contributes to conflicting messages about the status of this population. Weaknesses include the difficulty of reaching a large, transient audience of day users in the National Parks and National Forests; the dispersed nature of rural residents; inconsistency and “message overload” in signage; and ineffective use of social media. The protracted delisting process and associated litigation complicate IE&O efforts and partnerships between the IGBC and some NGOs.

To maximize the strategic impact of IE&O in the YE, the IGBC should focus on:

- Reducing conflicts associated with unsecured attractants on private lands and in gateway communities.
- Increasing public awareness of grizzly bear distribution and appropriate human behavior, including use of bear spray, especially among day users in National Parks and National Forests.
- Reducing conflicts, human injuries and grizzly bear mortalities due to encounters between grizzlies and hunters by increasing hunter awareness and use of bear spray.
- Creating more positive attitudes about grizzly bears and their recovered status.

THE IGBC WEBSITE AND USE OF SOCIAL MEDIA

The internet and social media are now a primary mode of communication and information sharing in America. The IGBC needs to use these channels more effectively to increase the impact of IE&O to advance recovery and conservation of grizzly bears. First, however, the IGBC member agencies need to make a fundamental, strategic choice between two alternatives for use of the internet and social media.

One option is for the agencies to pool additional resources to support a full-time employee or contractor to make the website more dynamic and to create and sustain an active presence on social media for the IGBC, as a collective entity, representative of all the member agencies. There are some advantages to this approach, but the overall cost, demands for coordination, and impact to the individual agencies' ability to support and maintain their own online and social media presence would be substantial.

An alternative is for the IGBC to improve its website using existing funds budgeted for IE&O and to encourage member agencies to enhance their individual use of online and social media channels for IE&O related to grizzly bears. This approach would enable the IGBC to continue to use its website to communicate the overall IGBC mission and goals and ecosystem-specific information and to serve as a link between member agencies. The IGBC website would also be a "portal" for the public to access member agency content. This approach would promote public awareness of the individual agencies and their responsibilities and provide for more dynamic, localized, and targeted use of social media in a more cost-effective, decentralized fashion. WMI is prepared to implement this recommendation under our cooperative agreement, if the IGBC concurs.

NEXT STEPS

The IGBC Executive Committee needs to consider the recommendations in this report and provide feedback to WMI and the ecosystem subcommittees. Based on direction from the IGBC Executive Committee, WMI is prepared to work with agency staff and NGO's to assist them with implementation to strengthen IE&O. The initial focus for the remainder of the current federal fiscal year would be redesigning the IGBC website and developing and specific implementation actions and budget for the upcoming fiscal year.

INTRODUCTION

Successful recovery, delisting and ongoing conservation of grizzly bears (*Ursus arctos*) in the conterminous states requires a combination of suitable habitat and human behavior that provide a secure future for bears on the landscape. Grizzlies need large, relatively undeveloped areas to meet their basic life requirements, with sufficient connectivity to allow individuals and genetic material to move across the landscape. They must also avoid human-caused mortality long enough to reproduce and sustain the population.

The Interagency Grizzly Bear Committee (IGBC) was established in 1983 to coordinate recovery and delisting of grizzlies. Over the past quarter century the IGBC has invested millions of dollars developing the science needed to inform conservation decisions, amended land management plans and worked with private land owners, local governments, transportation agencies and non-government organizations (NGOs) to secure habitat and provide connectivity across an increasingly fragmented landscape. Though far from complete, these efforts have done much to provide space on the land where grizzly bears can live.

Concurrent with these efforts to secure physical habitat, the IGBC worked with a number of partners to develop and deliver information, education and outreach about grizzly bears. These efforts are designed to influence human behavior in ways that enhance grizzly bear conservation by increasing human understanding of – and tolerance for – coexistence with grizzly bears, reduce bear-human conflicts, increase human safety, and lower bear mortality rates.

Considerable progress has been made with respect to human knowledge and tolerance of grizzly bears and much of the ignorance at the root of human-bear conflicts has been eliminated. However, as bear numbers and range increase and more people move into, work or recreate in bear country, the need for continued information, education, and outreach is expanding. In addition, some television and online videos continue to demonstrate or promote behavior that may lead people to engage in dangerous activities around bears and some parties promote misinformation for self-serving purposes.

The continued importance of information, education and outreach (IE&O) to recovery of grizzly bears is evident from the IGBC's current 5-year plan. IE&O is identified as a core element under 4 of the 5 goals in the IGBC's current strategic plan and each subcommittee is charged with specific IE&O tasks as part of their 5-year work plans.

At its summer 2011 meeting, the Executive Committee of the IGBC recognized the need to be more strategic in the design and implementation of IE&O efforts. Given the fiscal limitations and public scrutiny government agencies face, it is important that the IGBC be able to demonstrate that IE&O is well-conceived, well executed, and productive. The analysis and recommendations in this document were developed to address this need.

PLANNING GOALS

The goals of this planning process were to:

- Assess the current status of IE&O efforts of IGBC member agencies and non-governmental organizations related to grizzly bears.
- Identify the highest priorities for future IE&O to support recovery, delisting and management of grizzly bears.
- Determine the best ways to address priority IE&O needs.
- Determine the resources needed to address priority IE&O needs.
- Identify opportunities to leverage resources and efforts of agencies and non-government organizations.

APPROACH

Online and Email Surveys

Two online surveys (see Chapter 1 and Appendix A) were administered to IGBC agency and NGO staff involved with grizzly bear issues. These surveys were designed to assess the various media used and the views of the respondents with respect to the most important issues related to grizzly bear IE&O programs.

The first survey was administered to one person from each agency or NGO active within each of the 5 recovery ecosystem, typically the lead IE&O staff member. This individual was asked to compile input for all staff within their agency or NGO regarding current IE&O programs in that ecosystem.

The second survey was administered to a broader list of agency personnel, including IE&O staff as well as bear conflict specialists, research and management biologists, and wardens. This survey gathered individual views on the importance of various barriers to recovery and delisting and the effectiveness of current IE&O efforts.

A third survey was administered via email to the IGBC I&E Subcommittee to assess how well the subcommittee is functioning.

Workshops

A series of one-day workshops (see Appendix B) was conducted with IGBC agencies and NGOs in 4 of the 5 ecosystems between November, 2011 and January 2012. Local and Tribal government officials also participated in the Selkirk-Cabinet-Yaak (SCY) and Northern Continental Divide Ecosystem (NCDE) workshops, respectively. Workshops for the North Cascades (NC), SCY and NCDE ecosystems were held the day before or after those ecosystems' subcommittees fall meetings. The Yellowstone Ecosystem (YE) workshop was held on the day before a meeting of the Yellowstone I&E subcommittee.

Holding workshops in conjunction with the NC, SCY and NCDE subcommittee meetings facilitated broader participation than would have occurred with stand-alone meetings, and linked the discussion among subcommittee members to the discussion about IE&O. Holding the YE workshop in conjunction with the Yellowstone I&E subcommittee meeting allowed that group to follow-up immediately on the results of the workshop to develop specific action plans for the upcoming season.

The format for each of the workshops was similar. The sessions began with a brief discussion of current efforts by each of the agencies and NGO's in the ecosystem and an assessment of the strengths and weaknesses of those efforts. Next, participants reviewed a draft vision statement and guiding principles for IE&O to provide a framework for future efforts. Following that, participants reviewed and discussed the results of the online surveys of barriers to delisting and effectiveness of current efforts to confirm or amend the results of the survey. Finally, participants used the remaining time available to brainstorm around the audiences, messages, techniques and resources needed to address some of the highest priority barriers.

A workshop planned for the day before the Bitterroot Ecosystem, (BE) subcommittee meeting was cancelled due to the low response rate to invitations to the workshop and cancellation of the BE Subcommittee meeting. The cancellation of the BE workshop compromises the analysis of the situation in that ecosystem to some degree. More importantly, however, the lack of interest in the workshop or subcommittee meeting reflects a serious issue the IGBC Executive Committee needs to address. The current lack of direction in the BE, combined with the political fall-out from the reintroduction and recovery of wolves in central Idaho have pushed grizzly bear recovery to very low priority for many of the agency and NGO staff in the BE. This issue is discussed in more detail in a later section on the BE.

Review of Planning Documents, Funding Requests, Subcommittee Reports and Meeting Minutes

Five-year plans for the subcommittees, requests for I&E funds allocated by the IGBC, subcommittee reports and minutes of subcommittee and IGBC Executive Committee meetings were examined for information and direction related to IE&O. These documents provided additional insight into current efforts, priorities and accomplishments related to IE&O.

Report Organization

This report was developed in response to the need for more strategic direction for IE&O expressed by the IGBC Executive Committee in June, 2011. Consequently, the document focuses primarily on providing high-level, strategic recommendations, as opposed to operational detail. The main body of the report provides an assessment of the current situation as well as potential strategies to enhance IE&O. The appendices contain detail from the online surveys and workshops that staff working in IE&O programs can use to develop operational plans, once the IGBC Executive Committee makes decisions regarding the strategic recommendations.

Chapter 1 discusses results of the online surveys of IGBC agencies and NGO's. Additional detail is included in Appendix A.

Chapter 2 discusses a number of over-arching issues related to IE&O. This chapter also presents a number of high-level decisions the IGBC needs to make to provide direction for IE&O within, and across, the 5 ecosystem recovery areas.

Chapters 3 through 7 provide analyses of each of the recovery ecosystems including:

- a brief description of the current "operating environment" for IE&O within that ecosystem,
- an assessment of the strengths and weakness of current IE&O efforts within that ecosystem,
- a discussion of the most important barriers to recovery in that ecosystem that are a function of human attitudes, beliefs and behaviors, and
- recommendations to maximize the strategic impact of IE&O to advance recovery, delisting and ongoing conservation of grizzly bears in that ecosystem.

Chapter 8 discusses the IGBC website and use of social media.

NEXT STEPS

This strategic direction will be review by the IGBC Executive Committee at its meeting in June, 2012. At that meeting, the committee will need to make decisions regarding the recommendations included here.

Based on the decisions of the Executive Committee, WMI can begin working with IE&O staff in agencies and NGOs to implement those recommendations approved by the committee.

CHAPTER 1 –INFORMATION, EDUCATION AND OUTREACH SURVEY RESULTS

ON-LINE SURVEY OF CURRENT INFORMATION, EDUCATION AND OUTREACH EFFORTS

One representative of each agency and NGO within each of the 5 recovery ecosystems was asked to participate in an online survey to provide information for all efforts of their agency or organization in that ecosystem. Respondents were asked to list the types of IE&O media used by their agency or organization (e.g. press releases, brochures, radio and television, internet, etc.), who the target audiences were for various media, how frequently each medium was used, the relative cost and value of using that medium, etc. The survey also asked for the sources of information used, such as the Center for Wildlife Information (CWI) or Grizzly Bear Outreach Project (GBOP); what type of programs were offered to various age categories; what the most important messages included in IE&O are; what resources are currently being applied to IE&O; how programs are evaluated; and how existing efforts could be made more effective.

Thirty-four agency staff members were asked to answer the survey. Twenty provided complete responses and 6 provided partial responses. Thirty-two NGO staff members were asked to answer the survey. Seventeen provided complete responses and 3 provided partial responses. Response rates were lower than expected, but results still provide a reasonable assessment of current IE&O efforts.

Table 1 lists the responses to questions regarding use of various types of media for IE&O by IGBC agencies and NGO's. The following briefly summarizes input by media type:

Press Releases (Table 1.a.)

In general, the federal agencies reported less frequent use of press releases than the states or the Confederated Salish and Kootenay Tribe. Some NGO's reported using press releases, but this is not a major tool for these groups. Press releases were ranked as having medium to high value and low production cost. The value of press releases was reported higher when tied to a specific issue (e.g. initiation of new food storage orders) or events (e.g. bear-human conflict incident or bear sighting in the North Cascades). To successfully compete for reporters' attention, press releases need to answer the "So what?" question, or provide some other "hook" for reporters, editors and readers.

Prepared Articles for Print Media (Table 1.b.)

Prepared articles were reported as being used even less often than press releases by both agencies and NGO's. Both the value and relative cost of articles was rated slightly higher than press releases, reflecting the greater investment of time required to prepare an article, as well as the ability to convey more information. The difficulty getting articles placed in media available to a broad audience is a challenge, unless the article is invited.

An exception to the general pattern with prepared articles is publication in NGO newsletters. A number of NGO's regularly produce newsletters (e.g. Vital Ground Foundation) or magazines (e.g. National Wildlife Federation's "Ranger Rick") that reach hundreds of thousands of readers annually. These may provide a venue the IGBC could use to reach an interested audience.

Brochures, Cards, Coloring Books, other Printed Media (Table 1.c.)

Informational brochures, bear identification cards and coloring books, many prepared for the IGBC by the Center for Wildlife Information, (CWI) are among the most-used IE&O tools. The Grizzly Bear Outreach Project (GBOP) also produces materials used in the North Cascades and Selkirk-Cabinet-Yaak ecosystems. Tens of thousands of these items are distributed annually, with wallet-sized bear ID cards and coloring books being the most popular. These materials are distributed at license vendors, public events, agency offices and during presentations.

Generally, these items are seen as having medium to high value and, to date, relatively low to medium cost for agencies due to the partnership with the CWI and GBOP. The ability of these two NGO's to continue producing these materials is a factor the IGBC needs to bear in mind.

In addition to cost, the IGBC needs to ensure the messages conveyed in these materials are clear, concise and consistent across ecosystems and regardless of who produces them. Greater coordination among the subcommittees will be needed to accomplish this goal.

Educational Trunks or Teaching Units for Schools (Table 1.d)

Educational trunks containing bear hides, skulls, track casts, etc. and associated teaching units for schools are exceptionally popular with teachers. The tangible nature of the materials adds value, but the relatively high cost and limited materials available to produce educational trunks limits the number currently in use. Some agencies or offices that have trunks limit use further by only allowing their use as part of an agency-conducted programs or presentations. As with other materials, the IGBC needs to ensure that messages conveyed through trunks or teaching units are clear, concise and consistent.

Static Displays or Educational Trailers (Table 1.e)

A number of agencies reported they have and use static displays (e.g. mounted bears) in their offices or other locations that are attractive and informative for visitors. However, these are expensive to develop and exposure is limited to individual who come to the offices.

In the past few years, most ecosystems have obtained one or more "bear education trailers" that are equipped with mounted grizzly and black bears, portable displays related to bear safety and other materials. Although expensive to develop, these trailers provide a significant return on the investment by reaching huge numbers of people over time. The fact that they are portable, attractive, functional

and can be shared across jurisdictions makes them highly valuable. The main limitation on the use of trailers is the number of trailers available in relation to the demand for their use and the significant staff time required to haul the trailers from site to site and provide a presence at the venue where the trailers are used.

The IGBC should explore the opportunity to create additional trailers to reduce travel time. Developing a cadre of trained volunteers to help staff events where trailers are used would also increase the value of this tool.

Websites (Table 1.f)

Most agencies are using their websites to convey some information about grizzly bears. However, the nature of agency websites, which contain vast amounts of information, and their management make it difficult to assess the amount of use or impact of information provided. Both Idaho and Montana use their website to provide information to hunters (and others) on bear identification and Montana requires all black bear hunters to complete an online bear identification course before purchasing a bear license.

Agency staff reported websites as having high value as a communication tool, with low to moderate cost, especially on a potential per capita contact basis. However, for agencies to use websites most effectively, they need to dedicate significant staff time and resources to make their webpages attractive by providing frequently updated materials.

NGO's, generally, appear to be making more consistent and effective use of websites and most were able to report the number of "hits" on their site. This may reflect the narrower focus of a number of the NGO's or greater recognition of the value of the web, particularly for fundraising. NGO's also generally enjoy greater freedom and flexibility than government bureaucracies and can be more creative in their use of electronic media. The Missoula Bears website (missoulabears.com) is a good example.

Social Media – Facebook, Twitter, YouTube (Table 1.g)

The USDA Forest Service, US Fish and Wildlife Service, Idaho Fish and Game and Wyoming Game and Fish each reported using Twitter feeds as a way to alert the media and public about press releases. Other use of social media by agencies is limited. Opinions on the value of social media were mixed, based on unfamiliarity with these media and/or the time required to monitor and manage content. The relative cost was generally reported as low, but to use these media effectively does require dedicated staff time to provide regular feeds and updates.

As with websites, NGO's appear to use social media both more often and more effectively than agencies. A number of NGO's reported having tens of thousands, or more, followers on FaceBook or Twitter, providing a means of communicating a message rapidly to a huge audience.

Radio Public Service Announcements (PSA) or Purchased Time (Table 1.h)

Most agencies reported uncertainty about the value of radio and indicated their use of radio PSA's has declined over time. PSA's, in particular, were seen as having limited value, due to uncertainty about placement. Paid advertising, especially for public meetings or "bear awareness" was seen as one good use of radio, and invited interviews also were used in some areas. NGO responses were similar to agencies'.

Television Public Service Announcements (PSA) or Purchased Time (Table 1.i.)

As with radio, agencies reported limited use of television PSA's or purchased time due to placement of PSA's and the high cost of producing video or purchasing air time. Another complicating factor in the Selkirk-Cabinet-Yaak and portions of the Yellowstone ecosystems is the lack of local television stations to carry messages.

Two examples of effective use of television are broadcast of the "Recreating in Bear Country" DVD on local cable television in the Flathead portion of the NCDE and use of GBOP-produced video messages in the North Cascades ecosystem. In both cases, the availability of high-quality, fully produced material enhanced the "marketability" to broadcasters. In addition, GBOP personnel invest time in maintaining good relationships with media outlets, which increases the chance that materials provided will be used.

Other Media (Table 1.j)

Both the USDA Forest Service and National Park Service reported using signs extensively to communicate with the public. However, the cost of producing and placing signs can vary widely and their effectiveness is unknown or low (see further discussion regarding signs under the Yellowstone Ecosystem Workshop, below). The USGS and the Endangered Species Coalition reported using Podcasts to communicate but neither indicated how widely these are viewed. One US FWS office reported using an email list to target specific parties with regular updates

Table 2 lists the sources of IE&O materials used by agencies and NGO's. Most agencies and NGO's use a combination of materials produced "in house" as well as materials produced by other IGBC agencies, CWI and/or GBOP. For agencies in British Columbia and Alberta, scientific publications were also listed as sources of materials.

The extensive use of materials by "other IGBC agencies" indicates sharing of information is common. The extensive use of CWI materials by both agencies and NGO's in most ecosystems and use of GBOP materials in the North Cascades and, increasingly, the SCY demonstrates the value of these publications. However, the use of such a broad array of materials also introduces the potential for inconsistency in messages or quality of materials.

Table 3 lists responses to questions regarding the types of IE&O programs offered by agencies and NGO's for various age groups or interests. Programs targeting pre-school children are primarily reactive, serving walk-in visitors to offices or visitor centers. Coloring books are the primary tool and messages focus on bear identification and the importance of not feeding bears. Beginning with primary grades, programs become more proactive using in-classroom presentations and adding basic bear biology and conservation concepts. Educational trunks and trailers are used to support teachers as messengers and some agencies have targeted specific grades so that, over time, all students in an area will be exposed to messages. At the secondary grade level, concepts are covered in greater depth and some agencies provide field trips or other environmental learning opportunities to enhance student awareness and interest in learning about bears. Information on the use and effectiveness of bear spray is incorporated at the secondary grade level and increases in post-secondary programs.

To be most effective, programs from K – 12 should be part of an integrated curriculum that builds on earlier learning.

A number of post-secondary learning efforts were reported by NGO's. The National Outdoor Leadership School (NOLS) reaches over 3500 students per year with messages about safety in bear country. The USGS participates in the Rocky Mountain Science Network Summer Academy program and the US FWS reported participation in college classes. Montana FWP staff reported providing information about bear safety as part of a continuing education program for realtors through the Lincoln County Conservation District and local community college.

Montana, Idaho and Wyoming all incorporate information on how to travel and hunt safely in bear country into their hunter education programs. Use and effectiveness of bear spray should be a major component of this curriculum.

Among groups organized by others, Boy Scout and Girl Scout troops were most often cited as the focus of bear safety programs. In addition to instructing the scouts, "train the trainer" programs are used to enable scouts to convey what they have learned to others. Montana FWP provides information on working safely and avoiding conflict with bears to mine company personnel in Troy and Libby as part of an impact mitigation program. IE&O directed at groups organized by agencies included correspondence provided by the USDA Forest Service to grazing permittees, outfitters and other commercial users of the forests as well as training sessions for agency personnel.

Programs for the general public include workshops, presence at county fairs or sporting conventions, back-country patrols, bear rangers and the "Bear Brigade" in GTNP. Programs targeting landowners also include workshops, demonstrations, procuring bear-resistant containers and working with waste transfer companies, realtors and homeowner associations. All these approaches provide one-on-one contact which most respondents thought was most effective, although they can be time-consuming.

Other potential audiences for IE&O identified by response to the survey included agency staff from non-wildlife programs that work in the field in bear country such as Border Patrol, underserved urban communities and elected officials. Relatively few efforts were reported in these areas.

This type of outreach to people in other occupations who work in bear country should be a priority for the IGBC.

Table 4 lists the most important issues and messages included in IE&O programs and materials of agencies and NGO's. Not surprisingly, agencies focus primarily on human safety, conflict avoidance, food storage and attractant management, living and working in bear country. The value of carrying bear spray is frequently included in the messages, but only a few agencies indicated that hands-on training in the use of bear spray was a part of their effort.

NGO's reported addressing these topics as well, but in addition emphasized appreciation for bears, the need for more habitat, the role of bears in the ecosystem and the need to restore bears to the North Cascades and Bitterroot ecosystems. Interestingly, NOLS reported that their program strives to teach students how to avoid a confrontation with a bear, because they believe knowledge is of limited value during an actual confrontation – time is often too compressed to use knowledge. In general, NGO messages take more of an “advocate” for bears tone than agency messages.

Table 5 lists responses to questions regarding how the effectiveness of current IE&O programs is measured, how effectiveness could be improved and other general comments about IE&O.

How Effectiveness Is Measured

Only a few agencies or NGO's reported having any formal means of evaluating the effectiveness of their efforts; most responses were that effectiveness was not monitored. The USDA Forest Service reported using the number of contacts made and rate of compliance with food storage orders as one measure. USGS reported using website analytics to assess the number of people reached. Montana FWP reported using program evaluations for its Bear Aware presentations. Some NGO's reported using the number of members or size of donations as a metric and both NOLS and the Boone and Crockett Club's educational programs have formal assessments of their curricula and outcomes related to educational goals. The US FWS and Montana FWP reported completing a survey of public attitudes in northwest Montana in 2007 as a baseline that could be used to assess the impact of programs at some point.

How Could Current Efforts Be Made More Effective

Not surprisingly, the most common response from both agencies and NGO's was to provide more money and staff time for IE&O. Additional comments included:

- Identifying specific target groups, e.g. hikers or hunters, and developing programs, workshops and materials designed to reach those groups.

- Developing and applying ways to monitor and evaluate existing efforts and provide feedback mechanisms.
- Targeting specific school grades with a consistent program that, over time, would reach all students.
- Focus on a few clear, concise, consistent messages rather than trying to cover everything with everyone.
- Improved communication and coordination within the agencies and between the agencies and NGO's.
- Update the IGBC website
- Provide a national training staff to provide both in-reach and outreach.

Other Comments

Respondents offered a number of other comments regarding current programs including:

- The need to elevate the importance of IE&O within agencies that tend to focus primarily on biological measures and issues.
- The need for, and value of, a certification program for bear educators. This would provide an expanded number of people who could provide IE&O, while ensuring the right messages were being conveyed.
- When dealing with "traditional" audiences and landowners, messaged need to focus on practical tips more than the value of bears in an ecological or philosophical sense.

Table 6 lists responses to questions regarding the amount of staff time and operating resources committed to grizzly bear IE&O by agencies and NGO's. Staff time and funding varied widely between agencies and ecosystems. Generally, more time and money was committed to IE&O in the NCDE and Yellowstone ecosystems, as would be expected given the larger bear populations and increased interactions between people and bears. Many respondents had difficulty quantifying time and expenses, however, because IE&O is rarely an identifiable line item in an agency or NGO budget. Additional effort would be needed to further quantify staff time and expenditures. This may be necessary or beneficial if the IGBC wants to evaluate the return on investment of current IE&O.

ONLINE SURVEY OF BARRIERS TO RECOVERY, DELISTING, AND THE EFFECTIVENESS OF CURRENT IE&O EFFORTS

A second survey was administered to a broader range of individuals in agencies and NGO's who are familiar with grizzly bear conservation issues, including biologists, bear management specialists, additional IE&O personnel, etc. (see Appendix A). Respondents were asked to indicate which ecosystem(s) they worked in, to allow stratification of results. However, many respondents indicated working in more than one ecosystem, so clear separation was not always possible.

The broader survey addressed a number of perceived barriers to recovery and delisting of grizzly bears that are a function of human attitudes, beliefs and behaviors that could be addressed through IE&O. Respondents were asked to rank the importance of the barriers and to rate the effectiveness of current efforts in addressing the barriers. The survey asked respondents to rate the importance of a number of factors, such as other job duties, that limited effectiveness and to provide input on how to make efforts related to these barriers more effective.

Of 114 agency staff invited to participate in the survey, 68 completed the survey and 15 provided partial responses. Of 39 NGO staff invited to participate in the survey, 17 completed the survey and 4 provided partial answers. The sample sizes given in the following tables are broken down by ecosystem. Overall results are discussed in this chapter. Responses specific to a given ecosystem are discussed in more detail in the ecosystem chapters.

Table 7 lists a number of potential barriers to recovery and delisting along with the average ranking of those barriers by agency and NGO staff working with grizzly bears in each ecosystem. Survey participants were asked to rank each barrier on a 4 point scale, with 1 meaning the barrier was not important, 2 meaning the barrier was somewhat important, 3 meaning the barrier was very important and 4 meaning the barrier was critically important.

The only barrier that ranked in the top 5 for all ecosystems was opposition to bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts. In the ecosystems with the highest bear numbers (YE and NCDE) other common barriers in the top 5 were: conflicts between big game hunters and grizzly bears that result in defense of life and property kills; bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, barbeques, etc.; and bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.

Mistaken ID kills were identified as a high priority issue in the SCY where grizzly numbers are low and in the BE where a black bear hunter recently killed a rare immigrant grizzly. In these ecosystems every mortality is a set-back to recovery. Although discussion in the workshops revealed that vandal killing of grizzly bears (as opposed to agency-removal) is rare, it was identified as a high priority in the SCY and BE where numbers are low, every mortality is a set-back and public acceptance of grizzlies is lower than in the YE or NCDE.

Conflicts related to unsafe human behavior around bears (e.g. approaching too closely; feeding bears) was a high priority in the YE where there are millions of tourists potentially interacting with grizzlies. This barrier was also ranked relatively high in the NC, possibly relating to black bears as surrogates in a national park setting or rural areas of Washington.

Lack of awareness of the status and need for recovery, inadequate political support for funding and recovery actions made the top 5 priorities in the NC and BE. Combined with the high score for

opposition to increasing bear numbers in these 2 ecosystems, these results indicate the need to focus grizzly-bear IE&O on political decision-makers.

Inadequate consideration of the needs of grizzly bears in land use or development planning ranked high in the NCDE, where a conservation strategy has not yet been developed and bears are rapidly expanding into new territory. This barrier was also ranked among the top 5 in the NC where grizzlies are currently limited to remote and national park lands where land-use related conflicts are negligible, but ongoing land use changes within potential future grizzly range concern some managers.

The survey administered to respondents in the YE included two barriers to delisting. These barriers were not included in the other ecosystem surveys because none of the other ecosystems have been proposed for delisting to date. The first barrier to delisting was opposition to delisting based on the belief there are not enough bears or bear habitat. The second was opposition to delisting based on lack of trust in the states to manage a recovered population.

The average scores for these two barriers to delisting were 3.13 and 3.06, respectively. This indicates that most respondents believe that these barriers fall between “very” and “critically” important in preventing delisting. Although not statistically significant, the slightly higher score related to perceived concern about the number of bears or amount of habitat may indicate it is more important to increase awareness of the population and habitat than it is to build trust in future state management.

Table 8 lists the same potential barriers to recovery and delisting, along with the average rating of the effectiveness of current IE&O efforts in addressing the barriers. Survey respondents rated effectiveness on a scale of 1 to 4, with 1 meaning the barrier was not currently addressed, 2 meaning efforts were not very effective, 3 meaning efforts were somewhat effective and 4 meaning efforts were very effective.

Current efforts related to reducing the number of black bear hunters killing grizzly bears by mistake and reducing bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants or from unsafe human behavior were ranked among the most effective in all 5 ecosystems. Other efforts that ranked relatively high included reducing opposition to grizzly bear population increases based on fear of attacks in the SCY and NC, reducing conflicts between big game hunters and grizzly bears in the YE, SCY and BE, reducing bear-human conflicts associated with livestock husbandry practices in the YE, NCDE and BE, reducing bear-human conflicts related to development infrastructure (e.g. mines) in the YE and SCY and lack of public awareness of the status of grizzlies and the need for recovery in the NCDE and NC.

Current efforts related to killing bears as a way to express anti-government sentiment, opposition to the Endangered Species Act or as a result of blaming bears for loss of access or jobs (e.g. vandal killing) ranked relatively low in all 5 ecosystems. Current efforts to reduce killing of bears to profit from their trophy or body parts also ranked relatively low in all except the BE. Caution in interpreting these results is necessary, however, as these factors may have received ranks of 1 (not currently addressed) from a number of respondents due to the fact that either there are no bears there to be killed by vandals or for

their black market value (e.g. NC and BE) or because vandal killing is not perceived as occurring often. A number of open-ended comments from the Yellowstone area suggested such killing is rare there.

Current efforts related to overcoming the lack of political support for funding necessary to recover grizzly bears ranked low in the SCY and BE. Efforts to generate political support for the actions necessary to recover grizzlies also ranked low in these two ecosystems. If scores for current efforts for vandal or black market killing are set aside in the NC, where there are very few, if any, bears the next lowest ranked efforts are those related to generating political support for the funding and actions necessary to recover grizzly bears in this ecosystems.

Comparing the ratings of barriers in Table 7 and Table 8 indicates that the current efforts rated as most effective are being directed at many of the barriers identified as most important in preventing recovery. This indicates good alignment between importance and effectiveness. There are notable exceptions, however, such as the high importance and low effectiveness of current efforts related to inadequate political support for funding and recovery actions in the NC and BE and to a lesser degree in the SCY.

With respect to the two questions regarding barriers to delisting included only on the YES survey, respondents rated the effectiveness of efforts to address these barriers, on average, at 2.23 and 2.29, respectively; between “not very effective” and “somewhat effective.” Given the relatively high importance respondents assigned to these barriers to delisting, the relatively low scores for effectiveness may indicate this is another area in need of attention.

Table 9 lists a number of factors that may be limiting the effectiveness of current IE&O efforts, along with the average rank for that factor. Survey respondents rated the factors on a scale from 1 to 3, with 1 meaning the factor is not important, 2 meaning it is somewhat important and 3 meaning it is very important.

Two limiting factors ranked among the most important in all 5 ecosystems: other job duties and lack of operating funds. This reflects the lack of positions dedicated primarily to grizzly bear IE&O, along with competing demand for staff time and available funding. Another factor rated at least somewhat important in all 5 ecosystems was the inability to measure effectiveness of current efforts. Other limiting factors identified as most important were insufficient credibility or public trust in the BE and SCY, conflicting messages from other sources in the YES and BE, a lack of focus for IE&O in the BE, and ineffective use of the internet and social media in the BE and YES.

EMAIL SURVEY OF I&E SUBCOMMITTEE

A final survey was administered to the IGBC I&E Subcommittee, which consists of the current I&E chair in each ecosystem, to gather information about coordination of IE&O at the ecosystem level. The chair of the I&E Subcommittee was asked about the functioning of the Subcommittee.

Four of 6 I&E Subcommittee members (the SCY has 2 co-chairs) responded to the survey. The YE member, who is the current chair of the IGBC I&E Subcommittee, provided information about the Subcommittee.

Of the four ecosystems that responded to the survey, the YE is the most active with the broadest participation by agency and NGO staff. This I&E group meets regularly in conjunction with the YE Subcommittee, and as needed to fulfill tasks assigned by the YE Subcommittee. Coordination could be further improved if I&E staff were given more time and support to work on grizzly bear IE&O.

I&E subcommittees for the NCDE and SCY involve only Forest Service and Montana FWP staff. They use email and teleconferences to coordinate and occasionally meet in conjunction with the ecosystem subcommittees. Coordination could be improved if the groups had clearer direction from the ecosystem subcommittee and IGBC Executive Committee regarding priorities and expectations for IE&O.

The I&E subcommittee for the NC is the least active of the four reporting. Although several agencies have positions assigned to participate, some of these positions have been vacant for several years, so there is no link to those agencies. Although NGOs are not recognized as members of the NC I&E subcommittee, the few members work closely with GBOP staff who have largely taken over responsibility for IE&O in the NC. Coordination could be improved by filling the vacant positions and making IE&O a priority for those and other staff.

The overall IGBC I&E Subcommittee is not currently active, according to the chair. Not all ecosystem I&E Chairs participate and the group struggles for lack of clear direction. The one task the group does complete each year is gathering, ranking and approving proposals for use of the \$36,000 the IGBC makes available for IE&O efforts.

Coordination would be improved if the IGBC established a full time IE&O advisor position, similar to the other advisor positions so the individual could focus entirely on IGBC needs. As it is, agency staff must find ways to fit coordination of IE&O with other ecosystems into all their other job duties.

As an alternative, WMI can provide some level of coordination under the existing agreement with the IGBC. While funds directed to this function may reduce funding available for production of materials, the benefits of improved coordination may more than offset that impact.

CHAPTER 2 – OVERARCHING ISSUES & RECOMMENDATIONS

NEED FOR CLEAR DIRECTION FOR IE&O

Current IE&O efforts across the 5 recovery ecosystems have evolved without clear direction from the Executive Committee. While many of the efforts reflect the professional abilities and commitment of the staff involved, they lack a unifying purpose and guiding principles to provide a “frame of reference” for planning, implementation and evaluation for IE&O. The IGBC Executive Committee could provide additional guidance to the subcommittees and NGO partners regarding IE&O by adopting a vision and guiding principles that are general enough to enable each ecosystem to tailor its IE&O to local circumstances, yet specific enough to clearly communicate the committee’s expectations for IE&O.

A draft vision and guiding principles were presented to workshop participants for their consideration. Based on feedback at the workshops, the following vision and guiding principles are recommended to the Executive Committee:

Vision Statement

Information, education and outreach efforts of IGBC member agencies and their partners in the conservation community instill human attitudes, beliefs, and behaviors that enhance public safety, promote coexistence of people and bears, and support recovery, delisting and ongoing management of grizzly bears.

Guiding Principles

IE&O efforts of the IGBC member agencies and their partners in the conservation community should:

- *Focus on the highest priority issues affecting human safety; coexistence of people and bears; recovery, delisting and management in each ecosystem*
- *Be proactive and adaptive*
- *Be based on the best available science, knowledge, and experience*
- *Have realistic objectives and outcomes that can be, and are, evaluated in a cost-effective way*
- *Address the proper audiences*
- *Convey age- and audience-appropriate messages*
- *Use effective and efficient communication techniques and media*
- *Take advantage of partnerships and opportunities to leverage resources*

Following review and approval by the IGBC Executive Committee, this vision and set of guiding principles can be used to develop, implement and evaluate IE&O programs or efforts.

THE PRIORITY OF IE&O

A common issue identified by agency personnel and NGOs was insufficient time or resources dedicated to IE&O. Virtually every agency employee and many in the NGOs indicated the demands of other duties affected their ability to deliver IE&O related to grizzly bears. This issue is not unique to grizzly bears and almost any program area would benefit from additional personnel or funding. However, the underlying tension related to available time and resources reflects some uncertainty about what priority to place on grizzly bear IE&O.

The IGBC Executive Committee clearly recognizes that IE&O is a critical element of the overall effort to recovery grizzly bears. The fact that the committee has allocated about \$75,000 each year to IE&O from the total IGBC budget is one indicator of the importance of IE&O to the IGBC. Field staff and NGOs value this funding and make good use of it.

By commissioning this report, and focusing attention on ways to make IE&O more strategic and effective, the IGBC can help clarify its priorities for IE&O. It is important to recognize, though, that without committing additional resources to IE&O or assigning more personnel time to work on this issue, gains in the effectiveness of IE&O to advance recovery and delisting will be incremental, not exponential.

RELATIONSHIPS WITH NGOS

The IGBC has benefitted substantially from partnerships with NGOs. In particular, the Center for Wildlife Information (CWI) has provided materials that are well designed, attractive, relatively low cost and popular with IE&O staff and the public. However, CWI materials developed primarily for the national “Be Bear Aware and Wildlife Stewardship” campaign do not meet the needs for all aspects of IE&O for the IGBC. The IGBC should continue using CWI products when and where they mesh with IGBC IE&O needs and explore ways CWI can help leverage IGBC funding, but not limit itself to any single source of materials.

The IGBC has also benefitted substantially from its relationship with the Grizzly Bear Outreach Project (GBOP) in the NC and SCY ecosystems. GBOP’s non-advocacy approach and hiring of local staff make it a highly credible and effective partner. Other NGOs, including Living With Wildlife Foundation (LWWF), National Wildlife Federation (NWF) and Defenders of Wildlife (DOW) have worked with IGBC on a number of projects related to sanitation and securing attractants. The Vital Ground Foundation (VGF) and other NGOs focused on landscape conservation and securing linkage areas for grizzly bear populations are important partners for the IGBC. These and other NGOs allow agencies to leverage their limited IE&O resources and to reach some audiences or deliver some messages that the agencies cannot.

At the same time, agencies need to recognize two potential consequences of being too dependent on NGOs. First, the public may disassociate the agencies from recovery issues if an NGO is providing all, or

nearly all, of the IE&O without any state identify or presence. Second, if economic factors influence an NGO's ability to provide services, IE&O programs will suffer, unless the agencies are able to quickly "backfill" the deficit. Both of these impacts were identified as having some impact in the NC.

Finally, while there are many ways and times the IGBC and NGOs can work together, differences between the IGBC and an NGO on some issues such as delisting, can compromise the ability to work together. The IGBC needs to weigh the severity and consequences of the disagreement, along with the impact of a partnership with an NGO that may be simultaneously working with, and litigating against, the IGBC or a member agency, on the effectiveness of the IGBC with its overall audience.

COORDINATION OF IE&O

The IGBC needs to improve coordination of IE&O across all 5 ecosystems through its overall I&E Subcommittee and ecosystem-level I&E working groups. This would help the IGBC develop clear, concise and consistent messages related to a number of issues such as use of bear spray or securing attractants. It would also reduce confusion that results when the public receives too many different, and sometimes conflicting, messages from various agencies or NGOs. Improved coordination could also identify additional partnership opportunities.

One way to increase coordination would be to provide additional, dedicated time for one or more agency employees to focus on this issue. Given current constraints on agency budgets and staffing levels, that may not be feasible.

An alternative would be to have WMI assist with coordination of IE&O for the IGBC through the existing cooperative agreement. This could include promoting communication between subcommittees, helping with development of IE&O plans, evaluating IE&O efforts, and providing content management for the IGBC website.

NEED FOR MEASUREABLE OBJECTIVES AND MONITORING

The inability to measure the success of IE&O efforts was rated by agencies and NGOs as an important limiting factor across all 5 recovery ecosystems. Few programs have measureable objectives and most survey respondents indicated that effectiveness of IE&O programs is not currently monitored in any way. A public opinion survey conducted in the SCY was cited as providing a potential baseline against which to measure success, but there are currently no concrete plans to repeat the survey.

The IGBC needs to establish reasonable objectives for IE&O that can be measured in cost-effective ways to monitor and adapt programs. Objectives could be based on outputs, such as number of people contacted in the field, students reached through hunter education classes or programs delivered. These are easier to measure, but do not provide as clear an indication of the impact of IE&O as objectives based on outcomes, such as a change in the number of people observed carrying bear spray in a

National Park, reduced frequency of conflicts in an area, or changes in public opinion in sequential surveys.

Objectives and means of monitoring progress will need to be tailored to the circumstances and resources available in each ecosystem. If the Executive Committee concurs with the need to establish and monitor objectives for IE&O programs, WMI is prepared to assist the subcommittees with that process.

UNIQUE ATTRIBUTES OF EACH ECOSYSTEM

Although there are some common issues that span all 5 ecosystems, each one is at a different point on the recovery spectrum and has unique circumstances that must be factored into the design and execution of IE&O. Each subcommittee needs to focus on the issues it faces and use messages and tools tailored to fit the audiences affecting recovery and delisting for that specific ecosystem. A “one-size-fits-all” approach to IE&O will not be effective. Subsequent chapters of this report address the ecosystems individually and provide recommendations specific to each one.

CHAPTER 3 – NORTH CASCADES ECOSYSTEM

CURRENT OPERATING ENVIRONMENT

The NC ecosystem contains, or is adjacent to, the largest number of people of any of the five recovery areas. The large, urban centers near Puget Sound are home to a relatively affluent and diverse human population, many of whom are supportive of grizzly recovery in the NC. At the same time, many of these people are distanced from nature and the land due to where and how they live, so grizzly bears are rarely “top of mind” for most of these people.

In contrast, the human population on the east side of the Cascades in Washington is predominately rural, more utilitarian in values, more directly connected to nature and the land economically and in lifestyle. In this area, support for recovery of grizzly bears is tempered by concerns about the impact of bears on economic opportunities, human safety and freedom of choice. The ongoing recovery of wolves in this area likely increases sensitivity to issues associated with grizzly bears, as well.

The NC has the fewest grizzly bears of any of the occupied ecosystems. The number of bears living in the NC is estimated at less than 20. Recovery of grizzly bears in the NC is closely linked with, and to some degree dependent upon, conservation of grizzly bears in adjacent portions of British Columbia, Canada (B.C.). The grizzly population in this portion of B.C. is estimated at no more than 25 to 30 bears and considered “at risk.”

Due to the limited number of confirmed sightings of grizzly bears on either side of the border, and the failure to detect grizzly bears in recent hair snaring surveys, some question whether there are any or enough grizzly bears in the ecosystem to consider it occupied. This question has led to arguments over whether translocation of bears into the ecosystem (which is generally viewed as necessary for recovery) would constitute augmentation or reintroduction. This issue has stalled recovery efforts in Canada and has implications for recovery in the U.S.

Two other significant factors affect the operating environment for IE&O in the NC. One is the perceived lack of commitment by the U.S. FWS to provide policy-level support and financial resources to the decision-making process necessary to advance recovery. Another is a state statute that precludes the Washington Department of Fish and Wildlife from expending funds to translocate grizzly bears into the NC from outside the state. Combined, these factors create uncertainty for IE&O efforts regarding what the goals and focus of IE&O should be in the NC.

Current IE&O efforts in the NC are focused mainly on human-bear safety (especially sanitation and attractant management) though most of this relates to black bears, as opposed to grizzlies; bear identification; and the status of grizzly bears. A range of brochures, bear identification cards and other materials are available and used. Both the agencies and GBPO provide programs to schools or public groups, hunter education classes, and use one-on-one contacts to share information. The National Park

Service provides information to North Cascades National Park visitors. There is one bear education trailer in the NC and demand for the trailer exceeds staff time and resources available to use it. GBOP has produced a number of public service videos that are shown on television stations in the region and exposure has been substantial, boosted in part by the broadcast of the PBS series, “Bears of the Last Frontier” starring Chris Morgan, co-founder of GBOP.

The NC Subcommittee has regularly requested IGBC I&E funding to help support GBOP efforts and has received \$7,000 to \$ 8,000 for 5 of the past 6 years for that purpose. (Funding in 2010 was used to purchase the bear education trailer.) The GBOP has conducted public opinion surveys in counties to the west of the NC ecosystem that identified strong support there, even among rural residents. In the eastern part of the state, the GBOP provides outreach to communities and individuals to share information about grizzlies and reduce opposition based on lack of or misinformation. The GBOP is broadening the scope of its programs to include other species (black bears, cougars and wolves) and considering changing the name of the organization, accordingly.

STRENGTHS AND WEAKNESSES OF CURRENT IE&O EFFORTS

Participants in the NC workshop identified the following as strengths of current efforts:

- A strong partnership between the agencies and GBOP. This relationship leverages the limited resources of both parties, and each benefits from the other’s credibility. GBOP’s objective, non-advocacy approach and recruitment of local community members for staff enables them to approach individuals and audiences in a non-threatening manner.
- The “star power” associated with Chris Morgan as a result of his internationally recognized efforts on bear conservation and PBS television program provides the opportunity to use his persona to increase media and viewer attention and interest in IE&O messages.
- Both agency staff and GBOP enjoy good working relationships with local media outlets. These relationships, combined with the high interest in grizzly bears in general in the North Cascades media market makes information or stories produced by agencies and GBOP attractive to the media. These relationships also result in reporting that is generally accurate and positive toward recovery efforts (primarily in the urban west side). In addition, the diverse range of media outlets, and large population exposed to those media makes it possible for IE&O to reach a substantial audience at relatively low cost per capita.
- Good relationships between agency staff and the Woodland Park Zoo and Northwest Trek also provide the opportunity to use these venues to reach large audiences with positive messages at relatively low cost per capita.
- The use of black bears as a “surrogate” for grizzly bears, in communicating the need for attractant management and recent expansion of GBOP’s program to address other species (e.g. lions and wolves) reduces the focus on grizzly bears as a “problem” species.

Participants in the workshop identified the following weaknesses in the NC programs:

- The agencies' dependence on GBOP to produce and convey IE&O exposed a major vulnerability during recent years when funding sources for the nonprofit sector declined. With reduced funding from sponsoring agencies, foundations and other donors, GBOP was less able to fulfill the needs of the IGBC agencies. In addition, the agencies' reliance on GBOP reduces the public profile of the agencies with respect to grizzly bear recovery, potentially leading to the perception that recovery is being promoted by an NGO, rather than as part of a formal recovery plan developed and endorsed by the government.
- GBOP's non-advocacy approach, cited as a strength, above, is also a weakness in that it limits the group's ability actively to promote recovery.
- Inconsistency of messages related to the importance of recovery efforts. While the NC Subcommittee and the IGBC Executive Committee place a high priority on initiating an EIS to evaluate augmentation or reintroduction to accelerate recovery, the FWS's budget request has not prioritized funding for the EIS. This creates confusion and frustration within the agencies and their partners.
- Turnover of staff in some agencies has led to inconsistency of messages related to reporting of bear sightings, food storage, what to do in an encounter. The subcommittee has not developed clear, consistent, concise messages or an "elevator speech" that can be communicated to and by all staff.
- There are not enough "hands on" materials (mounts, hides, etc.). There is only one bear education trailer in the ecosystem and demand for its use far exceeds the capability of staff to use it effectively, given the huge audience.
- Efforts have not been targeted at some strategically important audiences such as key political figures or potential benefactors. Without a specific focus on these individuals, general messages have either not reached, or not affected them.
- The differences between the public interests and audiences on the east and west sides of the Cascades, as well as the cultural differences between the United States and Canadian audiences make it difficult to develop and deliver consistent messages in ways that will communicate effectively with such a diverse population. Efforts to date have not been successful in motivating effective action within the broad base of support for recovery of grizzly bears in the large human population on the west side of the NC. Nor have effective means been developed to reach the predominantly rural and politically important individuals on the east side of the Cascades to overcome resistance to recovery.
- Other listed or sensitive species (e.g. listed salmonids, spotted owls, bull trout) are a higher priority for agency resources than grizzly bears. The absence of grizzly bears creates fewer problems for resource managers and resource industries than the presence of these other species. Further, the legislative restriction on the Department of Fish and Wildlife's participation in grizzly bear recovery activities puts a damper on specific efforts of relocation from out of state.
- Although the agencies and GBOP have a good working relationship, it is not always easy for GBOP or other NGO's to access and use information agencies have that could promote recovery.

In addition, neither agencies nor NGO's have current information on public opinions at the legislative district level that could be useful in dialog with elected officials.

BARRIERS TO RECOVERY AND EFFECTIVENESS OF IE&O EFFORTS RELATED TO THE BARRIERS

Of 15 potential barriers to recovery in the NC that are a function of human attitudes, beliefs and behaviors that could be addressed through IE&O (Table 7), survey respondents from agencies and NGO's identified the following 5 as most important, in descending order:

1. Inadequate political support for funding necessary to recover grizzly bears.
2. Inadequate political support for actions necessary to recover grizzly bears.
3. Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.
4. Lack of public awareness of the status of grizzly bears and the need for recovery under the Endangered Species Act.
5. Inadequate consideration of the needs of grizzly bears in land use or development planning.

Discussion about these, and other, barriers at the workshop indicated that some of the fear associated with grizzly bear recovery is based on human safety concerns, as some recreationists perceive grizzlies will make hiking or camping unsafe. However, most of the fear centers on economic impacts. Some people in the logging industry are concerned that recovery will impact timber harvest opportunities and some in the ranching community are concerned about the potential for depredation on livestock or increased operating costs. These concerns have been elevated by the current dialogue in the state relative to wolf recovery. These concerns translate into political resistance to recovery.

The relatively high ranking of inadequate consideration of the needs of grizzly bears in land use or development planning in the survey may be linked to the lack of political support for recovery and/or lack of public awareness of the status of grizzly bears and the need for recovery. Discussion about this issue at the workshop indicated that the needs of grizzlies are rarely raised in local planning discussions, again reflecting that grizzlies are not "top of mind" with many people in the NC.

Bear-human conflict due to inadequate handling of attractants was identified as the next-most important barrier to recovery in the NC by survey respondents (Table 7). Discussion at the workshop indicated this barrier may have ranked relatively high due to conflicts with black bears, given the low number of grizzlies in the NC.

When asked to rate the effectiveness of current IE&O efforts related to these barriers, respondents on average ranked efforts related to 4 of the 5 most important barriers less than "somewhat effective" (Table 8). The gap between relative importance and perceived effectiveness was largest for the first 2 barriers. Only regarding the issue of bear-human conflicts resulting from inadequate handling of attractants did respondents on average rate current efforts as "somewhat effective" or higher.

When asked to rate factors that limit the effectiveness of IE&O in the NC, survey respondents ranked other job duties and priorities, inability to measure effectiveness, insufficient funding, conflicting messages from other sources, and ineffective use of the internet and social media as most important (Table 9). All these factors were rated between “somewhat important” and “highly important.”

RECOMMENDATIONS

To maximize the strategic impact of IE&O in the NC, the IGBC should maintain its partnership with GBOP and other NGOs and:

1. Increase the agency profile in recovery-related IE&O.
2. Continue efforts related to sanitation and attractant management, but pursue alternative funding sources appropriate to reducing conflicts with black bears to enable redirection of IGBC funding to grizzly-specific IE&O.
3. Explore the potential to secure private, philanthropic or foundation funding to produce and broadcast a feature-length video, hosted by Chris Morgan, about the need to, and value of, recovering grizzly bears in the NC.
4. Focus targeted outreach on specific, strategic audiences including the ranching and agricultural community, timber and energy-development industries, and local elected officials to develop an improved understanding of their resistance to recovery and develop support for funding and actions needed to recover grizzlies in the NC.

These recommendations are made with the caveat that the IGBC Executive Committee must first clarify the extent to which it believes the current political and fiscal environment will enable the agencies and NGO’s to make significant progress toward recovery. This decision should be made in consideration of circumstances in British Columbia, given the connected nature of recovery efforts on both sides of the border.

The fact that the FWS budget request at the regional and national level does not prioritize funding for the Environmental Impact Statement needed to advance decision-making about means to achieve recovery is interpreted as a lack of commitment on the part of the FWS to pursue recovery actions. This may contribute to the finding that “conflicting messages” is one of the factors limiting the effectiveness of IE&O in the NC.

Another factor cited as limiting effectiveness of IE&O was other job duties and priorities. Forest Service and state agency staff tasked with priority assignments related to other species may be reluctant to invest the time, resources and energy needed to implement the aforementioned strategies unless they see higher-level decision-makers within the FWS or IGBC pressing to secure funding for the most critical step needed to advance recovery.

A number of IE&O positions within state and federal agencies are reportedly vacant due to budget constraints. Neither state nor federal budgets are likely to increase in the near term, so the IGBC needs

to make an honest assessment about the potential to make significant progress in the NC in the next 5 to 10 years. Sustained uncertainty about the direction for recovery will continue to cripple IE&O in the NC.

If the IGBC believes advancing recovery is feasible, the agencies involved should elevate their profile in recovery-related IE&O. The importance of the GBOP to IE&O in the NC cannot be overstated, and support for GBOP should not be reduced. However, the state and federal agencies have very limited direct involvement with IE&O. This can create uncertainty in the public with respect to whether efforts to advance recovery are based on the interest of an NGO or are a legitimate government function and priority, based on the Endangered Species Act.

Current efforts directed at reducing bear-human conflict as a result of inadequate handling of attractants should be continued, and if possible, strengthened. These efforts are primarily targeted at minimizing problems with black bears, but will help create an environment that minimizes the potential for conflicts with grizzly bears in the future. By emphasizing the need for sanitation efforts related to black bears, rather than associating this effort with grizzly bear recovery, agencies and NGO's can reduce opposition to grizzly bear recovery based on people's resistance to change. The fact that sanitation is needed to deal with the existing black bear population justifies use of funding sources not tied to grizzly bear recovery and the IGBC agencies should explore alternative funding sources to address sanitation. This would enable the IGBC to redirect its limited resources to IE&O that more specifically addresses recovery of grizzly bears.

As important as IE&O related to sanitation is, however, it will do little to advance recovery of grizzly bears in the NCE. To move the needle in this ecosystem, IE&O must address the lack of political support for the funding and actions necessary to recover this population as well as the underlying causes – lack of awareness of the need for recovery and opposition based on fear of the impacts of grizzly bear recovery. IE&O efforts must consider the diverse socio-economic nature of the NC and strategically target the sources of opposition and political decision-makers that control funding and policy with respect to recovery efforts. IE&O in the NC must also be closely coordinated with conservation efforts in B.C.

There appears to be broad public support for recovery efforts in the population living on the west side of the NC. To date, though, agencies and NGO's have been unable to translate that support into sufficient political action to overcome resistance from more rural areas east of the Cascades. This may explain the survey respondents' high ranking of lack of awareness of the status of grizzly bears and the need for recovery efforts as a barrier to recovery.

Current IE&O efforts using the bear education trailer at local fairs, sportsmen's shows, the Woodland Park Zoo and other venues should be continued. However, given the limitations on staff time, the IGBC needs to find an alternative way to increase awareness of the status of grizzlies in the NC, the need for recovery and ways that legitimate concerns about an increase in grizzly numbers can be addressed.

The IGBC should explore the potential to produce and broadcast a full-length program specifically focusing on the need to, and value of, recovering grizzly bears in the NC in cooperation with GBOP. The IGBC may be able to mobilize public support, and generate political support, for funding and actions necessary to recover grizzly bears in the large urban areas by using the connections and “star power” of GBOP and Chris Morgan who is now an internationally recognized and respected naturalist. Production cost would likely be high, but there are potential funding sources (i.e. philanthropies and foundations) in the Puget Sound area that could be approached to support the production.

As a matter of both equity and political pragmatism, the IGBC should not focus solely on mobilizing the support among the urban population to advance recovery. The current efforts of the GBOP directed at addressing the concerns of rural residents about the impacts of grizzly bear recovery should be expanded. This will indirectly affect political decisions regarding funding and action. In addition, political decision-makers should be directly targeted by outreach efforts to address their concerns which cause resistance to recovery funding and actions.

Workshop participants identified the logging and energy industries, ranching and agricultural producers, and recreation and tourism sectors as key audiences for outreach to address concerns about the impacts of grizzly bear recovery (see Appendix B, NC Workshop Summary). A recurrent strategy identified as a way to reach these audiences was one-on-one and credible peer interaction. Bringing livestock producers from the NCDE who have successfully adapted to the recovery of grizzly bears on the Rocky Mountain Front to meet with farm and ranching groups in the NC would be more effective than agency presentations for these audiences. The NC Subcommittee should review the audiences listed in Appendix B, identify which are most influential in generating opposition to recovery, and initiate outreach to those audiences to understand and address their concerns.

The influence of local, elected officials (e.g. County Commissioners and state/provincial legislators) should not be overlooked. In the current political environment, at least in the U.S., a relatively small number of individuals can have a significant impact on decisions affecting funding and policy related to grizzly bear recovery in the NC. Outreach to these elected officials designed to understand and address their concerns about grizzly bear recovery should also become a priority for the NC. This outreach will need to be done by higher-level staff within IGBC member agencies to be effective.

In contrast to the foregoing, if the political and economic realities do relegate efforts to advance recovery of this population to a low priority at this time, staff should be so advised and the IE&O strategy adjusted, accordingly. Current efforts related to sanitation and living with large predators should be continued or expanded with broadened sources of funding appropriate to the species most involved. NC Subcommittee members should pursue opportunities to engage the strategic audiences east of the Cascades mentioned above in dialog about grizzly bear recovery as time permits, but part of the message conveyed should be that there are no imminent plans to conduct an EIS which would determine the need for relocation of grizzly bears to the NC. Clarifying that any consideration of relocating bears into the NC is not currently being pursued may reduce tension surrounding this issue and create additional opportunities to explore concerns about the eventual recovery of this population.

CHAPTER 4 – BITTERROOT ECOSYSTEM

CURRENT OPERATING ENVIRONMENT

The human population in and around the BE recovery zone is predominantly rural and the economy is based largely on agriculture, ranching, timber and other land-use related activities. Many residents remain closely tied to the land through employment and lifestyles. The majority of local residents and Idaho citizens overall are politically conservative and many are skeptical of the federal government and requirements of the Endangered Species Act.

There are no known grizzly bears in the BE at this time. One grizzly bear that originated from the SCY was killed by a hunter who mistook it for a black bear in 2010 in the Kelly Creek drainage in the northeast corner of the BE. Efforts to document the presence of grizzlies through hair snagging and remote cameras during the past two summers have provided no evidence of grizzly bears in the BE.

In much of Idaho, and to some degree in adjacent portions of Montana, the reintroduction and recovery of wolves has created or intensified animosity toward the Endangered Species Act and resistance to reintroduction of grizzlies. The “window of opportunity” that may have existed in the late 1990’s or early 2000’s to proceed with implementation of the record of decision on the environmental impact statement that proposed reintroducing grizzlies to the BE is closed.

The IGBC’s current 5-year plan for the BE calls for outreach to inform people in the area about the potential for, and consequences of, natural recovery of this population and efforts to identify and secure critical linkage areas between the BE and adjacent ecosystems, especially the SCY and NCDE to enable natural re-colonization. Recent IE&O efforts by agencies and NGO’s in the BE have focused mainly on sanitation, reducing attractants, and providing bear identification information. As in the NC, these efforts are important for reducing the potential for conflicts with black bears and set the stage for eventual recovery of grizzly bears.

The BE Subcommittee received \$2 - \$7,000 of IGBC I&E funding each year from 2007 – 2011 for outreach related to sanitation in the backcountry, bear identification, coexistence with bears and awareness of the status of grizzlies. In 2010 and ’11, \$2,100 of this funding was used to help support a seasonal Wilderness Ranger position that provided information and outreach related to bears in the Moose Creek Ranger District. The subcommittee did not request any IGBC I&E funds for 2012.

The Idaho Department of Fish and Game (IDFG) recently launched a bear ID program on their website and encouraged hunters and others to use the site to learn how to distinguish bear species. IGBC funding provided some support for development of this site. Use is voluntary at this point, but IDFG personnel have discussed making testing mandatory for black bear hunters, as is the case in Montana.

STRENGTHS AND WEAKNESSES OF CURRENT IE&O EFFORTS

A workshop scheduled for the BE was cancelled due to low response rates to the invitation to the workshop and cancellation of the fall BE Subcommittee meeting. Accordingly, no information on the strengths and weaknesses of current IE&O efforts comparable to that gathered for other ecosystems is available for the BE. The fact that the workshop and BE Subcommittee meeting were cancelled may indicate the biggest weakness in this ecosystem – the low priority given to recovery by agency staff and NGOs.

One strength identified from reviewing BE Subcommittee reports is the use of Wilderness Rangers to convey messages about the importance of securing attractants in backcountry areas. The one-on-one contacts made in the field are one of the most effective ways to target a key audience. Whether this position will continue, without IGBC funding in 2012, is unknown.

A potential strength for future IE&O related to the BE is the work of the Vital Ground Foundation and other NGO's focused on habitat conservation in linkage areas.

BARRIERS TO RECOVERY AND EFFECTIVENESS OF IE&O EFFORTS RELATED TO THE BARRIERS

Of 15 potential barriers to recovery in the BE that are a function of human attitudes, beliefs and behaviors that could be addressed through IE&O (Table 7), survey respondents from agencies and NGO's identified the following 5 as most important:

1. Inadequate political support for funding necessary to recover grizzly bears.
2. Inadequate political support for actions necessary to recover grizzly bears.
3. Black bear hunters killing grizzly bears by mistake because they cannot tell the difference between species.
4. Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.
5. Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.

The first 3 barriers were equally ranked as "very important." The other 2 were also equally ranked, and just slightly lower than the others.

Four of these barriers are the same as those identified for the NC. The only difference between the two ecosystems was that mistaken identify kills of grizzlies by black bear hunters ranked in the top 5 in the BE, as opposed to lack of awareness of the status of grizzly bears in the NC. This is likely due to the recent accidental grizzly kill in Kelly Creek. News regarding that incident, along with the history associated with development of the EIS that led to the now-suspended decision to reintroduce grizzly bears to the BE, likely increased public awareness of the status of grizzlies in the BE.

Another similarity to the NC is the relatively high rating of bear-human conflicts related to attractants, even though there are no grizzly bears in the BE to create conflicts. As in the NC, survey respondents may have based their ranking of this barrier on conflicts with black bears. One other possibility is that respondents perceived the potential for conflicts related to attractants, based on the current level of sanitation in the BE.

When asked to rate the effectiveness of current IE&O efforts related to the same 15 barriers to recovery, none of the current efforts in the BE were rated, on average, “somewhat effective” or higher (Table 8). Respondents rated efforts related to overcoming inadequate political support for recovery funding or actions between “not currently addressed” and “not very effective.” The gap between relative importance and perceived effectiveness was largest for these 2 barriers. The next largest gap between importance and effectiveness was in relation to efforts to overcome opposition to recovery based on fear of potential attacks on people, livestock or property or due to other conflicts. In the BE, the current controversy of wolf recovery and management may be one of the “other conflicts.”

Efforts related to black bear hunters killing grizzlies by mistake received the highest effectiveness ranking in the BE, coming close to “somewhat effective”. Efforts related to reducing conflicts due to inadequate handling of attractants ranked about midway between “not very effective” and “somewhat effective.”

The most important factors limiting the effectiveness of IE&O in the BE identified by agency and NGO staff include other job duties or priorities, insufficient credibility or public trust in the agencies, ineffective use of the internet and social media, insufficient operating funds, conflicting messages from other sources, and lack of a clear focus for IE&O efforts (Table 9). Other factors rated as at least “somewhat important” included lacking the right messages to reach key audiences, lack of coordination among agencies and the inability to measure effectiveness.

RECOMMENDATIONS

To increase the effectiveness of IE&O to advance recovery in the BE, the IGBC and their NGO partners should:

1. Continue efforts related to sanitation and attractant management, but pursue alternative funding sources appropriate to reducing conflicts with black bears to enable redirection of IGBC funding to grizzly-specific IE&O.
2. Increase IE&O on the importance of maintaining effective connectivity between the BE and other ecosystems.
3. Emphasize the importance of bear identification in hunter education and outreach.

As in the NC, addressing attractant management in the BE will pay immediate benefits related to black bears. This reduces public concerns about bear safety in general, and may help prevent future conflicts as grizzlies immigrate into the BE. The one-on-one contacts made by field staff such as Wilderness Rangers is an effective way to establish and build relationships with the public that can create trust and

the ability to address difficult subjects, like grizzly recovery. Also as recommended for the NC, the agencies should pursue non-ESA funding to support this work, given the focus on black bears.

The potential for natural recovery is a significant difference between the BE and NC, where lack of political support for the funding and actions to support recovery was also identified as an important barrier to recovery. This difference suggests that it may be more strategic for the IGBC to focus IE&O efforts on maintaining connectivity than to expend energy attempting to build political support for reintroduction. In addition to avoiding a difficult head-on challenge, efforts related to maintaining connectivity will benefit a host of species in addition to grizzly bears and can be promoted on the basis of those species, outside the context of the ESA.

Furthermore, maintaining connectivity between the BE and other part of the Northern Rockies will continue to be important regardless of how grizzlies eventually recover in the BE. Efforts related to securing linkage areas are timely, given the rate of change on the landscape. Unless these areas are secured within the next decade or so, the potential for natural re-colonization and long-term benefits will be greatly reduced.

Given that the current approach to recovery in the BE is through natural re-colonization, in addition to maintaining connectivity, agencies must do all they can to preclude any additional accidental mortalities of grizzlies that move into the BE. Bear identification should be part of the hunter education curriculum and the need to be certain of your target before shooting should be a focused message to all bear hunters. Idaho should consider the pros and cons of making a bear identification test mandatory for bear hunters, as is the case in Montana.

One important similarity between the BE and the NC is the need for the IGBC Executive Committee to give the subcommittee, agency staff and NGO's a reason to prioritize any recovery actions. The prolonged timeline associated with natural recovery, the controversy over wolf recovery and other demands on staff make IE&O related to grizzly bear recovery a low priority for most agency staff in the BE. The above-mentioned strategies will only be implemented by staff if they perceive that doing so is important to their organization, and they are provided the time and resources to do the job.

Chapter 5 Selkirk-Cabinet-Yaak Ecosystem

CURRENT OPERATING ENVIRONMENT

The SCY includes two separate areas of grizzly bear habitat. The Selkirk portion of the recovery zone includes parts of northern Idaho, northeast Washington and adjacent southeastern British Columbia, Canada. The grizzly bear population in this part of the SCY is estimated to be around 50 – 60 bears, equally divided between the U.S. and Canada.

The Cabinet-Yaak portion is located in northwest Montana and northern Idaho. The grizzly population in this part of the recovery zone is estimated at about 40 bears. A transportation corridor along the Kootenai River that includes U.S. Highway 2 and the Burlington Northern Rail Road line creates a barrier to grizzly movement between the Yaak River drainage in the northern part of this area and the Cabinet Mountains to the south.

The fragmented nature of this ecosystem, combined with low bear numbers presents a difficult conservation challenge. Current recovery efforts for this population are focused on three main strategies: reducing human-caused mortality to the few bears that are present; augmentation of the population from the adjacent NCDE to accelerate population growth; and maintaining or improving connectivity within the SCY and between the SCY and other parts of the meta-population.

The human population in and around the SCY recovery zone is predominantly rural and politically conservative. The economy is closely tied to resource extraction including logging and mining, agriculture, and ranching and much of the area is economically depressed. Many residents remain closely tied to the land through employment and lifestyles. The international composition of the SCY also adds complexity to recovery efforts.

There are a number of immigrant communities and a substantial, seasonal workforce in the SCY for whom English is not their first language. Cultural differences and language barriers complicate IE&O in the SCY. Although there are no National Parks within the SCY the area attracts a large number of summer visitors, many of whom know little or nothing about how to recreate in grizzly country in ways that preclude bear-human conflicts.

Current IE&O in the SCY is focused on reducing bear-human conflicts related to management of attractants, safety in bear country, reducing unwarranted fear of bears, bear identification – especially among black bear hunters – and the need to reduce bear mortality. Montana Fish, Wildlife and Parks has one full-time position working on grizzly bear outreach in the SCY, supported with mitigation funding from a mining company. Other agency positions in Montana, Idaho and Washington spend time devoted to IE&O. Maintaining local, knowledgeable staff in the rural communities contributes substantially to the effectiveness of IE&O in the SCY. The SCY has received between \$6 and \$8,000 per year in IGBC I&E funding for the past several years to support one or more of these positions for the past 3 years.

In addition to the IGBC agencies, several NGOs are active in the SCY. Among these are GBOP which has started working in the part of eastern Washington, the Kootenay Valley Resource Initiative (KVRI) in northern Idaho, WildBC Habitat Conservation Trust and Birchdale Ecological in Canada, and the Vital Ground Foundation (VGF) which focuses on conserving linkage areas in the SCY and other ecosystems.

One controversy the IGBC faces in the SCY is ongoing lack of faith in agency estimates of grizzly bear numbers in the Cabinet-Yaak portion of the ecosystem among some local residents. The courts have relied on the low official estimate in several rulings that have stopped resource development projects seen as important to the economy by local residents. Disagreement over the number of bears interferes with agency-public dialog over other issues. In response to this, local residents initiated a project to derive a statistically bounded estimate of bear numbers, using hair-snagging and DNA analysis as was done in the NCDE. The need for, and value of, this project has been a divisive issue within the IGBC and affected inter-agency relationships in ways that could compromise IE&O.

STRENGTHS AND WEAKNESS OF CURRENT IE&O IN THE SCY

Participants in the SCY workshop identified the following as strengths of the current IE&O efforts:

- Agencies have local, knowledgeable, respected staff working on grizzly bear outreach.
- NGO's like GBOP, KVRI and the VGF are engaged.
- Good IE&O materials provided by CWI, GBOP and the agencies, along with mounted bears and a bear education trailer are available.
- Public-agency relationships are improving overall and officials in Boundary County, ID and Lincoln County, MT are constructively engaged.
- There are no un-manned waste transfer sites in the U.S. portion of the SCY.
- A public opinion survey of attitudes toward grizzly bears conducted in 2007 provides a baseline against which to measure progress.
- Agency and NGO employees from B.C. regularly participate in discussions and efforts in support of recovery.

Weaknesses identified by the workshop participants include:

- The mix of private and public lands which results in dispersed human population and lack of consistent rules for attractant management.
- The lack of an enforceable rule against leaving unsecured attractants in Idaho.
- Inconsistent prioritization of IE&O by agencies in the SCY.
- Inability to identify or reach important parts of the audience, such as summer visitors.
- Inadequate use of the internet and social media.
- Conflicting opinions on the status of the grizzly population.
- Uncertainty about what would constitute recovery and what it will take to get to that point.
- Inconsistent treatment of attractants, especially garbage north of the border.
- Declining financial support for the local positions that are the "front line" of IE&O.
- Lack of coordination and communication within agencies and NGOs working in the area.

BARRIERS TO RECOVERY AND EFFECTIVENESS OF IE&O EFFORTS RELATED TO THE BARRIERS

Of 15 possible barriers to recovery that are a function of human attitudes, beliefs and behaviors, respondents to the online survey identified the following as the most important in the SCY in descending order:

- Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, barbeques, etc.
- Black bear hunters killing grizzly bears by mistake because they cannot tell the difference between species.
- Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.
- Conflicts between big game hunters and grizzly bears that result in defense of life and property kills.
- Killing of grizzly bears out of fear of potential attacks on people, livestock or property.

The top 3 barriers were all ranked at least “very important” on average; the other 2 ranked nearly as high (Table 7). Four of the 5 all contribute to unsustainable mortality in the SCY population. The ranking of killing out of fear may have been related to a high-profile case in northern Idaho in 2011 involving an individual who shot and killed a grizzly bear that was on his property, but that available evidence did not clearly indicate was an imminent threat.

When asked about the effectiveness of current IE&O in the SCY, respondents rated efforts related to black bear hunters killing grizzlies by mistake highest, but did not rate any efforts, on average, as “somewhat effective” or better (Table 8). Efforts related to the most important barriers listed above fell somewhere between “not very effective” and “somewhat effective,” reflecting a broad perception that IE&O efforts could be enhanced in the SCY.

When asked what factors limited the effectiveness of IE&O in the SCY, survey respondents ranked insufficient funding, demands of other job duties or priorities, insufficient agency credibility and the inability to measure effectiveness in descending order as the main factors. All of these were rated as “somewhat important” to “highly important” (Table 9).

RECOMMENDATIONS

To maximize the strategic impact of IE&O in the SCY, the IGBC should:

- Maintain or increase efforts related to attractant management by agency employees and NGOs in local communities.
- Increase efforts focused on bear identification by black bear hunters and getting all hunters to carry and know how to use bear spray.
- Increase IE&O related to the importance of augmentation and maintaining linkage within the SCY and between the SCY and other areas.

- Leverage local interest and participation in the DNA study to increase awareness of the status of grizzly bears and support for recovery.

Local, knowledgeable employees of agencies and NGOs who have earned the respect of many residents of the SCY are the most effective IE&O “tool” available to the IGBC. Their credibility, responsiveness, and ability to relate to people in the area enable them to convey important messages about managing attractants, living and recreating safely in grizzly range and the need for recovery. These staff members are a vital link to local county officials who have shown increasing willingness to support recovery.

The presence of local staff is also important for reaching some key audiences identified by workshop participants that are not currently being addressed, including: dispersed landowners, “silent neighbors” who are reluctant to notify officials of problems on adjacent properties, immigrant communities or seasonal workforces with language barriers, individuals or communities that are on the fringe of bear distribution, seasonal visitors or agency co-workers. IGBC agencies should do all they can to maintain or increase funding for these positions, as the “front line” of IE&O working to prevent conflicts associated with attractants.

Given the low number of bears in the SCY, every loss represents a significant setback to recovery and “off-sets” expensive efforts to augment the population. Although relatively rare, mistaken identity kills of grizzlies by black bears have occurred. Montana adopted a requirement that all black bear hunters take an online bear identification course before purchasing a hunting license. Idaho recently posted a similar course on their website. Both agencies should do all they can to maximize use and impact of this tool. Other means of alerting bear hunters to the potential presence of grizzlies and the need to be absolutely certain of their target should also be maximized.

Avoiding grizzly deaths in conflicts with big game hunters or people working and recreating in grizzly habitat through increased use of bear spray should be a focus of IE&O. Agencies should provide training on the effectiveness of bear spray and its use and encourage all staff working in the field to carry bear spray. Setting this example for outfitters, hunters and the public is important. The value and utility of bear spray and the need to practice using it should also be a component of all Hunter Education classes and outreach to hunters and outdoor recreationists.

Maintaining linkage within and between the SCY and other ecosystems is vital to recovery and conservation of this population. The IGBC should work with partners like VGF to enhance IE&O related to the importance of linkage. This element of IE&O must be sensitive, though, to public concerns and perceptions that maintaining or restoring linkage means excluding or removing people from the landscape.

Finally, although some discord continues within the IGBC related to the DNA project in the Cabinet-Yaak, this project represents an opportunity for the IGBC to engage local residents in learning more about grizzly bears and developing an increased appreciation for the benefits of recovery. Project staff should do all they can to keep residents informed of the project’s status and progress through a variety of

media, local meetings and one-on-one contacts. Given the involvement of county officials in originating the study, the IGBC should engage the county in IE&O efforts as well.

Chapter 6 – Northern Continental Divide Ecosystem

CURRENT OPERATING ENVIRONMENT

The NCDE is located in northwest Montana. The ecosystem is anchored by Glacier National Park and the Bob Marshall Wilderness Complex, but a significant, and increasing, portion of the occupied grizzly bear range in the NCDE is multiple-use lands in National Forests, state forest land, two Indian Reservations and private lands. Uses of these lands cover a spectrum from large ranches on the Rocky Mountain Front to urban and suburban areas of the Flathead and Whitefish Valleys and the outskirts of Missoula. The complex land ownership and use pattern in the NCDE creates a challenging environment for IE&O.

A USGS-led study using DNA from hair snares estimated the NCDE grizzly bear population in 2004 at 765 bears. Subsequent monitoring of the population trend by Montana FWP indicated the population is growing at about 3% per year, resulting in a current estimate of over 1000 bears. In addition to increasing in numbers, the population is expanding its range, especially to the east and south. Grizzly bears are now commonly found occupying riparian corridors and farmland east of Interstate 15 and at least one bear went east as far as the confluence of the Marias and Missouri rivers. NCDE bears regularly occur as far south as the mountains west of Helena and one NCDE bear was illegally killed on the Mt. Haggin Wildlife Management Area southeast of Anaconda. Grizzlies frequent the Rattlesnake Canyon north of Missoula and have been documented within a mile of the Montana FWP headquarters office within the “urban” area of Kalispell. Concurrent with this range expansion, IE&O must prepare local residents and visitors for the presence of grizzlies in areas where they have been absent for over 70 years.

The human population in the NCDE is also growing, though at a somewhat slower rate over the past few years with the downturn in the economy; it is also highly diverse with respect to knowledge and opinions about grizzly bears. Most people living on the east of the NCDE are long-term, rural residents, living on ranches or in small communities tied to agriculture, logging or other land-based economic activities. Many of these people grew up knowing that grizzly bears were part of the landscape and have a relatively high tolerance for bears. As bear numbers and range increase, however, conflicts are more common and people who did not previously have to deal with bears on their property have to adapt. This trend will strain both IE&O efforts and public support for bears.

To the south and west there are urban centers such as Helena, Missoula, Kalispell and Whitefish as well as smaller communities and ex-urban areas with a mix of long-term and newer residents who have a wide range of experience, views and values related to grizzly bears. Glacier National Park draws hundreds of thousands of visitors from around the globe each summer and the National Forest lands are heavily used by anglers, hikers and hunters who may encounter grizzly bears. Developing ways to reach these audiences is a challenge for IE&O.

The Confederated Salish and Kootenai Tribes and Blackfeet Tribe represent unique cultural groups within the NCDE. The Tribes are actively involved with the NCDE and tribal employees provide a

valuable resource to the IGBC for communicating with Native Americans on the Flathead and Blackfoot Reservations.

IGBC agencies believe the NCDE grizzly bear population is near, or has already reached, biological recovery. The population is numerically larger and more widely distributed than the Yellowstone population and is effectively connected with the meta-population to the north in Canada. Efforts are underway to draft a Conservation Strategy for the NCDE that will provide management direction and regulatory mechanisms necessary when the population is delisted. Many residents in the NCDE also believe the population is recovered and are confused or frustrated that the administrative process to delist the NCDE has been, and will likely remain, a drawn out process.

A number of NGOs work cooperatively with IGBC agencies in the NCDE to develop and deliver IE&O to support recovery. Defenders of Wildlife, the Living With Wildlife Foundation, and the Blackfoot Challenge each have personnel in the NCDE that assist with outreach to landowners, providing information, assistance, and in some cases funding to subsidize electric fencing of chicken coops, apiaries and calving/lambing pastures. A broad coalition of agencies, NGOs and a waste management company maintains a website (missoulabears.org), which provides static information, alerts on bear activity in the area, and a place for citizens to report both bear sightings and to report unsecured attractants. This support and involvement of NGOs is critical to the current level of effectiveness of IE&O in the NCDE.

In contrast to the YE, where litigation over delisting has created a rift between IGBC agencies and some NGOs, there has been relatively little disagreement between agencies and NGOs related to grizzly bear recovery in the NCDE. These relationships may change, however, when delisting is formally proposed, potentially undermining some of the current IE&O efforts in the NCDE.

Over the past five years, the NCDE Subcommittee has requested between \$10 and \$31,000 of IGBC I&E funding each year. The allocation to the NCDE has grown over that same time from \$5,500 in FY '08 to \$14,500 in FY '12, with most of the funding used to support seasonal "Bear Rangers" in several National Forests. Other funds were used to develop a static display in the Hungry Horse District Ranger Office, to secure and outfit an educational trailer and support the Swan Valley Bear Smart program. This funding is essential to maintaining the level of "on the ground" presence of staff providing outreach to summer visitors.

STRENGTHS AND WEAKNESSES OF CURRENT IE&O

Participants in the NCDE workshop identified the following strengths of current IE&O in the ecosystem:

- A cadre of local, knowledgeable, respected bear conflict managers with strong people-skills.
- Solid scientific information on the size and growth rate of the population.
- Generally positive public attitudes toward grizzly bears.
- Good relationships between agency IE&O staff and the media, and generally interested and supportive media.
- Having a clear goal – delisting – and a reasonable expectation of eventually getting there.

- Strong partnerships between agencies, NGOs, Tribes and waste management companies.
- The missoulabears.org website.
- Good outreach materials provided by CWI.
- Effective messaging related to bear identification through mandatory online testing for all black bear hunters.

Participants in the NCDE workshop identified the following weaknesses of current IE&O in the ecosystem:

- They do not have a way to monitor or measure success or effectiveness.
- Efforts across the ecosystem are not well coordinated.
- Policy-level disagreements between some agencies and NGOs (e.g. litigation over the Yellowstone delisting decision) can have impacts to on-the-ground efforts; this issue could intensify when delisting is proposed for the NCDE.
- Difficulty addressing local versus national views and values related to bears.
- Difficulty reaching newer residents and seasonal visitors who have little or no knowledge about bears.
- The need for better information on the IGBC website and making use of social media.
- Efforts to date have not been strategically focused on key audiences or the most important content.

BARRIERS TO RECOVERY AND EFFECTIVENESS OF IE&O EFFORTS RELATED TO THE BARRIERS

Of 15 potential barriers to recovery in the NCDE that are a function of human attitudes, beliefs and behaviors that could be addressed through IE&O (Table 7), survey respondents identified the following 5 barriers to recovery as most important in descending order:

1. Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.
2. Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.
3. Inadequate consideration of the needs of grizzly bears in land use or development planning.
4. Conflicts between big game hunters and grizzly bears.
5. Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.

The top three barriers related to attractants, livestock husbandry, and land use or development planning may reflect the large number of conflicts associated with dispersed, rural homeowners that are raising chickens or other small livestock. Discussion at the workshop revealed that this type of conflict is frequent and increasing, demands a disproportionate amount of conflict managers' time, and can establish behavior patterns in bears that lead to more substantial damage to structures or threats to public safety. In the words of one participant, "Chickens are the 'gateway drug' for grizzly bears." Given the relative social and economic value of a few chickens versus a grizzly bear, this is a significant problem the IGBC needs to address.

The relatively high ranking of conflicts between big game hunters and grizzly bears is likely based on the increasing frequency with which hunters, and people looking for shed antlers in the spring, are encountering grizzly bears. That black bear hunters killing grizzly bears by mistake did not rank high on the list may be the result of a combination of effective outreach to hunters and the fact that the grizzly population is large and growing, in spite of human-caused mortality.

When asked to rate the effectiveness of current IE&O efforts in addressing the same 15 barriers, respondents identified efforts related to reducing mistaken identity killing of grizzly bears by black bear hunters and efforts related to unsafe human behavior highest, with each rated on average “somewhat effective” (Table 8). Other efforts rated nearly as highly were those related to reducing conflicts with livestock husbandry, reducing conflicts with attractants in general and efforts related to the lack of public awareness of the status of bears. The latter may be a result of the significant publicity related to the DNA study and overall outreach efforts of agency and NGO staff.

Efforts related to other important barriers including conflicts with big game hunters, inadequate consideration of grizzly bear needs in planning and opposition to bear population increases due to fear each ranked mid-way between “not very effective” and “somewhat effective.” Efforts deemed least effective were those related to vandal or illegal killing of grizzlies, although the low scores for these barriers may also be a function of respondents rating these as “not currently addressed” because they rarely occur and have no population-level impact in the NCDE.

When asked to rate factors that limit the effectiveness of IE&O in the NCDE, survey respondents rated other job duties, insufficient operating funds, inability to measure effectiveness, lack of coordination among agencies and partners and conflicting messages from other sources as “somewhat important” or higher, on average (Table 9).

RECOMMENDATIONS

To maximize the strategic impact of IE&O in the NCDE, the IGBC should:

- Maintain or increase funding for full-time and seasonal field staff engaged in direct public contact and bear conflict management.
- Focus IE&O on securing attractants in general, and small livestock in particular, to reduce conflicts with bears in dispersed, rural settings and along the “dispersal front” of expanding grizzly range.
- Increase outreach to local communities, homeowners associations and county planning authorities with respect to securing attractants to reduce conflicts and increase public safety.
- Increase hunters’ and other recreationists’ knowledge about and use of bear spray
- Increase public awareness of the presence of grizzly bears along the “dispersal front” and reasonable, appropriate steps residents can take to avoid conflicts.

The knowledgeable, local employees of agencies, Tribes and NGOs that provide direct public contact and conflict management in the NCDE are the greatest asset of the IGBC. These individuals are highly

respected by, responsive to, and very effective with the public in identifying and resolving conflicts. Given the size and complexity of the NCDE, no other staffing model could provide the same level of impact.

IE&O in the NCDE needs to focus additional attention on securing attractants in general, and small livestock including chickens in particular, in dispersed, rural areas. The IGBC must get individual homeowners or small communities in grizzly bear habitat to recognize the importance of preventing bears' access to garbage, bird seed, animal feed and small livestock. On the eastern dispersal front, where bears are moving into wheat farming country, landowners need to understand the potentially dire consequences of leaving even relatively small quantities of spilled grain available to grizzly bears.

In addition to direct outreach to home and landowners, IE&O should target community or county-level planning authorities to convey the magnitude of the problem associated with grizzly bear access to attractants. For maximum impact, this outreach should focus on human safety factors, rather than simply bear conservation. The goal should be at a minimum to engage the support of community and county leaders in spreading and reinforcing the message about the need to secure attractants. Where more powerful tools such as ordinances are needed and available, outreach should seek to employ them. Existing cooperative programs with NGOs like the DOW and LWWF are critical components in this area and should be supported to the extent possible.

With increasing grizzly bear numbers and distribution, combined with more people living and recreating in grizzly bear range, the IGBC needs to bolster IE&O related to the value of carrying bear spray in a host of settings, from general recreation and hunting to working on the land. Bear spray is demonstrably more effective for most people in preventing or reducing the severity of injury during an encounter, but few people are aware of that fact or carry bear spray. Participants at the NCDE workshop generated a number of ideas about how to address this need (see Appendix B) that should be developed further and implemented.

Related to all the above efforts, the IGBC needs to focus IE&O along the dispersal front to prepare people living in these areas for inevitable grizzly bear presence and encounters. Messages should focus on the probability of grizzlies being in the area and the reasonable steps people can take, especially securing potential attractants, being alert and carrying bear spray. The goal should be to maximize public safety, reduce unnecessary fear or opposition to recovery and prevent events that could lead to a change in public attitudes toward grizzly bears.

Finally, some effort should be focused on creating realistic expectations regarding the timeline and path to delisting. Some people are frustrated that grizzlies remain listed and others have concerns about the consequences of delisting. To date, the discourse among various interests has remained less charged than is currently the case in the YE, where litigation over delisting has polarized the atmosphere. The NCDE could easily follow that same path unless expectations are managed and clear communication continues with all parties as the delisting process moves forward.

Chapter 7 – Yellowstone Ecosystem

CURRENT OPERATING ENVIRONMENT

The YE has a complex jurisdictional setting, including all of Yellowstone and Grand Teton National Parks as well as parts of 5 National Forests and 3 states. The amount of federal land and historic significance of Yellowstone National Park bring a high level of national attention and give this grizzly population greater symbolic value than any other in the lower 48 states. The high profile of YE grizzlies offers both advantages and disadvantages with respect to IE&O. The intense interest in YE grizzlies creates demand and an eager audience for IE&O. At the same time, some NGOs use the national interest in the status of YE grizzlies to leverage initiatives that extend beyond issues associated with bears, such as climate change, which complicates efforts more directly tied to bear conservation.

The high profile of the YE grizzly population has resulted in greater interagency and agency-NGO coordination of both recovery efforts and IE&O in the YE than other ecosystem. The YE Subcommittee and its Yellowstone I&E subcommittee meet more consistently than other subcommittees and benefit from the support of the IGBST. Nevertheless, the large number of agencies and NGOs involved in the YE affects the efficiency and effectiveness of IE&O.

Private lands are limited within the core of the recovery area, but as grizzly numbers and distribution expand, relatively more of the overall YE includes private land used for ranching, recreation and communities. The economy of the area is based on traditional industries such as agriculture and timber as well as increasing volumes of tourism and recreation. The audience for IE&O in the YE spans a broad spectrum from multi-generational local residents to millions of seasonal visitors, as well as the national public that may never come to the YE, but can affect policy decisions related to bear management. The size and complexity of the audience increases the difficulty of designing and delivering IE&O for the YE.

The YE grizzly bear population increased steadily during the past 3 decades and now includes at least 600 bears. The Interagency Grizzly Bear Study Team (IGBST) believes the current population monitoring protocol is too conservative and is revising its methods to provide a more accurate, and likely larger, population estimate. There are some indications the population may have reached a density-dependent “plateau” within the core of the recovery area, but grizzlies are expanding their range, especially to the east and southeast. Where bears are dispersing beyond the core recovery area, conflicts associated with unsecured attractants or livestock operations are increasing and human-caused mortality may be reducing the rate of growth.

The USFWS removed this population from the list of threatened species in 2007, but subsequent litigation resulted in re-listing due to questions about the potential impact of climate change and the loss of white-bark pine as a food source. The USFWS is re-analyzing the science and indicated that a new delisting rule could be published within the next year two. The ongoing controversy related to delisting creates tension between interests and conflicting messages in the popular media about bears.

Grizzly bears killed 4 humans in the YE during the past 2 years and several conflicts between big game hunters and grizzly bears resulted in human injury. These incidents have sparked numerous, sensational articles and rekindled fear of grizzly bears. Speculation about the connection between declining white bark pine seeds and increased bear attacks on people has fueled arguments about both delisting and human safety in the YE, further complicating the IE&O environment.

The National Park Service funded two recent studies in Grant Teton National Park related to IE&O. The first study assessed people's knowledge about grizzly bears, their perception of the risk of injury, and behaviors related to safety in bear country. Results of the study revealed that most visitors to the park have low bear-relevant knowledge levels. Many park visitors recognized the potential for serious consequences of a bear attack, but few carried out risk-avoidance behaviors such as carrying bear spray or making noise due to a belief that the risk of an encounter was low.

The second study evaluated the effectiveness of "Be Bear Aware" outreach efforts within the park. Major findings included that most visitors could recall seeing signs or receiving other Be Bear Aware information in the park, the entrance to the park and campgrounds were the main source of Be Bear Aware information, and that less than half of the visitors who viewed the Park's website read the Be Bear Aware information there. The study included recommendations on placement of Be Bear Aware materials and other means to further increase public awareness of the presence of bears and the need to adopt appropriate behaviors to avoid conflicts.

All three state wildlife agencies, the Forest Service and National Park Service have full-time, experienced, local bear conflict management specialists on staff. Seasonal employees, including a "Bear Brigade" in Grand Teton National Park provide additional assistance during the summer when bears are active and tourist numbers peak. Additional agency IE&O personnel are actively engaged in the YE, although the scope of their responsibilities affects the time they can commit to grizzly bear IE&O. Several NGOs, including the Defenders of Wildlife, Sierra Club, Yellowstone-to-Yukon, Natural Resources Defense Council, CWI, National Wildlife Federation, and Greater Yellowstone Coalition are also actively involved with IE&O in the YE. NGO efforts may, or may not, be coordinated and consistent with agency IE&O depending on the NGO and/or topic.

The YE has received from \$2,000 to \$8,350 each year in IGBC I&E funding over the past 6 years. Funds have been used to produce materials ranging from trail signs to refrigerator magnets, purchase air time for radio announcements about bear safety, and to support seasonal staff assigned to assist with IE&O.

STRENGTHS AND WEAKNESSES OF CURRENT IE&O EFFORTS

Participants in the YE workshop identified the following strengths of current IE&O in the ecosystem:

- Strong support from supervisors and administrators for IE&O. Although more staff and resources could certainly be used, the historic support for IE&O efforts and the YES I&E Subcommittee provide clearer direction and motivation for this ecosystem than any other.

- A Conservation Strategy that provides clear management direction and desired outcome to build IE&O programs around.
- Knowledgeable, experienced, trusted, local staff that interface with the public on a daily basis. All three states and the federal agencies have well-respected field personnel that have been on the scene for years. Their knowledge and relationships are critical to the effectiveness of IE&O.
- Access to local schools and communities. As members of a local community, agency personnel involved in IE&O are welcomed in schools and communities to provide information.
- A cadre of summer employees and volunteers to help with peak tourist season.
- Good coordination among the agencies and some of the NGOs. The fact that the YE has the longest-tenured and most active I&E subcommittee along with over 25 years' experience working across jurisdictional boundaries has created a culture of cooperation among IE&O staff.
- Clear and enforceable rules for National Park lands and to some degree National Forests. NPS rules and Forest Service food storage orders have the force of law and staff are empowered to cite violators. This helps overcome complacency or inconsistency in IE&O related to attractants.
- Mandatory bear identification testing for black bear hunters in Montana; voluntary identification training for bear hunters in Idaho and inclusion of how to hunt safely in grizzly country in all 3 states' hunter education programs.
- Strong technological support for web-based outreach through the USGS Northern Rockies Center
- Good partnerships between the agencies and some NGOs. NGOs that are not involved in litigation to block delisting regularly work constructively with agencies to address issues of common concern, e.g. bear-human safety. These NGOs can bring resources and people to the table to support or expand IE&O.

Workshop participants identified the following weaknesses in the IE&O efforts in the YE:

- The challenge of reaching a huge and diverse audience of highly transient visitors to the ecosystem. Each year over 1 million people from all point of the globe travel to and through the YE in places where they may encounter a grizzly bear.
- Many local residents live in dispersed, low-density areas. Some of these areas have little or no local television or radio coverage. This makes it harder for personnel to reach and interact with them.
- Some local residents have traditional views about or values toward grizzly bears that are not supportive of further recovery and are resistant to change.
- Bear management specialists are not equally distributed (few in Idaho) and their workload during the summer is crushing.
- Not all communities are supportive of adopting or enforcing ordinances to reduce conflicts due to attractants.
- The landscape is changing too fast for personnel to keep up.
- The prolonged delisting process is eroding local support in the face of increasing bear numbers and conflicts without increased management flexibility. Ironically, funding levels for IE&O declined with re-listing relative to levels under the Conservation Strategy.

- Some inconsistency in food storage orders, signs, other messages.

BARRIERS TO RECOVERY, DELISTING AND EFFECTIVENESS OF IE&O EFFORTS RELATED TO THE BARRIERS

The YE is unique among the ecosystems because all the agencies and some NGOs believe this population has recovered and should be delisted. The FWS delisted the Yellowstone distinct population segment in 2007, but a lawsuit filed by several NGOs resulted in re-listing in 2009. In view of the ongoing dispute over the status of the YE population, the survey of barriers administered to agency and NGO personnel for this ecosystem asked about barriers to both recovery and delisting.

Of 15 potential barriers to recovery in the YE that are a function of human attitudes, beliefs and behaviors that could be addressed through IE&O (Table 7), agency personnel and NGOs identified the following 5 barriers to recovery as most important in descending order:

1. Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.
2. Conflicts between big game hunters and grizzly bears that result in defense of life and property kills.
3. Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.
4. Bear-human conflicts and defense of life and property kills that result from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.
5. Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.

In addition to ranking barriers to recovery, YE survey respondents were asked to rank the importance of 2 barriers to delisting:

- Opposition to delisting of grizzly bears in the Yellowstone ecosystem based on the belief there are not enough bears or bear habitat, and
- Opposition to delisting of grizzly bears in the Yellowstone ecosystem based on lack of trust in states to manage a recovered population.

Agency and NGO respondents ranked the both barriers between “Very important” and “Critically important” (Table 7). The importance given to concern about the number of bears and habitat is not surprising inasmuch as the ongoing legal challenge to delisting is based on habitat concerns.

Separating agency from NGO rating of the second barrier to delisting provided a surprising result. Agency respondents rated this barrier between “very important” and “critically important.” NGOs respondents rated this barrier as less than “very important.” This may indicate the agencies’ perception of the public’s trust in the states’ ability to manage grizzlies is lower than the NGO’s. If that is true, and the NGO’s perception is reflective of the general public, of the two barriers to delisting tested in this

survey, it may be more important for IE&O to focus on the issue of public awareness of grizzly bear population size, distribution and habitat security than on building trust in state management programs.

Combined responses from agencies and NGOs regarding the effectiveness of current IE&O in the YE rated efforts related to reducing accidental killing of grizzlies by black bear hunters and reducing conflicts due to inadequate handling of attractants as at least “somewhat effective” (Table 8). Efforts related to reducing conflicts between big game hunters and bears, conflicts related to livestock husbandry, reducing unsafe human behavior, and reducing the impact of human infrastructure such as roads or campgrounds were among the highest ranked, but rated less than “somewhat effective” on average.

When asked to rate factors that limit the effectiveness of IE&O in the YE, survey respondents rated other job duties, inability to measure effectiveness, insufficient operating funds, conflicting messages from other sources, and lack of effective use of the internet and social media as “somewhat important” or higher, on average (Table 9).

RECOMMENDATIONS

Discussion at the YE workshop provided additional insight into the barriers to recovery and delisting that help to inform recommendations for use of IE&O in the YE. To maximize strategic impact of IE&O in advancing recovery, delisting and long-term conservation of grizzly bears in the YE, the IGBC should focus on:

- Reducing conflicts associated with unsecured attractants on private lands and in gateway communities.
- Increasing public awareness of grizzly bear distribution and appropriate human behavior, including use of bear spray, especially among day users in National Parks and National Forests.
- Reducing conflicts, human injuries and grizzly bear mortalities due to encounters between grizzlies and hunters by changing behavior and increasing use of bear spray.
- Creating more positive attitudes about grizzly bears and their recovered status.

Significant progress has been made in reducing conflicts associated with attractants on public lands through adoption of food storage orders for National Forests and National Parks. Bear management specialists reported that relatively few conflicts occur in on public lands due to inadequate management of attractants. Clear, enforceable rules on these public lands are a great asset for conflict reduction.

In contrast, conflicts on private lands and in gateway communities surrounding the YE are increasing as the bear population expands in numbers and distribution. While some communities have demonstrated willingness to adopt ordinances to address attractant management, for most areas and individuals, IE&O about appropriate practices may be more expedient than regulatory approaches.

Workshop participants identified landowners (rural, suburban and urban); local elected officials who control land use decisions, ordinances and contracts with waste management companies; and local

businesses (e.g. restaurants that may serve as attractant sources) as key audiences to address with IE&O about securing attractants. Information about the messages, techniques and resources needed to implement IE&O with these target audiences is included in the workshop summary in Appendix B. Given the importance of knowledgeable, local staff to the effectiveness of IE&O in this context, IGBC agencies should maintain or increase the number and support for bear management specialists in the YE.

Recent research in Grand Teton National Park and the human fatalities in Yellowstone National Park in 2011 highlighted one weakness related to IE&O on public land. Few of the millions of front-country, day users are aware of appropriate human behavior in grizzly bear habitat and during an encounter with a grizzly bear. The fact that neither of the 2011 victims were carrying bear spray, along with research that demonstrates relatively few people carry and know how to use bear spray, demonstrates that IE&O to date has not created sufficient awareness of the value of this tool.

The day following the YE workshop, members of the YE I&E subcommittee met to identify 4 or 5 specific actions that could be taken in 2012 to address human safety. This task, assigned to the I&E subcommittee by the YE Subcommittee at their fall meeting, aligned well with the workshop.

The I&E subcommittee identified the need to improve the effectiveness of signage as one action in 2012. This included designing a new, simpler sign that conveys a clear, concise and consistent message for use throughout the YE; inventorying signage and reducing “clutter” and conflicting messages; and placing signs at different locations to increase awareness of signs.

The I&E subcommittee also discussed ways to use new technologies, such as videos, Twitter feeds or smartphone applications to convey important messages. At least one private company is already creating a phone app that allows users to upload and locate grizzly bear and other wildlife sightings in Yellowstone National Park. While there are certainly potential drawbacks to this app, it is unlikely government can prevent its deployment and use; it may be more strategic to embrace this tool and use it to convey messages about appropriate behavior.

Conflicts between big game hunters and grizzly bears are increasing as bears expand their numbers and range. Grizzly bear mortality due to conflicts with big game hunters is not having significant impacts on population growth, but these losses affect public attitudes. This source of mortality will also reduce grizzly bear hunting opportunities and related benefits following delisting. Human injuries associated with conflicts between bears and hunters contribute to negative attitudes toward grizzlies.

Research suggests that bear spray is more effective at preventing or reducing human injuries during bear-human confrontations than firearms. The IGBC needs to find ways to convey that message to hunters and convince them to carry and use bear spray. Hunter education classes are one tool to affect future hunters, but some form of peer-based messaging is needed to reach current hunters and change attitudes and behavior.

The IGBC needs to communicate more positive messages about grizzly bears to overcome 2 of the identified barriers to recovery and delisting. First, much of the opposition to recovery due to fear of grizzly bears is based on media coverage about bears that conveys negative messages and creates disproportionate perceptions of risk. The IGBC should find ways to communicate positive messages about grizzly bears and to put risk of conflict or injury in proper context. Being prepared to provide this information during news cycles associated with incidents involving human injury or fatalities is critical.

Second, the IGBC needs to convey more positive messages about the recovery of grizzly bears in the YE. Some NGOs, especially those challenging delisting, use a variety of media to create the perception that grizzlies in the YE remain threatened by climate change and will be decimated by energy and land development and human-caused mortality, including hunting, if the population is delisted. The IGBC should not attempt to counter every piece of misinformation, but should develop and implement a media strategy designed to demonstrate that the YE population is recovered and that the Conservation Strategy guarantees a secure future for this population.

CHAPTER 8 – THE IGBC WEBSITE AND SOCIAL MEDIA

The internet and social media are now a primary mode of communication and information sharing in America and globally, especially among people under 35 years of age. The potential impact of electronic communication is evident from the speed with which some videos “go viral” and the political uprisings of the “Arab Spring.”

CWI created a website for the IGBC with the domain name “igbconline.org” in 2007. The site was, and still is, designed, hosted and maintained by Flathead Valley Web Works in Kalispell, MT. CWI supported the website under a cooperating agreement with the IGBC from 2007 through 2011. CWI transferred ownership of the domain name and responsibility for the website to the IGBC in December, 2011.

A core group of IGBC staff and advisors provide web-ready content, through the chair of the IGBC I&E Subcommittee or IGBC Executive Assistant to the webmaster for posting. The site contains thousands of pages of content, that provide information on the IGBC, subcommittees, bear safety, wildlife linkage, bear spray, bear resistant equipment, research reports, news and updates related to grizzly bears and links to a number of other sites related to grizzly bears. However, most of this content is static and updates to the site are relatively infrequent. Consequently, the site is not as dynamic as it could be.

Use of the IGBC website has increased steadily from 1.3 million requests in 2008 to over 4.5 million requests in 2011, and is on track to increase again in 2012. The average successful requests per day is nearly now nearly 14,000, with about 63 megabytes of data transferred daily. There is some seasonality to the volume of requests, with volume increasing during the months when bears are active relative to winter months.

To date, IGBC presence in the social media is limited to a FaceBook page created by the chair of the IGBC I&E Subcommittee. The page is not being actively managed and is not widely used. This is a significant contrast to use of social media reported by several NGOs. A few IGBC member agencies are using social media to a limited extent.

The IGBC could use electronic media more effectively to increase the impact of IE&O to advance recovery and conservation of grizzly bears. First, however, the IGBC member agencies need to make a fundamental, strategic choice between two alternatives for use of the internet and social media.

One option is for the agencies to pool additional resources to support a full-time employee or contractor to make the website more dynamic and to create and sustain an active presence on social media for the IGBC, as a collective entity, representative of all the member agencies. There are some advantages to this approach, but the overall cost, demands for coordination, and impact to the individual agencies’ ability to support and maintain their own online and social media presence would be substantial.

An alternative is for the IGBC to redesign its website using existing funds budgeted for IE&O and encourage member agencies to enhance their individual use of online and social media for IE&O related to grizzly bears. This approach would enable the IGBC to continue to use its website to communicate the overall IGBC mission and goals and ecosystem-specific information and to serve as a link between member agencies, NGOs and the public. The IGBC website would also be a “portal” for the public to access member agency content served through the agency’s website. This approach would promote public awareness of the individual agencies and their responsibilities and provide for more dynamic, localized, and targeted use of the internet and social media in a more cost-effective, decentralized fashion. WMI is prepared to implement this recommendation under our cooperative agreement, if the IGBC concurs.

In addition to producing and posting informational videos on YouTube, IGBC agencies could use Twitter feeds to share information on local issues or problem areas. QR codes could be posted on signs in areas with cell service that would link to information on food storage requirements or other updates. The IGBC could also take advantage of the development of phone apps as a means of sharing information with the public or engaging them in providing information such as the location of unsecured attractants or other potential problems that need agency attention. The best ideas for use of social media would probably come from field staff at the local level. The challenge will be gaining agency support for use of social media and making it functional for much of the remote country in which grizzlies live.

TABLES

Table 1.a. Use of press releases to provide information, education and outreach regarding grizzly bears by Interagency Grizzly Bear Committee member agencies and non-government organizations. Survey conducted October – December, 2011.

Name of agency or organization	Ecosystem	Press Releases					
		Target Audiences	Locations Used	Frequency of Use	Relative Value	Relative Cost	Comments
US Forest Service/IGBC	All; Regionally; Nationally (U.S.); Canada	hunters, hikers, conservation groups, general public, public agencies	local media, sportsmen's groups, other agencies	as needed or as issues arise	med to high	low	news releases work if the news is timely and captures the "so what" factor
U.S. Forest Service, Okanogan-Wenatchee N.F.	North Cascades	Washington state media outlets	Throughout Washington state	When grizzly bears are sighted, when wildlife monitoring results are released and when wildlife monitoring teams begin their field studies.	High	Low	Media representatives and their audiences love wildlife stories. These stories are often controversial, but overall it seems most of the public loves these types of stories.

USFWS	North Cascades; Regionally	Media, NGO's, Congressional Offices, Tribes, public	Vocus Distribution system	2-3 times per year - when appropriate	medium to high	low	Good tool when used sparingly
USDA Forest Service, Flathead Natl. Forest	Northern Continental Divide	local media and Flathead Valley residents as forest visitors	News releases are sent out of our Forest Supervisor's Office to media outlets in the Flathead and Swan Valleys, Missoula, Polson/Ronan (radio and print media)	1-2 releases annually depending on the need	medium -- hard to gauge to evaluate effectiveness	low	Use releases to communicate to the broader community audience, reminding forest visitors about proper food storage and being bear aware when recreating; sometimes releases are done in cooperation with FWP;
Rocky Mountain Ranger District, Lewis & Clark National Forest	Northern Continental Divide	General public in the surrounding area; likely forest users	Media along the Rocky Mountain Front, Great Falls	Infrequent	Medium	Low	Generally only used when there is a specific issue or occurrence that warrants public attention or reminders
USDA Forest Service	Northern Continental Divide Ecosystem						We don't use press releases

Montana Fish, Wildlife & Parks	Northern Continental Divide Ecosystem	Adults, youth & families	Montana Wild - Helena, MT	2 times per month June - August	Low	Low	Primarily the press releases are to advertise for our bear education programs offered at the center
U.S. Forest Service (Flathead N.F, Lewis & Clark N.F, Helena N.F., Lolo N.F., Kootenai N.F)	Northern Continental Divide Ecosystem	Residents living in and near national forests; general public targeting Forest visitors /users	Local radio and print media outlets in and near Forests	Infrequently and depending on the need (maybe 1-2 releases annually/forest)	Medium - but hard to put a value on	Low	National Forest use of press releases vary by forest: when used, the releases are intended to remind forest visitors about proper food storage, being aware of bears when recreating. Use varied by forest, with 4 of the 5 forests using them only when there is a specific issue or occurrence that warrants public attention or reminders- such as new food storage order.
Confederated Salish and Kootenai Tribes	Northern Continental Divide; Regionally	Flathead Indian Reservation and surrounding areas	newspapers, local radio and TV	high frequency in spring and fall	medium	low	
Idaho Fish and Game	Selkirk-Cabinet-Yaak Ecosystem	General public (mostly northern Idaho)	local newspapers, occasionally radio	2-3 times per year	medium	low	

Montana Department of Fish Wildlife and Parks	Selkirk-Cabinet-Yaak Ecosystem	Residents and hunting community of Libby, Troy, Yaak, Heron, Noxon, Trout Creek, Thompson Falls	Local media outlets (local papers and radio) for Libby, Troy, Yaak, Heron, Noxon, Trout Creek, Thompson Falls, Plains	Monthly while bears are awake; sometimes as often as once per week and when conflicts are occurring more frequently.	High	Low	I don't exactly understand the "locations used" portion of this question.
US Fish and Wildlife Service	Selkirk-Cabinet-Yaak Ecosystem	local newspapers, radio stations	Libby, Thompson Falls, Sandpoint, Bonners Ferry, Missoula	3-5 times per summer depending upon need	high	low	distribute via email
US Forest Service	Selkirk-Cabinet-Yaak	North Idaho media outlets including daily/weekly print, radio, and television. Also include "the Spokesman Review" newspaper in Spokane, WA.	Grizzly related information is typically distributed to media outlets north of I-90 with some bleed over into St. Maries, ID, Newport, WA and Spokane, WA.	Average of two to three releases a year for grizzly related information	moderate/high	low	

National Park Service - Grand Teton	Yellowstone	Local Papers		Early season reminder, after an incident (positive and negative)	Medium	Low	
MFWP	Yellowstone	hunters, summer recreationists, residents	sw MT newspapers (daily, weekly), radio, television & interested citizens	6 to 8 per year, with specific incidents releases	medium	low	the public becomes conditioned & complacent overtime...recognizing that newer publics are informed
Wyoming Game & Fish Dept.	Yellowstone Ecosystem	hunters, backcountry users, residents	statewide and regional media	Approx. 6/year	high	low	
Idaho Department of Idaho Fish & Game	Yellowstone Ecosystem	hunters, recreationalists, residents, tourists-everyone.	Distributed within ecosystem including other states.	monthly	high	Low	YES media distribution list also includes PIOs of member agencies who in turn redistribute releases.
US Geological Survey, Interagency Grizzly Bear Study Team	Yellowstone; Northern Continental Divide	regional media/AP/public	MT, ID, WY, CO, UT	5-6/year	high	low	releases are used to alert media and public on both trapping operations and new research publications
Vital Ground	All	VG Members and General Public	Regional Newspapers and VG website	6-8 times per year.	Medium	Low	VG's press releases are focused on our habitat acquisition program or organizational events.

Defenders of Wildlife	All; Regionally	All demographics	Regionally and Nationally	As needed	High	Low	
Montana Wilderness Association	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak; Yellowstone	all Montanans	statewide	weekly	high	low	
National Wildlife Federation	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak; Yellowstone; Nationally (U.S.)	general public (concerned public)	Montana, Idaho	1/year	low	low	We do a PR when we have some activity/results to report
National Parks Conservation Association	North Cascades Ecosystem	General Public, Elected Officials, Community Leaders	Newspapers, ally publications	1-3 times per year	Medium	Low	

Grizzly Bear Outreach Project	North Cascades Ecosystem; Selkirk-Cabinet-Yaak	General Public	In the Selkirk and North Cascades Ecosystems	2 x/year	High	High	It is cheap to send out press releases. We get anywhere from 2-10 calls for interviews. Also it keeps the bear safety issue at the forefront of the media's attention. If just one person changes their behavior from an article or interview, I would say this was a success.
NOLS	North Cascades Ecosystem; Yellowstone; Regionally, Nationally (U.S.); Canada	We only use press releases to clarify facts to the public about specific incidents with bear-human interactions.	WY, AK	rarely, as needed	High	Low	We've had 2 bear incidents in 4 million user days/45 years
Yellowstone to Yukon Conservation Initiative	Northern Continental Divide ; Selkirk-Cabinet Yaak; Canada	Alberta Government decision-makers, citizens in Alberta	Southern Alberta	Six times per year	High	Low	Media releases are a major way of communicating and have produced good results for us in terms of Alberta government policy.
Boone and Crockett Club	Northern Continental Divide Ecosystem; Regionally; Nationally (U.S.)	K-12 Youth, Adults, Boy Scouts, Hunters	Theodore Roosevelt Memorial Ranch	each year - spring, summer and fall	high	medium	
Endangered Species Coalition	Regionally	reporters, editors	Montana statewide	occasionally	medium	low	

Sierra Club	Regionally	press, decision makers	Seattle, Nationally	regularly	medium -High	Low	
Natural Resources Defense Council	Regionally; Nationally (U.S.)	Membership, media, general public, local, state, and federal agencies	local, regional, national newspapers; local/regional TV	Variable - depends on frequency/importance of current issues	Medium - High	Low	
BE BEAR AWARE CAMPAIGN	Regionally; Nationally (U.S.)	EVERY ONE EVERY WHERE	EVERY EHERE	OVER AND OVER AGAIN	LOW	ONE MILLION	SILLY QUSTION
Greater Yellowstone Coalition	Yellowstone Ecosystem	We have created several press releases regarding grizzly bears	Regional and national print, electronic and web media	Twice a year	Medium	low	We generally limit our use of press releases because direct contact with media seems to be more effective.

Table 1.b. Use of prepared articles for print media to provide information, education and outreach regarding grizzly bears by Interagency Grizzly Bear Committee member agencies and non-government organizations. Survey conducted October – December, 2011.

Name of agency or organization	Ecosystem	Prepared Articles for Print Media					
		Target Audiences	Publications Used	Frequency of Use	Relative Value	Relative Cost	Comments
US Forest Service/IGBC	All; Regionally; Nationally (U.S.); Canada	general public, hunters, hikers, outdoor enthusiasts, conservation groups	newspapers, op-ed pieces, scientific journals, magazines, newsletters, websites	As needed	med to high	low	
Lolo National Forest	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak	Recreating Public/Forest Users	Missoulain and other local papers associated with Seeley; Plains/Thompson Falls, Superior.	Annual	High	Low	This was an especially important media this year as the Lolo implemented a forest-wide food storage order
U.S. Forest Service, Okanogan-Wenatchee N.F.	North Cascades	Media representatives	News releases	When grizzly bears are sighted, when wildlife monitoring results are released and when wildlife monitoring teams begin their field studies.	High	Low	We have never submitted op-ed pieces to media outlets, but that might be something to consider. Other efforts might include meeting with the editorial board of some newspapers.

North Cascades National Park	North Cascades	public, park employees	Grizzly Bear Outreach Project brochures, etc.	constant	high	low	The GBOP has assumed the role of I&E in the NCE, and very successfully.
USFWS	North Cascades; Regionally	outdoor recreationists	Selected newspapers, occasionally sporting magazines	Rare	Medium	High	Not much opportunity for this in the NC Area
USDA Forest Service, Flathead Natl. Forest	Northern Continental Divide	targeted local community/residents, such as Upper Swan Valley residents	weekly papers; partner organization newsletters -- for example, Swan Ecosystem Center's "Swan Valley Bear News"	2-3 articles annually	medium	low	Could possibly measure some value by readership numbers; the print version is often displayed on-line electronically
Rocky Mountain Ranger District, Lewis & Clark National Forest	Northern Continental Divide	Local and visiting public	Choteau Acantha's Visitor's Guide	Annual	Medium	Low	Annually updated article about bear habits, safety around bears, and food storage requirements in area Visitor's Guide
USDA Forest Service	Northern Continental Divide Ecosystem	General public	Brochure, I&E in office for the display of Lincoln grizzly	Every day, every hour of every day - 30,000 people per year	High	Low	Mass produce in office

U.S. Forest Service (Flathead N.F., Lewis & Clark N.F., Helena N.F., Lolo N.F., Kootenai N.F.)	Northern Continental Divide Ecosystem	Residents living in and near national forests - sometimes targeting a local community; Local and visiting Forest recreators/users	Local daily/weekly newspapers; visitor guides; partner organization newsletters; uses published articles as I&E in district offices	Varies by forest - from 2-3 articles annually to once per year	Medium to High	Low	Some forests used prepared articles more this year than in past with the implementation of Food Storage Orders new to portions or all of the Forest. Used also to update area Visitor's Guides with bear safety, bear habits, and food storage. May be able to measure value of this item by readership numbers in papers; print version of prepared articles also often displayed on-line electronically.
Confederated Salish and Kootenai Tribes	Northern Continental Divide; Regionally	Flathead Indian Reservation and surrounding areas	weekly and daily publications in the area	high frequency, weekly or more based on issue	high to medium based on the issue	low	
Idaho Fish and Game	Selkirk-Cabinet-Yaak Ecosystem	general public	local newspapers	2-3 times per year	medium	low	
Montana Department of Fish Wildlife and Parks	Selkirk-Cabinet-Yaak Ecosystem	Full-time residents, visitors, seasonal residents, and in-state/out-of-state hunters	Local newspapers and local radio for Libby, Troy, Yaak, Heron, Noxon, Trout Creek, Thompson Falls, MT	Monthly while bears are awake	High	Low	

US Fish and Wildlife Service	Selkirk-Cabinet-Yaak Ecosystem	local newspapers	Libby, Thompson Falls, Sandpoint, Bonners Ferry, Missoula	3-5 times per summer depending upon need	high	low	distribute via email
US Forest Service	Selkirk-Cabinet-Yaak						None in recent years
MFWP	Yellowstone	hunters, fishermen, recreationists	newspaper, radio, television	low with additional articles prepared at state level	low	low	
Wyoming Game & Fish Dept.	Yellowstone Ecosystem	hunters	Jackson newspaper insert	1/year	high	medium	Developed in cooperation with CWI (Chuck Bartlebaugh)
Idaho Department of Idaho Fish & Game	Yellowstone Ecosystem	hunters, residents, tourists	Idaho Falls Post Register, Island Park News, Rexburg Standard Journal, Idaho State Journal, Blackfoot Morning News, Idaho Statesman, Jackson Hole News, Missoulain, Bozeman Chronicle, Teton Valley News, Valley Citizen, Jefferson Star, Planet	weekly	High	Low	Newspapers are more than willing to run stories or call to do follow ups on news releases. Some publications take submissions, while others require payment for placement in hunting specials or tourist publications.

			Jackson Hole, Idaho Falls Magazine				
US Geological Survey, Interagency Grizzly Bear Study Team	Yellowstone; Northern Continental Divide	scientists and natural resource managers	Ursus, Ecological Applications, Journal of Wildlife Management,	3-5/year	high	high	This pertained to articles published by IGBST and NCDE researchers
Defenders of Wildlife	All; Regionally	All demographics	Defenders Magazine, regional news, regional magazines	As needed	High	Med-High	
Living with Wildlife Foundation	All; Regionally; Nationally (U.S.); Canada	hunters backpackers, hobby farmers	Backpacker magazine, Hobby Farms, Countryside; Mother Earth News	infrequent	high		we have not yet submitted the articles but are working on getting ready for submission
Montana Wilderness Association	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak; Yellowstone	all Montanans	newspapers	seldom	low	low	

National Wildlife Federation	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak; Yellowstone; Nationally (U.S.)	concerned citizens	newspapers, High Country news	1/2-3 years	medium	low	used to do more (e.g. Bitterroot reintroduction), seldom now.
National Parks Conservation Association	North Cascades Ecosystem	Members, General Public, Elected Officials, Community Leaders	Newspapers, Newsletters, Ally Publications	Once a year	Low	Low	
WildBC, Habitat Conservation Trust Foundation	North Cascades; Selkirk-Cabinet-Yaak; Canada	K-12 educators, post secondary educators	Wild About Bears; Grizzly Bear Biology Teacher and Student guide				
Yellowstone to Yukon Conservation Initiative	Northern Continental Divide ; Selkirk-Cabinet Yaak; Canada	General audiences	Calgary Zoo magazine; British Columbia magazine	Twice per year	Low	Low	These occur opportunistically as writers approach us for interviews.
Boone and Crockett Club	Northern Continental Divide Ecosystem; Regionally; Nationally	Educators	Grizzly Bear Resource Guide for Educators	Every year since published - don't remember the pub	Medium	Medium	

	(U.S.)			date at the moment			
Endangered Species Coalition	Regionally	general public, sportsmen, wildlife advocates	Montana major daily newspapers, sporting journals	occasional	high	low	
Natural Resources Defense Council	Regionally; Nationally (U.S.)	Conservation community, general public, sportsmen, land/grizzly managers	NRDC newsletters, other organizations publications, newspapers, periodicals	Variable	High	Medium	
BE BEAR AWARE CAMPAIGN	Regionally; Nationally (U.S.)	EVERY ONE	ALL	ALL THE TIME	LOW	ONE MILLION	SILLY QUESTIONS
Birchdale Ecological	Selkirk-Cabinet-Yaak Ecosystem; Regionally; Canada	Canada Geographic readers, Canada wide	Canada Geographic	Once, in progress	High	I am getting paid	Currently doing an article
Greater Yellowstone Coalition	Yellowstone Ecosystem	Newspaper op-eds	Newspapers	3 - 4 annually	High	low	This seems to be a particularly effective way to reach our target audiences in the region.

Table 1.c. Use of brochures, cards, coloring books and other printed media to provide information, education and outreach regarding grizzly bears by Interagency Grizzly Bear Committee member agencies and non-government organizations. Survey conducted October – December, 2011.

Brochures, Cards, Coloring Books, Other Printed Media								
Name of agency or organization	Ecosystem	Target Audiences	Locations Used	Frequency of Use	Number Distributed Annually	Relative Value	Relative Cost	Comments
FWS	Bitterroot Ecosystem; Yellowstone; Nationally (U.S.)	People who live, work , and recreate in grizzly country.	grizzly habitat and conferences and public events.	3-4 times per year	several thousand	low	low	
Lolo National Forest	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak	Recreationists/Forest Users of all Ages	Missoula, Ninemile, Superior, Plains/Thomps on Falls, Seeley Lake Ranger Districts	2 to 3 times/week	approx. 500	High	Low	

U.S. Forest Service, Okanogan-Wenatchee N.F.	North Cascades	General public.	Front desks at ranger stations and the Okanogan-Wenatchee N.F. headquarters.	Available for the public to pick-up at front desks, but no current efforts at dissemination through other means.	150 at the Okanogan-Wenatchee N.F. headquarters, the seven ranger stations combined are surely disseminating at least that number.	Low	Medium	We currently distribute the "Know Your Bears--Look For a Combination of Characteristics" card from www.fivevalleyschaptersSCI.org , "Hiking in Bear Country" brochure by the IGBC, and "Be Bear Aware" from www.BeBearAware.org
North Cascades National Park	North Cascades	public, park employees	visitor centers and many other public venues	frequent	not sure; these are from the GBOP & they have the numbers	high	low	
USFWS	North Cascades; Regionally	Recreationalists, Schools, Scout Groups, tourists	NPS/WDFW/USFS kiosks and offices, bear trailer	constant	10-15 boxes each of multiple pubs	medium	medium	useful tools in the right conditions
USDA Forest Service, Flathead Natl. Forest	Northern Continental Divide	Forest visitors, school-age youth, Forest employees	at each ranger district front desk; Summit Nature Ctr. on Big Mtn.; visitor ctr. at	medium to high	estimated 500 to 700 total for the various print media used	medium to high		to date, cost has been relatively low to medium for our individual forest with most printed materials provided through the IGBC or other source; some cost for

		and visiting fire crews	the Condon Work Ctr.; Hungry Horse Dam visitor ctr.;community events (NW MT Fair, at Forest booth; Great Rockies Outdoor Sport Show in Kalispell; Forestry Expo; Bear Fairs); classroom presentations; various teacher trngs/wkshps; campground hosts, bear rangers, recreation employees distribute to individual forest visitors; handouts provided at fire camps and given directly to crews that may do 'spike camps'; ranger district					reproducing our individual forest food storage handout and youth coloring books
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			orientations; outfitters; campground concessionaire;					
Rocky Mountain Ranger District, Lewis & Clark National Forest	Northern Continental Divide	Forest/District visitors; school groups	District Offices; local schools	Varied; continually available	unknown	medium	low	Probably most useful when used repeatedly over different age groups with local schools; used with variety of requested specific presentations rather than as part of regular teaching unit
USDA Forest Service	Northern Continental Divide Ecosystem							Mentioned in previous question
Montana Fish, Wildlife & Parks	Northern Continental Divide Ecosystem	Public	Montana Wild		Not sure yet	Medium	Medium	We have these brochures on a table for visitors to pick up. We also hand them out at our bear awareness programs.
U.S. Forest Service (Flathead N.F, Lewis & Clark N.F, Helena N.F., Lolo N.F., Kootenai N.F)	Northern Continental Divide Ecosystem	Forest/district visitors; school aged youth and forest users of all ages; Forest employees and visiting fire crews	Ranger district and supervisor offices; local schools; FS nature centers; FS and other agency visitor centers; community events such as local fairs at FS booths, outdoor sport shows; teacher	Varied but continually available through the year - medium to high	Hard to estimate with the variety used and # events/outlets individual forests attend or use. Rough estimate of 2500 items (500 items	Medium to high - extremely hard to gauge value	Low	Much of the materials area provided thru IGBC or other source; some cost for local reproduction of food storage orders and coloring books. This type of media is most useful when used repeatedly over different age groups with local schools; Besides district offices, bear rangers and campground hosts distribute a large portion of this printed media.

			workshops; bear rangers, recreation personnel and campgrounds hosts distribute to forest visitors; campground concessionaire; outfitters; ranger district orientations		distributed /forest with some distributing less and some more)			
Confederated Salish and Kootenai Tribes	Northern Continental Divide; Regionally	local school groups, civic organization and community meetings	Flathead Indian Reservation and surrounding area	high	variable from year to year with expanding printed media	high	medium	
Idaho Fish and Game	Selkirk- Cabinet-Yaak Ecosystem	coloring books: kids ages 8 and under. Hunting in bear country - hunters. Bear ID cards - hunters and backpackers	local schools, county fairs, public library, hunting camps, field contacts	continuous, year-round	at least 3,000 coloring books, 500 hunting brochures, 500 bear ID cards	high	medium	kids love coloring books, brochures and ID cards very useful

Montana Department of Fish Wildlife and Parks	Selkirk-Cabinet-Yaak Ecosystem	People attending local festivals and fairs, schools (all grade levels) and families of school-aged children, hunters, visitors	Festivals, fairs, organized events, schools (all grade levels), libraries, public meetings, presentations at organized meetings, workshops	Year round; handouts given at approximately 20-30 events per year, plus handouts are given to residents with bear conflicts at the time of the conflict	3000	High	Medium	Brochures and other printed material are distributed for pickup ad hoc at Libby Chamber of Commerce, KNF District Ranger offices, public libraries, and city hall in Thompson Falls. The number of printed material given out annually is a complete guess as I have no way to track back and quantify it. But, the number I give out is unlikely to be lower than what I provided.
US Fish and Wildlife Service	Selkirk-Cabinet-Yaak Ecosystem	general public	USFS offices, realtors, chamber of commerce - Libby, Thompson Falls, Bonners Ferry, Sandpoint	Keep supplies stock through periodic visits	200-300	medium	medium	

US Forest Service	Selkirk-Cabinet-Yaak	Forest Users including recreationists and hunters and special use permittees (including recreation cabin owners, outfitter and guides, livestock permittees)	Forest district offices (Coeur d'Alene, Sandpoint, Priest Lake, Bonners Ferry, Newport, Sullivan Lake, Colville) and other visitor center venues	High		High	Medium	
National Park Service - Grand Teton	Yellowstone	Public	Throughout the park	6-8 months a year	A lot! We run out of some items.	Medium	Medium	
MFWP	Yellowstone	hunters, recreationists, residents	regional offices (Bozeman, Helena, Billings)	medium	1500 -2500	medium	medium	
Wyoming Game & Fish Dept.	Yellowstone Ecosystem	hunters, hikers, youth, homeowners	G&F offices, public events, workshops, etc.	daily	several thousand (?)	medium	medium	We distribute all the brochures, coloring books, etc. developed by CWI

Idaho Department of Idaho Fish & Game	Yellowstone Ecosystem	Everyone-hunters, hikers, residents& tourists	schools, agency offices, fairs, tourist bureaus, sport shows, scout groups, school groups	Daily	Brochures-5k, ID Cards 20k, coloring books-1k, ID placemats-5k	High	medium	Production cost in past has mainly been covered by CWI via funds from IGBC and states. Locally. black & white ID placemats have been produced for use at restaurants in bear areas.
US Geological Survey, Interagency Grizzly Bear Study Team	Yellowstone; Northern Continental Divide	general public	MT, WY, ID, CO, UT	10-20/year	~50/year	high	low	This pertains to information sheets produced for IGBST and NCDE grizzly bear studies and distributed at conferences, via the NPS, and educational outlets.
Kootenai Tribe of Idaho								This is a cooperative effort through KVR
Vital Ground	All	General Public and VG Members	Nationally	Regular	10,000	Medium	High	Brochures are to promote Vital Ground's habitat conservation efforts and to recruit new supporters.
Defenders of Wildlife	All; Regionally	All ages/demographics	Montana/Wyoming/Idaho	Frequent	500-1000	High	Med	Magnets are the most popular of our printed media
Living with Wildlife Foundation	All; Regionally; Nationally (U.S.); Canada	anyone living in or recreating in wild areas	international; internet	always available via internet		high	low	Living with Predators Resource Guides
Montana Wilderness Association	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-	our members, prospects	statewide	constant	100,000	medium	medium	

	Yaak; Yellowstone							
National Wildlife Federation	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak; Yellowstone; Nationally (U.S.)	people with bear problems, developers, wildlands interface	Montana, Idaho	chronic	variable, several hundred probably on average	medium	Medium	We print the brochures and distribute to agencies for on sight distribution. Don't do as much in recent years.
Grizzly Bear Outreach Project	North Cascades Ecosystem; Selkirk-Cabinet-Yaak	See excel sheet						
NOLS	North Cascades Ecosystem; Yellowstone; Regionally, Nationally (U.S.); Canada	general public	Grizzly bear display in Lander, WY (NOLS HQ)	ongoing public display	~2,000 color brochures	medium	low (WY Gam & Fish supplies cases to us)	
Yellowstone to Yukon Conservation Initiative	Northern Continental Divide ; Selkirk-Cabinet Yaak; Canada	General audiences	Displays at film festivals and conferences	Couple of times per year	500	Low	Medium	We have fact sheets on grizzly bears and their role in the Y2Y vision.

Endangered Species Coalition	Regionally	general public at larger events	Bozeman, Missoula, Helena	occasionally	couldn't say	medium	medium	
Sierra Club	Regionally	members, general public, decision makers	regionally	often	5000+	high	medium	
Natural Resources Defense Council	Regionally; Nationally (U.S.)	Conservation groups, students, sportsman's groups, educators, eco-tourists	Schools, membership meetings, public presentations, national parks	Variable - monthly to quarterly	500	Medium	Medium	
BE BEAR AWARE CAMPAIGN	Regionally; Nationally (U.S.)	EVERY ONE	EVERY WHERE	ALL THE TIME	100 OF THOUSANDS	LOW	ONE MILLION	SILLY QUESTION
Greater Yellowstone Coalition	Yellowstone Ecosystem	GYC membership	Nationally	once a year	8,000	Medium	High	We use these to reach our membership that's age 50 or older. Generally we ask them to comment on an issue relating to grizzly bears, and provide the background for them.

Table 1.d. Use of educational trunks or teaching units for schools to provide information, education and outreach regarding grizzly bears by Interagency Grizzly Bear Committee member agencies and non-government organizations. Survey conducted October – December, 2011.

Name of agency or organization	Ecosystem	Educational Trunks or Teaching Units for Schools						
		Target Grades	Locations Used	Frequency of Use	Number of Students Reached	Relative Value	Relative Cost	Comments
Lolo National Forest	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak	K-12	Missoula	5 to 10 per year	150 to 300	Low	High	
U.S. Forest Service, Okanogan-Wenatchee N.F.	North Cascades	K-12	Yakima County Fair, Kittitas County Fair, Salmon Fest in Leavenworth.	Annually during the summer.	At least 2,000	Low	Medium	Staffing at county fairs has been reduced so we don't have presence at all North Central Washington county fairs.
North Cascades National Park	North Cascades	varies	visitor centers, some schools	not sure in the park, but generally several times per year	not sure -	medium	very high	Kids' imaginations are really sparked when learning about bears with the tangible objects to see and feel.
USFWS	North Cascades; Regionally	5-Mar	Schools in GB areas	10-12 classrooms/year	Av 30 students/class	high	low	Labor intensive, audience for future support

USDA Forest Service, Flathead Natl. Forest	Northern Continental Divide	K-8	classroom, community events, teacher trngs.,					The Flathead NF does not have a trunk specific to bears. We refer teachers and youth group leaders to the Glacier NP Bear Trunk and FWP bear bag and box. Some of our Forest trunks do contain some info. related to bears, such as some life history info.,and safe recreating in bear country. We also loan out various bear related educational guides, if requested. Safe recreation in bear country included in the Forestry Expo student wkbook for 5th grade; Do use guides internally for classroom presentations, etc.
USDA Forest Service	Northern Continental Divide Ecosystem							Not sure, we don't use it if it is available.
Montana Fish, Wildlife & Parks	Northern Continental Divide Ecosystem	K-12	Helena School District	1/month	25/month	low	low	
U.S. Forest Service (Flathead N.F, Lewis & Clark N.F, Helena N.F., Lolo N.F., Kootenai N.F)	Northern Continental Divide Ecosystem	K-12	local school classrooms, community events, teacher trainings, summer recreation	0-10 times/year depending on Forest	Variable depending on times used; 0-300/ forest	Low	High for those that use	Two of the five forests do not use - most likely because they are not available. FNF used trunks from other agencies; Availability not consistent across forests.

			programs					
Confederated Salish and Kootenai Tribes	Northern Continental Divide; Regionally	pre-school to post secondary	primarily Flathead Indian Reservation, additionally surrounding areas as requested	more frequently during the school year, on average 1 to 2 X month	Approximately 20 schools, from elementary, middle to high school	one time development costs (high) and maintenance costs (low)	high	
Idaho Fish and Game	Selkirk-Cabinet-Yaak Ecosystem	elementary schools	northern Idaho schools	10 times a year	250	low	medium to high	good resource for teachers
Montana Department of Fish Wildlife and Parks	Selkirk-Cabinet-Yaak Ecosystem	K-12	Schools in Libby, Troy, Yaak, Heron, Noxon, Trout Creek, Thompson Falls	As requested, approximately 4-5 per year	varies by year; in 2011 approximately 300 students in 5 different schools	High	High	I do not provide educational trucks to schools without also coming to give a presentation to the students. I come into the local schools myself and organize times in which I can give a bear program to the students myself. Programs vary with teachers needs and may be done annually for a single teacher or every 4-5 years for all the students in

								every grade for a single school over the course of 1-2 days.
US Fish and Wildlife Service	Selkirk-Cabinet-Yaak Ecosystem	High School Advanced Biology class field trip	Libby	Annual	40	Medium	High	Student learn wildlife research techniques and local bear biology / management
US Forest Service	Selkirk-Cabinet-Yaak	grades 1-6	varies annually (schools in the Bonners Ferry, Priest, Sandpoint, Coeur d'Alene areas)	varies annually	varies annually	low	medium	The Forest Service supports the purchase/maintenance of educational trunks and the salaries of two IDF&G employees that are the most frequent presenters of bear information to area school children. The IPNF has provided upwards of \$30,000 in the last few years to support these positions.
National Park Service - Grand Teton	Yellowstone	grade school	Local and visiting school groups.	2 - 4 times a year	100	Low	low	
MFWP	Yellowstone	k-12	schools, scouts, informative presentations, hunter-ed	continually - everyday	unknown - thousands	low to med	high	most requested IE material (bears & wolves)
Wyoming Game & Fish Dept.	Yellowstone Ecosystem	preschool-middle school	All eight regional offices	varies, but probably averages once/month for each	10,000/yr (?)	medium	high	bear ed. trunks are very popular and a great teaching tool. Several thousand are contacted at our annual Hunting & Fishing Expo each year.

Idaho Department of Idaho Fish & Game	Yellowstone Ecosystem	pre-K through college	Upper Snake Region of IDFG-schools, state parks, fairs, scout gatherings, safety training, hunter education	weekly	Hard to get a firm count because of varied usage. Trunks are used by schools all across region. Most hunter education courses in region contain a bear education unit, reaching a few thousand students each year. 25 teachers took part in a 2 credit college course called WILD About Bears, these teachers were given resources to allow them to reach hundreds of students.	Medium	High	
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US Geological Survey, Interagency Grizzly Bear Study Team	Yellowstone; Northern Continental Divide	k-12	MT	2/year	100	low	medium	Used MT FWP bear trunks.
Kootenai Tribe of Idaho								This is a cooperative effort through KVRI
Defenders of Wildlife	All; Regionally	K-12	Montana	20-30 times a year	over 500 kids a year	Low	High	The initial cost of creating a trunk can be high. However, multiple uses over many years make it cost effective in the long run.
National Wildlife Federation	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak; Yellowstone; Nationally (U.S.)							Used to do more of this
Grizzly Bear Outreach Project	North Cascades Ecosystem; Selkirk-Cabinet-Yaak	elementary		As of 2009, less focus on schools	1,000	low	Med	Because of the intense hours it takes to produce really good educational outreach to students we since 2009, we don't aggressively seek out school presentations but do when we are asked. We loan our trunk out which has a lot of kid materials in it from books, to casts, etc

Boone and Crockett Club	Northern Continental Divide Ecosystem; Regionally; Nationally (U.S.)	Middle and High School	Theodore Roosevelt Memorial Ranch	Each year in various programs	1500 to 2000 per year	medium	high	
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Table 1.e. Use of static displays or educational trailers to provide information, education and outreach regarding grizzly bears by Interagency Grizzly Bear Committee member agencies and non-government organizations. Survey conducted October – December, 2011.

Name of agency or organization	Ecosystem	Static Displays or Educational Trailers						Comments
		Target Audiences	Locations Used	Frequency of Use	Number of People Reached	Relative Value	Relative Cost	
Lolo National Forest	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak	field going personnel	Missoula Supervisor's Office	Annual	35 to 40 or more	High	Low	Be Bear Aware Educational Trailer is used during bear spray/wildlife encounter training for SO field personnel. The prominent display of the trailer in front of the building attracts quite a number of onlookers.
North Cascades National Park	North Cascades	We have often hosted the GBOP's posters, etc. in our visitor centers	visitor centers	all summer, for many of the past several summers	most people who come in (not sure of #s)	medium (?)	to us, none; not sure how much the GBOP spent	
USFWS	North Cascades; Regionally	Everyone, especially sportsmen	Cabela's, outdoor events	30-50 times/year	depends on event: 1K some days, 200 others	Very high	high	Excellent tool if staffed with the right people and materials

USDA Forest Service, Flathead Natl. Forest	Northern Continental Divide	Forest visitors and residents	community events such as the annual county fair, Forestry Expo, Great Rockies Sport Show, Bear Fairs, Summit Nature Center at Big Mtn., Hungry Horse Ranger District front office	2-5 times annually	estimated 2,000-3,000 total for the year (does not count the nature center - annual visitors, 11,000-14,000)	medium	initial cost for production high, low when borrow existing display	The Flathead makes use of different displays. At the nature ctr. there is a black bear and grizzly bear mount and signing; at the Great Rockies Sport Show ea. yr. the Hunting/Recreating in Bear Country display is used from the Ninemile Ranger District, has been used at the NW MT Fair also; various items used for display at the local Bear Fairs (display board w/ photos/text, mount, hides, food storage boxes); grizzly bear mount, display signs, at Hungry Horse RD front office area
Rocky Mountain Ranger District, Lewis & Clark National Forest	Northern Continental Divide	Forest Visitors	District Offices, trailheads, campgrounds	Continuous	unknown	Medium ?	Medium	Standard information posted at trailheads and campgrounds regarding bear safety, food storage requirements; large signs regarding food storage posted on roads at main Forest entrances
USDA Forest Service	Northern Continental Divide Ecosystem	General public	Office	Every day	Over 30,000 visitors per year	High	Medium	Lots of static displays in our office
Montana Fish, Wildlife & Parks	Northern Continental Divide Ecosystem	General Public						We have a new trailer, but have not used it yet. We still are working on getting the outside painted and vinyl panels for it.

U.S. Forest Service (Flathead N.F., Lewis & Clark N.F., Helena N.F., Lolo N.F., Kootenai N.F.)	Northern Continental Divide Ecosystem	Forest visitors and residents; field-going personnel	District and SO offices, trailheads, campgrounds, community events such as county fairs, Forestry expo, Sports shows, Bear Fairs, nature and visitor centers	Educational Trailers - 1-5 times annually (2 forests); Static displays - up year-round, & viewed every day	Static displays are viewed by many more folks than the Trailers; Unknown number for most forests; 2-3000 people up to 30,000 visitors/year	Medium to High	low to medium - static displays; Trailer - initial cost to produce high, now low when borrowing trailer	Variety of static displays used: mounts of grizzly/black bears with display signs at various offices; other static displays in offices including food storage boxes; informational signs posted at trailheads, campgrounds, and roadsides regarding food storage requirements; 2 trailers mentioned - that are borrowed? from other agencies/areas
Confederated Salish and Kootenai Tribes	Northern Continental Divide; Regionally							We have not developed static displays or educational trailers
Idaho Fish and Game	Selkirk-Cabinet-Yaak Ecosystem	general public - life size grizzly mounts	library, department office, wildlife refuge	year round	several thousand at each place	high	medium	very good public outreach
Montana Department of Fish Wildlife and Parks	Selkirk-Cabinet-Yaak Ecosystem	Residents, hunters and visitors to the CYE portion of Lincoln and Sanders Counties, MT; Libby, Troy, Yaak, Heron,	Schools, school field trips, festivals, fairs, organization and local club meetings/presentations, electric fencing workshops	approximately 15 times per year	6,000 or more per year	High	High	Educational trailer is also used as a storage for static displays.

		Noxon, Trout Creek, Thompson Falls,						
US Fish and Wildlife Service	Selkirk- Cabinet-Yaak Ecosystem	Community events	Libby, Troy, Plains	3-5 times per year	300-400	High	Medium	Shared effort with MDFWP Bear Management Specialist
US Forest Service	Selkirk- Cabinet-Yaas							NA at this time. The FS does have informational kiosks at major trailheads and developed campgrounds that feature standardized posters concerning grizzly bear identification and proper food storage, but they do not currently have any large displays that focus on grizzly bear I&E.
National Park Service - Grand Teton	Yellowstone	Public	In park, local public functions	minimum of 4 weeks a year	A LOT, hundreds to thousands depending on the season.	High	High	GRTE just got a bear ed trailer and we only just started using it.

MFWP	Yellowstone	sportsmen & recreationists	sport shows	low	hundreds	low	low	not well received by hunters due to Sierra Club sponsorship
Wyoming Game & Fish Dept.	Yellowstone Ecosystem	general public	Cody & Jackson offices have ed. trailers but they are used throughout the state	30-50 times/year combined	several thousand	high	medium-high	The Jackson trailer is used throughout the summer at popular pull-outs in Grand Teton National Park. They are hugely popular.
Idaho Department of Idaho Fish & Game	Yellowstone Ecosystem	residents, tourists, hunters, anglers, scouts, students	schools, state parks, regional airports, visitors centers	daily to monthly-static display remains up at regional airport all fall.	Thousands of scouts are reached via Bear Education Trailer. Displays at Eastern Idaho State Fair reach easily 100k annually. Hundreds of travelers each day at airport view	Medium	High	Cost to produce Bears Education trailer were split between USWFS money given to IDFG for grizzly management and The Wildlife Conservation Society. Large static display was provided by CWI and partners.
Kootenai Tribe of Idaho		General public	County Fair	annually		Medium	low	This is a cooperative effort through KVRi
Vital Ground	All	General Public	Regionally	6-8 times per year	?	Low	Low	VG table top displays are to promote the organization's conservation projects and to recruit new supporters.

Defenders of Wildlife	All; Regionally	Hunters	Montana	5-10 times a year	approximately 500-1000 a year	Medium	High	High initial cost
Living with Wildlife Foundation	All; Regionally; Nationally (U.S.); Canada	hobby farmers, livestock producers, school groups, 4H clubs	fairs and events in Northwestern Montana	high usage during summer months	hundreds	high	high	we are working with Montana Fish, Wildlife & Parks on a new electric fencing trailer that will feature portable fencing displays, information and other educational materials
Grizzly Bear Outreach Project	North Cascades Ecosystem; Selkirk-Cabinet-Yaak	General	NC and Selkirks	All year long	Thousands...	High	Low	All our staff could use upgraded display materials. They are relatively low budget items and we would love to have higher quality displays.
NOLS	North Cascades Ecosystem; Yellowstone; Regionally, Nationally (U.S.); Canada	general public	USFS kiosks, NH Museum bear display in Cody, WY	ongoing	10's of thousands	high	high	We were a partner in the video display about humans and grizzlies
Yellowstone to Yukon Conservation Initiative	Northern Continental Divide ; Selkirk-Cabinet Yaak; Canada	General audiences	Film festivals and conferences	Several times per year	Hundreds	Medium	Low	Displays create an opportunity to engage people in conversation.

Sierra Club	Regionally	members, general public, media	seattle, regionally	monthly	1000's	high	medium	
BE BEAR AWARE CAMPAIGN	Regionally; Nationally (U.S.)	EVERY ONE	EVERY WHERE	ALL THE TIME	MILLIONS	LOW	?	SILLY QUSTION

Table 1.f. Use of websites to provide information, education and outreach regarding grizzly bears by Interagency Grizzly Bear Committee member agencies and non-government organizations. Survey conducted October – December, 2011.

Name of agency or organization	Ecosystem	Websites						
		Target Audiences	Frequency of Use	Volume of Use (Hits/month)	Relative Value	Relative Cost	Information Most Often Sought	Comments
FWS	Bitterroot Ecosystem; Yellowstone; Nationally (U.S.)	Anyone interested in bears.	all the time.	?	high	low	everything about bears	
Lolo National Forest	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak	Recreationists /Forest Users	Annual Updates	I know we monitor this..I'd need to contact the Regional Web person to get the info.	High	Low	Same as above, I'd need to contact the Regional Web person to get the info.	
North Cascades National Park	North Cascades	public, local stakeholders						We have input to the GBOP's site's content & find it very thorough and generally accurate
USFWS	North Cascades; Regionally	Web-literate sportsman and recreationists	ongoing	Never checked	medium	low	Very little about grizzly bears	

USDA Forest Service, Flathead Natl. Forest	Northern Continental Divide	Forest visitors						We have a Bear Aware link under Alerts on the Forest home page. Visitors get quick reminder about staying alert when recreating in bear country, there is quick link to the FWP Bear Aware page. The forest went to a new web format this summer; still working to develop a forest specific bear aware page that will feature info. on the food storage order and offer add'l links to other bear web sites.
USDA Forest Service	Northern Continental Divide Ecosystem	General public	Unsure	Unsure	Unsure	Unsure	Unsure	
Montana Fish, Wildlife & Parks	Northern Continental Divide Ecosystem	General Public						
U.S. Forest Service (Flathead N.F, Lewis & Clark N.F, Helena N.F., Lolo N.F., Kootenai N.F)	Northern Continental Divide Ecosystem	Forest users and visitors	annual updates	Unknown - regional web person monitors - will try to get this number	Unsure for most forests; high value for one forest	unsure - will try to run down a number	unsure - will try to run down	Some forests have a link to more bear information or food storage requirements; links to FWP Bear Aware page

Confederated Salish and Kootenai Tribes	Northern Continental Divide; Regionally	global	weekly	bear information hits are not separated from general requests for information	high	low	general recreation regulations	
Idaho Fish and Game	Selkirk-Cabinet-Yaak Ecosystem	mostly hunting public	often	unknown	unknown	low	hunting in bear country	
Montana Department of Fish Wildlife and Parks	Selkirk-Cabinet-Yaak Ecosystem							I cannot determine the amount the MFWP website is used specifically for people searching for information on bears in the CYE alone. I do place CYE updates and information on the IGBC website under the S/CY subcommittee page.
US Fish and Wildlife Service	Selkirk-Cabinet-Yaak Ecosystem	Anybody searching on the web	Updated with any new information as available	???	high	low	probably reports or informational updates	

US Forest Service	Selkirk-Cabinet-Yaak	Forest visitors including outfitter/guides, contractors/crews employed on forest, Forest Service employees, recreational visitors and general public	checked and updated at least weekly		High	Low	recreation, maps, planning	
National Park Service - Grand Teton	Yellowstone	Public	Unknown	Unknown	Low	Low	Unknown	I will have to direct this question to an interpretive range to answer.
MFWP	Yellowstone	hunters, fishing, recreationists, photographers,	high	11,103 per year	high for those seeking information	medium	unknown	
Wyoming Game & Fish Dept.	Yellowstone Ecosystem	hunters	year round		medium	low	hunting information	We have a voluntary bear id. quiz and a grizzly bear info site that provides "real-time" info on all mgt. actions taken, etc.

Idaho Department of Idaho Fish & Game	Yellowstone Ecosystem	Students, residents, hunters, tourists	daily	1,982/yr (out of 3.2 million for the agency site)	High	Low	Identification and safety in bear country	Our Commission has directed for us to construct our own ID test section. This addition will be launched soon and will include stills and video clips. A certificate will be available for printing after completion, but is not required for hunters yet.
US Geological Survey, Interagency Grizzly Bear Study Team	Yellowstone; Northern Continental Divide	general public, media, scientists, natural resource managers	daily	IGBST web - 7900 thus far for 2011; NCDE - 3000 thus far for 2011	high	medium	general research and monitoring information, scientist contact info	
Kootenai Tribe of Idaho		General Public/Agencies	Moderate		Medium	Low		KTOI hosts KVRI website which includes the Grizzly Bear Subcommittee.
Vital Ground	All	General Public	Daily	average 17,400 per month for the past year	High	Medium	General info about bears.	The IGBC website could be much more effective. It is rather "clunky."
Defenders of Wildlife	All; Regionally	All ages and demographics	Missoula Bears- 38 average visits per day in one year, Defenders	Missoula Bears- Oct2010- Sept2011 143,150, Defenders of Wildlife-	High	Medium	Missoula Bears-outreach materials and bear/lion updates and sighting reports, Defenders of	This information is for two websites. Please contact me with questions regarding the information provided here.

			of Wildlife-Grizzly related pages get about 3K unique page views a year. Grizzly fact sheets get about 93K unique page views, coexisting with carnivores gets about 10K unique page views	Grizzly related pages get about 3K unique page views a year. Grizzly fact sheets get about 93K unique page views, coexisting with carnivores gets about 10K unique page views			Wildlife -Grizzly Fact Sheets	
Living with Wildlife Foundation	All; Regionally; Nationally (U.S.); Canada	anyone seeking information about preventing conflicts with grizzly bears	High	10,000 hits per month on average	high	low	Living with Predators Resource Guides and pages dealing with preventing conflicts with wildlife	

National Wildlife Federation	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak; Yellowstone; Nationally (U.S.)	conservationist citizens	continuous	nationally 100s of thousands, locally hundreds	high	medium	information to take action on an issue (e.g. public comment on conservation issue to influence policy makers)	
National Parks Conservation Association	North Cascades Ecosystem	General Public, Members		476,000 per month	High	Low	Information about different national parks	
Grizzly Bear Outreach Project	North Cascades Ecosystem; Selkirk-Cabinet-Yaak	General		2-3,800 visitors a month	High	Med	depends on the month. Because of our TV and radio PSAs and PBS, grizzly bear and black bear safety and ecology and behavior is most sought	When we change our name, we hope to redo our website to make everything even more user friendly. People love our website and call us from all over the US to find out who designed it
WildBC, Habitat Conservation Trust Foundation	North Cascades; Selkirk-Cabinet-Yaak; Canada						climate change information; science in action program; Project WILD	

Yellowstone to Yukon Conservation Initiative	Northern Continental Divide ; Selkirk-Cabinet Yaak; Canada	General audiences	Constant	4074 hits to grizzly bear conservation strategy page; 1821 hits a year on general grizzly bear page; 158 hits in last year to specific grizzly bear campaign page;	Low	Medium	The most frequently hit pages are the Y2Y home page, job opportunities pages, "about us" page, Journey of Wildlife and Art, and the Peel Watershed Campaign (Yukon).	
Endangered Species Coalition	Regionally	General endangered species interest or issue-specific searches (ie. Keystone XL, Gulf Spill,	daily	15-20k/month (across 4 sites)	high	low	Species information, actions, Endangered Species Day information	
Sierra Club	Regionally	members, general public, media, decision makers	always		high	low	wildlife conservation	

Natural Resources Defense Council	Regionally; Nationally (U.S.)	NRDC membership, grizzly activists, educators, scientists	Weekly to monthly		High	Low		
Birchdale Ecological	Selkirk-Cabinet-Yaak Ecosystem; Regionally; Canada	web users, local and regional		I don't know	Medium	Low		This is 2 years old, and is getting more use
Greater Yellowstone Coalition	Yellowstone Ecosystem	national, regional, local	regularly updated	a few dozen	medium	low	educational	We try to use a variety of ways to direct people to our grizzly bear page, e.g., posting stories on our Facebook page.

Table 1.g. Use of social media (FaceBook, Twitter, YouTube) to provide information, education and outreach regarding grizzly bears by Interagency Grizzly Bear Committee member agencies and non-government organizations. Survey conducted October – December, 2011.

Name of agency or organization	Ecosystem	Social Media – Facebook, Twitter, YouTube						
		Target Audiences	Locations Used	Frequency of Use	Number of Friends or Followers	Relative Value	Relative Cost	Comments
U.S. Forest Service, Okanogan-Wenatchee N.F.	North Cascades		None.					We use Twitter and Tweet when we disseminate a news release.
North Cascades National Park	North Cascades							Again, we refer people to the GBOP's resources.
USFWS	North Cascades; Regionally	Youth - teens to early 30's	Twitter, facebook	When appropriate		medium	low	Useful when something is happening. Good crisis mode tools
Confederated Salish and Kootenai Tribes	Northern Continental Divide; Regionally							we are not currently using social media for external communications
US Forest Service	Selkirk-Cabinet-Yaak	General public	Twitter account-used for messages related to NFS issues throughout north Idaho	once or twice a week on average	120	low	low	Our Twitter feed automatically picks up and tweets any news releases or alerts posed to our website in addition to any wildfire information our forest posts to Inciweb. http://twitter.com/#!/IDPanhandleNF

National Park Service - Grand Teton	Yellowstone	Public	Facebook, Pod Casts	GRTE has a food strage and wildlife viewing podcast available.	Unknown	Unknown	Unkn own	I will ask an interpretive ranger to answer these questions.
MFWP	Yellowstone	outdoor enthusiasts - general public	state postings on all 3 social media sites	high - daily	unknown	medium	medi um	
Wyoming Game & Fish Dept.	Yellowstone Ecosystem	general public				medium	low	WGFD utilizes facebook and YouTube for a variety of fish & wildlife information, not just bears.
Idaho Department of Idaho Fish & Game	Yellowstone Ecosystem	Subscribers to IDFG- mainly hunters	Facebook & Twitter	Weekly	thousands	Medium	Low	All grizzly related stories are linked to out FB and Twitter sites and sent out in the same manner as all other news releases.
US Geological Survey, Interagency Grizzly Bear Study Team	Yellowstone; Northern Continental Divide							
Vital Ground	All	General Public	Nationally	Daily	1525	low	low	Hard to measure effectiveness.
Defenders of Wildlife	All; Regionally	All ages/demogr aphics	Missoula Bears - Facebook, Defenders of Wildlife - Facebook,	Missoula Bears- weekly Facebook updates, Defender	Missoula Bears - 48 Facebook friends, Defenders of Wildlife -	High	Low	This information is for two websites. Please contact me with questions regarding the information provided here.

			Twitter, YouTube	s of Wildlife- Daily	combined Facebook and Twitter - 176K			
Living with Wildlife Foundation	All; Regionally; Nationally (U.S.); Canada	Wildlife Advocates	FaceBook causes page	low	35	low	low	I haven't yet done much with this medium. I hope to use it more in the future.
National Wildlife Federation	Bitterroot; Northern Continental Divide; Selkirk- Cabinet- Yaak; Yellowstone; Nationally (U.S.)	general public	nationally (some insignificant effort locally)	nationall y major-- in millions/ year	impossible to say...many different individuals in the national office do this independe ntly...same locally but not many do it.	medium	low	Mostly focused on providing information and encouragement to comment on policy issues
National Parks Conservation Association	North Cascades Ecosystem	General Public, Members	Twitter and Facebook	Often	26,297 on Twitter; 73,586 Likes on Facebook	Medium	Low	

Grizzly Bear Outreach Project	North Cascades Ecosystem; Selkirk-Cabinet-Yaak	General public			200	High because it can reach a lot of people at relative low cost.200	Med	We just posted our YouTube and Facebook site in May of this year. At this time we have
Yellowstone to Yukon Conservation Initiative	Northern Continental Divide ; Selkirk-Cabinet Yaak; Canada	Youth	Facebook and Twitter	Weekly	780 on Facebook; 43 on Twitter	Medium	Low	We are very new to social media and haven't fully integrated it into our strategic communications.
Endangered Species Coalition	Regionally	US Citizens 18+ with an interest in conservation, wildlife, animal welfare or environment.	5 (FB/Twitter/Google+/YouTube/Change.org)	daily	about 25,000	medium	low	
Sierra Club	Regionally	members, general public	regionally	regularly	100,000 nationally 300 locally	high	low	
Greater Yellowstone Coalition	Yellowstone Ecosystem	Facebook friends	GYC facebook page	updated daily	6,500	high	low	In the past six months we have made our Facebook page a priority, and it appears to be paying dividends, at least in terms of interest in our issues. Grizzly bears typically rank with wolves and bison as favorite topics.

Table 1.h. Use of radio public service announcements (PSA) or purchased air time to provide information, education and outreach regarding grizzly bears by Interagency Grizzly Bear Committee member agencies and non-government organizations. Survey conducted October – December, 2011.

Name of agency or organization	Ecosystem	Radio PSA's or Purchased Air Time					Comments
		Target Audiences	Locations Used	Estimated Listener Numbers	Relative Value	Relative Cost	
U.S. Forest Service, Okanogan-Wenatchee N.F.	North Cascades						We only send out news releases concerning grizzly bear and black bear monitoring and other bear-related issues. We do not disseminate PSAs.
North Cascades National Park	North Cascades						Oh dear, again - GBOP
USFWS	North Cascades; Regionally						We have not used radio PSA's in years but they can be a good tool
USDA Forest Service, Flathead Natl. Forest	Northern Continental Divide	Forest Visitors, local residents	Flathead Valley stations				In the past, the Forest worked with FWP, Region 1 to provide a spring and fall paid radio PSA; often receive 'free' air time on local stations to promote Bear Fair events, bear aware reminders such as food storage
U.S. Forest Service (Flathead N.F, Lewis & Clark N.F, Helena N.F., Lolo N.F., Kootenai N.F)	Northern Continental Divide Ecosystem	Forest visitors, area residents	Flathead Valley Stations	unknown	unknown	unknown	In the past, the FNF worked with FWP, region 1 to provide a spring and fall paid radio PSA; often receive "free" air time on local stations to promote Bear Fair events, bear aware reminders such as food storage.

Confederated Salish and Kootenai Tribes	Northern Continental Divide; Regionally	Flathead Indian Reservation	7 radio stations on the Reservation	139,000	high	medium to high	
Idaho Fish and Game	Selkirk-Cabinet-Yaak Ecosystem	general public	northern Idaho	unknown	unknown	medium	used in the past, not much now
Montana Department of Fish Wildlife and Parks	Selkirk-Cabinet-Yaak Ecosystem						have done 2 radio interviews with local radio station in Libby in the 4 years I've worked here. But they were requested interviews, not PSA's or purchased air time.
National Park Service - Grand Teton	Yellowstone	Local public	local radio stations	Unknown	Medium	Medium	
MFWP	Yellowstone	sportsmen, recreationists , residents	statewide	thousands	medium	low	
Wyoming Game & Fish Dept.	Yellowstone Ecosystem	hunters, homeowners , backcountry users	Jackson	5,000	medium	medium	We purchase air time in Jackson, but primarily utilize PSAs in other communities
Idaho Department of Idaho Fish & Game	Yellowstone Ecosystem	Residents, hunters, tourists	Radio stations throughout ecosystem	Unknown	High	low	PCAs are distributed occasionally, but use is unknown and follow-up lacking. At times we have been able to secure funds & PSAs from NGOs. Paid is better than free when it comes to placement and frequency. The budget is the limit.
Vital Ground	All	General Public	Nationally	200,000 per year	low	medium	VG uses radio PSA's to raise awareness about Vital Ground and generate interest in our habitat conservation work.

Living with Wildlife Foundation	All; Regionally; Nationally (U.S.); Canada	People living in the NCDE / adults	Whitefish/Kalispell		medium	low	Hard to track effectiveness of this medium.
National Wildlife Federation	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak; Yellowstone; Nationally (U.S.)	Western Montana listeners to public radio	Missoula, MT Public Radio....have 1 commentary/month, each 5 minutes		High	low	We've been doing this for a decade
Grizzly Bear Outreach Project	North Cascades Ecosystem; Selkirk-Cabinet-Yaak	General public	NC and Selkirks and statewide networks.		Low	High - when they are played!	radio PSA's have been playing since early September
Greater Yellowstone Coalition	Yellowstone Ecosystem	regional	Regional radio stations	NA	medium	low	We rarely use this because of perceived limited effectiveness.

Table 1.i. Use of television public service announcements (PSA) or purchased air time to provide information, education and outreach regarding grizzly bears by Interagency Grizzly Bear Committee member agencies and non-government organizations. Survey conducted October – December, 2011.

		Television PSA's or Purchased Air Time						
Name of agency or organization	Ecosystem	Target Audiences	Locations Used	Frequency of Use	Estimated Viewer Numbers	Relative Value	Relative Cost	Comments
U.S. Forest Service, Okanogan-Wenatchee N.F.	North Cascades		None.					Our news releases are disseminated to television news stations in Washington.
North Cascades National Park	North Cascades							Again, GBOP
USFWS	North Cascades; Regionally					low	high	No use
USDA Forest Service, Flathead Natl. Forest	Northern Continental Divide	Forest visitors, area residents	local cable station					The "Recreating in Bear Country" DVD has been shown regularly on the local cable channel.
U.S. Forest Service (Flathead N.F, Lewis & Clark N.F, Helena N.F., Lolo N.F., Kootenai N.F)	Northern Continental Divide Ecosystem	Forest visitors, area residents	Flathead N.F.- local cable station	unknown	unknown	unknown	unknown	The "Recreating in Bear Country" DVD has been shown regularly on the local cable channel

Confederated Salish and Kootenai Tribes	Northern Continental Divide; Regionally	Flathead Indian Reservation	KSKC TV	spring and fall	unknown	medium	low	
Montana Department of Fish Wildlife and Parks	Selkirk-Cabinet-Yaak Ecosystem							Not relevant, no local television stations in the area.
MFWP	Yellowstone	hunters, fishers, recreationists , residents	statewide	spring thru fall4 to 8 times	thousands	medium	low	
Wyoming Game & Fish Dept.	Yellowstone Ecosystem	hunters and general recreationists	Casper & Cheyenne	twice a year	20,000	medium	low	WY Game & Fish develops bear-related PSAs a couple times/yr
Idaho Department of Idaho Fish & Game	Yellowstone Ecosystem	residents, hunters, tourists	Network & cable TV outlets	Seasonal	Unknown	Medium	High if purchased	Value is unknown and free PSA placement is often very late at night. Paid placement is better, but extremely costly.
National Wildlife Federation	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak; Yellowstone; Nationally (U.S.)	concerned citizens on issue addressed	National HQ	perhaps 20/year		medium-high	High	We have a production staff to do these and do them well. They focus on an issue. An example can be seen at: http://nsidc.org/data/seaice_index/images/daily_images/N_stddev_timeseries.png

Grizzly Bear Outreach Project	North Cascades Ecosystem; Selkirk-Cabinet-Yaak	general public	WA and soon to be ID, Selkirks in WA	Airing on many channels since May	a few million	High	High	Have received lots of accolades for our Bear Safe PSA. It has driven a lot of people to our website to get more bear safety info. The stations play it because 1. safety message, 2. local, 3. we worked it.. called stations before and after.
Greater Yellowstone Coalition	Yellowstone Ecosystem	NA	na	na	na	na	na	We have sparse TV presence in Greater Yellowstone

Table 1.j. Use of other media to provide information, education and outreach regarding grizzly bears by Interagency Grizzly Bear Committee member agencies and non-government organizations. Survey conducted October – December, 2011.

Name of agency or organization	Ecosystem	Other Media							Comments
		Type of Media	Target Audiences	Locations Used	Frequency of Use	Amount of Use	Relative Value	Relative Cost	
USFWS	North Cascades; Regionally	GBOP program	General		ongoing	constant	high	high	very effective
USDA Forest Service, Flathead Natl. Forest	Northern Continental Divide	Signing	Forest visitors	Trail heads, road (Forest portal) signs, campground info. boards, dispersed camping areas, picnic areas	posted yr round				ARRA funds used to place "Food Storage Required" signs at all major forest road portals (15 signs); FNF specific food storage sign for posting at TH's, campgrounds, etc.
Idaho Fish and Game	Selkirk-Cabinet-Yaak	face to face, field contacts, grocery stores, gas station, "Hunter, know your bear" signs	general public, hunters, local residents	anywhere	daily	lots	high	low	one on one discussions very useful with local publics

Montana Department of Fish Wildlife and Parks	Selkirk-Cabinet-Yaak	IGBC Selkirk/Cabinet-Yaak Subcommittee website	Anyone visiting the IGBC webpage		Updated 1-2 times per year		medium	low	I provide updates and information on what is going on with my activities and the bears in the Cabinet-Yaak Ecosystem to the IGBC S/CY subcommittee web page.
US Fish and Wildlife Service	Selkirk-Cabinet-Yaak	email contact list	anyone who wants to be on this list		3-5 times per year depending upon need - the same as any of my press release	??	medium	low	I keep an email update list which includes media contacts, agencies, and the general public that requests to be informed
National Park Service - Grand Teton	Yellowstone	Signs	Public that are actually getting out of vehicle and hiking	All trailheads in YELL and some trailheads in GRTE	Not much; poor performer		Low	Low	
Wyoming Game & Fish Dept.	Yellowstone	signage at trailheads, visitor centers, airports, etc.	backcountry users	all major trailheads in the GYE			medium-high	low	

Idaho Department of Idaho Fish & Game	Yellowstone	Internet Banner Ads, Speaking Engagements	General public and interested parties	Ads of Facebook, speaking engagements to clubs and public	Occasionally	Ads can be tracked by hit	medium	low	FB ads are good in they can be focused and hits produce demographic data. Speaking engagement are good in that they reach dozens to hundreds and a time and allow for direct feedback to questions and development of support networks.
US Geological Survey, Interagency Grizzly Bear Study Team	Yellowstone ; Northern Continental Divide	Podcasts	general public		2/year		medium	medium	podcasts developed for specific components of IGBST and NCDE research programs
Kootenai Tribe of Idaho		Taxidermy Bear Display	public/local community.	Library, Hunter Education, County Fair, etc.	moderate	moderate	High	High	Used primarily by IDFG
Vital Ground	All	Organization's biannual newsletter (Vital News)	VG Members and Donors.	Nationally	Biannual	6,000 each issue.	High	Medium	Vital News would be a great outlet for articles the IGBC would like to distribute to a supportive constituency - especially scientific info for the lay public.
Defenders of Wildlife	All; Regionally	Website and Organizational Blogs etc...	Defenders Members and Supporters		Regular	High	High	Low	None related specifically to grizzly bears beyond earned media, organizational communications (Facebook, Twitter, Blogs, etc..)and local outreach efforts.

National Wildlife Federation	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak; Yellowstone ; Nationally (U.S.)	National Magazine... National Wildlife, Ranger Rick,	members and subscribers, Ranger Rick is school kids	national	monthly	subscribers = 100s of thousands each magazine	High	very High	This is somewhat similar to FWP's magazine...relies on lots of great photos. Ours have a more pointed message usually. We also produce reports on topics like wildlife adaptation to climate change, vulnerability assessments, etc. We also host lots of workshops and conferences on specific topics.
Grizzly Bear Outreach Project	North Cascades Ecosystem; Selkirk-Cabinet-Yaak								We meet individually with media folks throughout the year. A partial list of our press is on our website. We have had a lot of response to radio, tv, and newspaper interviews. PBS special, Letterman, PSAs, Bear Awareness Week, and press releases have increased interest.
NOLS	North Cascades Ecosystem; Yellowstone ; Regionally, Nationally (U.S.); Canada	Published book "Bear essentials"	general public	US national		sold 20,000? copies	high	high	

Endangered Species Coalition	Regionally	podcasts	general public, wildlife advocates	3 (hosted on 2 sites, published through itunes)	monthly	low	medium	low	Not a regular part of our communications strategy and not published frequently enough to accurately quantify the value other than on a relative cost basis.
Birchdale Ecological	Selkirk-Cabinet-Yaak Ecosystem; Regionally; Canada	personal presentations, radio interviews, magazine articles, TV programs newspaper stories	interested groups, public	regional area	5-10 / year	medium	medium	medium	I generally respond to request for talks or interviews. I get a lot and do them all
Greater Yellowstone Coalition	Yellowstone Ecosystem		National conservation readership	Land Letter, NewWest, National Parks Traveler	once a month	NA	high	low	

Table 2. Sources of information, education and outreach materials used by agencies and NGO's.

Name of agency or organization:	Ecosystem	Sources of materials used in information, education and outreach related to grizzly bears				
		Created in-house	Other IGBC Agencies	Center for Wildlife Information	Grizzly Bear Outreach Project	Other
FWS	Bitterroot Ecosystem; Yellowstone; Nationally (U.S.)	X	X	X		
Lolo National Forest	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak	X	X			
U.S. Forest Service, Okanogan-Wenatchee N.F.	North Cascades		X		X	We use IGBC materials.
North Cascades National Park	North Cascades				X	
USFWS	North Cascades; Regionally			X	X	
USDA Forest Service, Flathead Natl. Forest	Northern Continental Divide	X	X	X		
Rocky Mountain Ranger District, Lewis & Clark National Forest	Northern Continental Divide	X	X			
USDA Forest Service	Northern Continental Divide Ecosystem	X	X		X	
Montana Fish, Wildlife & Parks	Northern Continental Divide Ecosystem	X	X	X		

U.S. Forest Service (Flathead N.F, Lewis & Clark N.F, Helena N.F., Lolo N.F., Kootenai N.F)	Northern Continental Divide Ecosystem	X	X	X	X	
Confederated Salish and Kootenai Tribes	Northern Continental Divide; Regionally	X		X		MT FWP, and other internet information as applicable
Idaho Fish and Game	Selkirk-Cabinet-Yaak Ecosystem	X	X	X	X	British Columbia Min of Environ
Montana Department of Fish Wildlife and Parks	Selkirk-Cabinet-Yaak Ecosystem	X	X	X		
US Fish and Wildlife Service	Selkirk-Cabinet-Yaak Ecosystem	X	X	X	X	Brochure created with coalition of NGO partners - Bears: Pointers for Peaceful Coexistence
US Forest Service	Selkirk-Cabinet-Yaak	X		X		
National Park Service - Grand Teton	Yellowstone	X	X	X		
MFWP	Yellowstone	X	X	X		
Wyoming Game & Fish Dept.	Yellowstone Ecosystem	X		X		
Idaho Department of Idaho Fish & Game	Yellowstone Ecosystem	X	X	X		PSA and flyers produced by NGOs such as Defenders of Wildlife and Sierra Club
US Geological Survey, Interagency Grizzly Bear Study Team	Yellowstone; Northern Continental Divide	X		X		
Kootenai Tribe of Idaho		X	X	X	X	Montana Fish, Wildlife and Parks
Vital Ground	All	X	X	X	X	Other nonprofit conservation organizations.

Defenders of Wildlife	All; Regionally	X	X	X		
Living with Wildlife Foundation	All; Regionally; Nationally (U.S.); Canada	X		X		We compile information from other wildlife agencies who are working on bear conflict prevention and make this info available via LWWF
National Wildlife Federation	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak; Yellowstone; Nationally (U.S.)	X				contract writers
National Parks Conservation Association	North Cascades Ecosystem	X			X	N/A
Grizzly Bear Outreach Project	North Cascades Ecosystem; Selkirk-Cabinet-Yaak	X		X	X	
NOLS	North Cascades Ecosystem; Yellowstone; Regionally, Nationally (U.S.); Canada	X	X			We have routine research retreats (in the field) to study bear-human interactions with Steve Herrero and Tom Smith.
WildBC, Habitat Conservation Trust Foundation	North Cascades; Selkirk-Cabinet-Yaak; Canada	X				Ministry of Environment (BC); technical experts in BC
Yellowstone to Yukon Conservation Initiative	Northern Continental Divide ; Selkirk-Cabinet Yaak; Canada	X				Scientific research; scientist partners; other ENGO partners; government web sites; media; list servers
Bob Marshall Wilderness Foundation	Northern Continental Divide Ecosystem	X	X			
Boone and Crockett Club	Northern Continental Divide Ecosystem; Regionally; Nationally (U.S.)	X	X	X		Montana Fish Wildlife and Parks

Endangered Species Coalition	Regionally	X	X			other wildlife NGO's
Sierra Club	Regionally	X			X	
Natural Resources Defense Council	Regionally; Nationally (U.S.)	X	X	X		
Birchdale Ecologiccal	Selkirk-Cabinet-Yaak Ecosystem; Regionally; Canada	X				
Greater Yellowstone Coalition	Yellowstone Ecosystem	X	X			State fish and game agencies, Wildlife Conservation Society, independent scientists

Table 3. Summary of information, education and outreach programs offered by IGBC agencies and NGO's

Name of agency or organization	Ecosystem	Information, education and outreach activities of agencies and organization about grizzly bears offered to:									
		Pre-school children	Primary grades	Secondary grades	Post-secondary grades	Hunter Education Classes	Groups organized by others	Groups organized by your agency or organization	General public	Landowners	Other
FWS	Bitterroot Ecosystem; Yellowstone; Nationally (U.S.)			high school programs in Libby each year			any group who wants a talk about bears		anyone who wants information we talk to		
Lolo National Forest	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak	Provide coloring books to walk-ins upon request; they go extremely fast.	grizzly bear information is woven into classroom programs	grizzly bear information is woven into classroom programs			Girl and Boy Scouts of America; provide informational brochures and signs to post at camps.	Annual outfitter and guide and other permittee letters reminding folks about food storage; annual training on food storage, how to behave in bear country, and what to do in the event of a wildlife/bear encounter is required of all field personnel.	Food storage information posted on Lolo www site; news releases done annually to remind the public about the importance of food storage; brochures/information handed out by front liners at 5 ranger districts; developed rec. sites visited during the summer/fall	provide brochures and handouts upon request	

									by rec. and wildlife technicians, law enforcement, etc.; signs posted at all developed campsites and trailheads.		
U.S. Forest Service, Okanogan-Wenatchee N.F.	North Cascades		Dissemination of brochures at county fairs and educational outreach venues like Salmon Fest in Leavenworth.	Same as above.	Same as above.	We annually disseminate the black bear and grizzly bear brochures at hunter information booths in the fall.			Dissemination at county fairs and hunter information booths.		
North Cascades National Park	North Cascades	I have occasionally given presentations, using the bear trunk.	I have occasionally given presentations, using the bear trunk.	I have occasionally given presentations, using the bear trunk.							I will be working to get involved in an urban/underserved kids' group in the coming

											year.
USFWS	North Cascades; Regionally	none	classroom visits	classroom visits	Classroom visits	printed materials			Media reports, GBOP program		
USDA Forest Service, Flathead Natl. Forest	Northern Continental Divide		Forestry Expo, 5th grade students receive information in event wkbks and on-site presentation, how to safely recreate in bear country especially proper food storage. Summit Nature Center visiting youth groups receive	classroom presentations;					Produced in cooperation with partners, Recreating in Bear Country DVD, available to groups for showing; misc. community presentations; hunting patrols, one-on-one contacts.; Bear Rangers (formal programs, one-on-one contacts with visitors); Organize and staff up to two annual one day community Bear Fairs in cooperation with other agency and NGO partners. Fair targeted		Employees -- being safe while working in bear country and formal bear spray trng. at all ranger district orientations; and for visiting fire crews on large fires

			formal bear aware message during their program .						to landowners and recreationists. Summit Nature Center employees regularly talk with visitors about bears, bear mgmt., recreating safely in bear country. Day long Bear Aware station for families at Forestry Expo.		
Rocky Mountain Ranger District, Lewis & Clark National Forest	Northern Continental Divide	Occasional, according to request by local teachers ; Programs have focused on basic bear biology and not allowing bears to receive "people food"	Same as pre-school				Bear biology and safety and use of pepper spray talk provided to variety of groups as requested , including Boy Scouts, teacher groups, Becoming an Outdoors woman workshop		Contacts by campground and wilderness rangers made regularly with Forest visitors (usually overnight campers, backpackers, horse parties); otherwise limited to existing methods such as posted materials at District offices, trailheads and	Most interaction with landowners occurs through FWP grizzly bear management specialist, with cooperation as needed/requested by us. Some occurs incidentally within the community via	

							s		campgrounds; occasional press releases as needed for specific situations; large signs regarding food storage requirements posted on roads at main Forest entrances	interpersonal interaction	
USDA Forest Service	Northern Continental Divide Ecosystem	As they visit the office to see the bear - bear awareness, identification, biology, living with bears	As they visit the office to see the bear - bear awareness, identification, biology, living with bears	As they visit the office to see the bear - bear awareness, identification, biology, living with bears	As they visit the office to see the bear - bear awareness, identification, biology, living with bears		As they visit the office to see the bear - bear awareness, identification, biology, living with bears		As they visit the office to see the bear - bear awareness, identification, biology, living with bears	As they visit the office to see the bear - bear awareness, identification, biology, living with bears	
Montana Fish, Wildlife & Parks	Northern Continental Divide Ecosystem	Bear ID Education Program	Bear ID, Bear Awareness & Safety, Bear Biology, Grizzly Bear Recovery	Bear ID, Bear Awareness & Safety, Bear Biology, Grizzly Bear Recovery		Bear ID, Bear Awareness & Safety, Bear Biology, Grizzly Bear Recovery	Bear ID, Bear Awareness & Safety, Bear Biology, Grizzly Bear Recovery	Bear ID, Bear Awareness & Safety, Bear Biology, Grizzly Bear Recovery	Bear ID, Bear Awareness & Safety, Bear Biology, Grizzly Bear Recovery		

			y								
U.S. Forest Service (Flathead N.F, Lewis & Clark N.F, Helena N.F., Lolo N.F., Kootenai N.F)	Northern Continental Divide Ecosystem	Provide material to walk-ins (coloring books), materials given when visiting the office to see bear mounts; presentations "by request" from teachers, and summer recreation programs - basic bear biology and not allowing	Same things as with pre-school; additional programs targeting 5th graders; Nature and Visitor centers receive visits from these grades - they get a formal bear aware message during program.	More classroom presentations; visits to offices to see bear mounts - impromptu talks on bear biology and living in bear country	Visiting office to see the bear.....		Bear biology and safety, use of pepper spray talk to groups as requested - examples include Girls & Boy Scouts; Becoming an Outdoors woman workshops	Annual outfitter and guide/other permittee letters reminding folks about food storage & annual training on food storage, how to behave in bear country, bear encounters. Training for FS field-going personnel on bear safety, food storage, etc.; food storage training for fire camps set up on forests	Bear rangers on 2 forests conduct formal & informal programs at campgrounds/summer recreation programs/have booths set up at county fairs and conduct day long community Bear Fairs in cooperation with other agencies and NGO's; One on one contact with campers, hikers, backpackers, horse parties by bear rangers, campground & wilderness	Interaction through presentations at county fairs and Bear Fairs set up to reach landowners and recreationists. Walk-in discussions and dissemination of materials at district offices	Presentation to Border Patrol agents on Food Storage Order & what that means for their activities.

		bears to get "people food"; put on a good camper/ bad camper skit.							rangers, recreation & wildlife technicians & law enforcement; Brochures and handouts at all ranger stations; signs and other posted materials at offices, trailheads, campgrounds; news releases as needed; food storage information on web sites		
Confederate d Salish and Kootenai Tribes	Northern Continental Divide; Regionally	in school presentations	school presentations	presentations	presentations	I am a hunters education instructor	Boy scout camp		as requested	in the field with bear managers	
Idaho Fish and Game	Selkirk-Cabinet-Yaak Ecosystem	coloring books	coloring books, presentations, bear trunks	presentations	reports and publications	bear ID, hunting in bear country, bear ID cards	presentations	bear ID cards, living in bear country	assorted, a little bit of everything	one on one	"Hunter know your bear" signs throughout ecosystem

Montana Department of Fish Wildlife and Parks	Selkirk-Cabinet-Yaak Ecosystem	Activities and outreach for Pre-K children and families through the Libby Public Library	K-6 programs at the public school districts for Libby, Troy, Trout Creek, Noxon, Thompson Falls, and the Lincoln County Rural (one room) Schools. Programs to home-school kids through 2 organizations in Lincoln County.	High School Biology classes at Libby and Troy High School, Libby High School Advanced Biology class annual field trip in to bear country	Gave program to continuing education class for local realtors in Lincoln County that was offered through the Lincoln county conservation district and the local community college.		Bear spray safety and training through the USFS on the Kootenai National Forest; bear safety and awareness training to employees at the Troy Mine, through Revette Minerals, Inc.		I provide annual electric fencing workshops in Lincoln and Sanders counties, MT.	I provide annual electric fencing workshops in Lincoln and Sanders counties, MT.	Presentations to any local organized club or organization whom ask
US Fish and Wildlife Service	Selkirk-Cabinet-Yaak Ecosystem		6th grade field trip with Society of	Field trips for advanced biology class	Occasional college level field trips	Archery education	Kootenai Valley Resource Initiative, Cabinet-Yaak	Bear Spray training for other agencies	Informational updates as desired		

			America n Forester s				Grizzly Bear Citizen Committe e, local search and rescue groups				
US Forest Service	Selkirk- Cabinet- Yaak		Present ations about Grizzly Bear biology - by Forest Service district biologist s								The IPNF also supports these types of activities by paying a portion of the salary for two Idaho Fish and Game employe es (i.e. Watchabl e Wildlife interpret ative position (Beth Paragami an) and Conserva tion Officer (grizzly bear I

											and E) (Brian Johnson)
National Park Service - Grand Teton	Yellowstone	N/A	Staying safe in bear country /Working in bear country (food storage, bear spray, bear ID)	Staying safe in bear country/ Working in bear country (food storage, bear spray, bear ID)	Staying safe in bear country/ Working in bear country (food storage, bear spray, bear ID)	N/A - Bear Safety brochure in GRTE Elk Reduction Program Pamphlet	Staying safe in bear country/ Working in bear country (food storage, bear spray, bear ID)	Staying safe in bear country/Working in bear country (food storage, bear spray, bear ID)	Annual Living in Bear Country Workshop in Jackson (food storage, bear spray, bear ID)		
MFWP	Yellowstone	ed trunks (hides, skulls), brochures, posters	- same -	- same -	- same -				- same -	personal visits	
Wyoming Game & Fish Dept.	Yellowstone Ecosystem	school programs	school programs and other	Annual Youth Camp		Bear safety is part of the statewide	periodic bear safety talks/semi		Approximately 10 public workshops per year	personal contacts	

			events such as annual Hunting & Fishing Expo			curriculum, so it is taught in every class	nars				
Idaho Department of Idaho Fish & Game	Yellowstone Ecosystem	Trunks and talks about bear basics. bear stickers, tattoos, and stamps used	Creation of WILD About Bears workshop for teachers - 2 credit course following Project WILD format. IDFG Publication - Wildlife Express-Grizzly Bear Issue distributed to students. Videos about bear biology and bear safety are used. Trunks and talks about	Creation of WILD About Bears workshop for teachers- 2 credit course following Project WILD format. IDFG Publication - Wildlife Express-Grizzly Bear Issue distributed to students. Videos about bear biology and bear safety are used. Trunks and talks	Videos about bear biology and bear safety are used. Trunks and talks about bear basics. Idaho bear posters, tattoos, hand stamps used	Use of bear spray is demonstrated and participants get a chance to try training canister. Tracking display created to teach difference between types of bear prints. Videos about bear biology and bear safety are used. Trunks and talks about bear	Bear Education Trailer is used as a teaching tool. Use of bear spray is demonstrated and participants get a chance to try training canister. Videos about bear biology and bear safety are used. Trunks and talks about bear basics. Idaho bear posters,	Bear Education Trailer is used as a teaching tool. Use of bear spray is demonstrated and participants get a chance to try training canister. Videos about bear biology and bear safety are used. Trunks and talks about bear basics. Idaho bear posters, tattoos, hand stamps used	Public presentations for general public to attend and learn more about bears. Work has been done to cultivate relationships with Reuters New Agency & Associated Press to become Point of Contact for grizzly and bear related news stories. Participation in special events at local zoos focusing on bears. Special segment on local TV, radio, and in local papers about all	Demonstrations on how to bear proof your property are given. Use of bear spray is demonstrated and participants get a chance to try training canister. Videos about bear biology and bear safety are used.	Posting of bear related in-house video to department website via YouTube. Bear Education Trailer is used as a teaching tool at state fairs and scout gatherings. Large static display is used at sport shows, airports, fairs, and scout gathering

			bear basics. Idaho bear posters, tattoos, hand stamps used.	about bear basics. Idaho bear posters, tattoos, hand stamps used		basics. Idaho bear posters, tattoos, hand stamps used	tattoos, hand stamps used		aspects of bear biology, safety, and hunting. Bear Education Trailer is used as a teaching tool. Use of bear spray is demonstrated and participants get a chance to try training canister. Videos about bear biology and bear safety are used. Trunks and talks about bear basics. Idaho bear posters, tattoos, hand stamps used		s.
US Geological Survey, Interagency Grizzly Bear Study Team	Yellowstone; Northern Continental Divide		Montana State University Super Science Saturday	Billings community schools science and technology days	Rocky Mountain Science Network Summer Academy				website, info sheets, phone inquiries (grizzly bear trapping hotline)		Society of Environmental Journalists conferences
Kootenai Tribe of Idaho								ubcoKTOI is a member of the KVRI Grizzly Bear	KVRI Grizzly Bear Subcommittee . See above.		

								Subcommittee. This subcommittee focuses on distributing factual information to the public through fact sheets, county fair demonstration/display, and KVRl public meetings.			
Vital Ground	All	N/A	N/A	N/A	N/A	N/A	N/A	Focus is on the need to conserve habitat, and the grizzly as an umbrella, keystone and indicator species for conservation.	Focus is on the need to conserve habitat, and the grizzly as an umbrella, keystone and indicator species for conservation.	Information about bear "attractants" as it relates to VG's conservation easements.	Conservation education is NOT Vital Ground's primary focus, so our activities are limited in this regard.
Defenders of Wildlife	All; Regionally	Group tailored hands-on presentations	Group tailored hands-on presentations	Group tailored hands-on presentations	Group tailored hands-on presentations	Group tailored presentations	Group tailored presentations, tabling events	Group tailored presentations, tabling events	Group tailored presentations, electric fencing workshops, tabling events	Group tailored presentations, electric fencing workshops, tabling events	

Living with Wildlife Foundation	All; Regionally; Nationally (U.S.); Canada						We provide conflict prevention information including information about bear-resistant products and methods for deterring bears to the Blackfoot Challenge Wildlife Committee, sanitation work group (Allied Waste Missoula), Confederated Salish and Kootenai Wildlife Division, Girl Scouts (Western	Human-Bear conflict Prevention Workshops for bear managers in Colorado, Montana and Wyoming	Information about bear conflict prevention and bear-resistant products	Information about bear conflict prevention and bear-resistant products	helping to organize the 4th International People-Bear Conflicts Workshop to be held in Missoula in March 2012
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							Montana), Nine Mile Wildlife Work Group, and a host of wildlife agencies nationwid e				
National Wildlife Federation	Bitterroot; Northern Continental Divide; Selkirk- Cabinet- Yaak; Yellowston e; Nationally (U.S.)										All of these things are integrate d into the other media we mention ed. Grizzly bears are, themselv es, only a small part of our overall communi cations effort.
National Parks Conservatio n Association	North Cascades Ecosystem										Elected Officials - importan ce of grizzly

											bears to ecosystem
Grizzly Bear Outreach Project	North Cascades Ecosystem; Selkirk-Cabinet-Yaak		Kids slide show...	Slide presentation and talk.	general slide presentation and talk	General slide presentation, id cards,	depends	depends	One-on-ones, presentations, tabling events, kitchen meetings,	see above	
NOLS	North Cascades Ecosystem; Yellowstone; Regionally, Nationally (U.S.); Canada				Our 3500 students/year earn college credit for their NOLS course, which often includes human-bear safety practices.	We informally help train these groups as a community service.		We run 30 day educational expeditions in bear habitat for 3500 students/year.			
WildBC, Habitat Conservation Trust Foundation	North Cascades; Selkirk-Cabinet-Yaak; Canada		Wild About Bears; Project WILD	Wild About Bears; Grizzly Bear Biology Teacher and student guide	Wild About Bears; Grizzly Bear Biology Teacher and Student guide; Project WILD						

Yellowstone to Yukon Conservation Initiative	Northern Continental Divide ; Selkirk-Cabinet Yaak; Canada						Speaking at meetings or conferences		Speaking at meetings or conferences; media releases; fact sheets; displays	Meetings	
Boone and Crockett Club	Northern Continental Divide Ecosystem; Regionally; Nationally (U.S.)	Difference between grizzly and black bears	Difference between grizzly and black bears - physical characteristics, tracks	Same as primary grades but will add more depth and	Be Bear Aware training, and Bear ID	Be Bear Aware training, Bear ID	same as above	same as above	will provide pamphlets for hunters using the TRM Ranch through the Block Management Program in Montana	none, however we do provide information to visitors questions as well as pamphlets for their use.	
Endangered Species Coalition	Regionally								fact sheet detailing grizzly bear ecological and western cultural importance, threats to recovery, importance of habitat protection		
Natural Resources Defense Council	Regionally; Nationally (U.S.)		Slide shows on bear biology, behavior, Be Bear Aware	Same	Same		Rotary, Sportsman's groups, Conservation group meetings				

Birchdale Ecological	Selkirk-Cabinet-Yaak Ecosystem; Regionally; Canada						Bear conservation, research, and coexistence		Bear conservation, research, and coexistence	Bear conservation, research, and coexistence	
Greater Yellowstone Coalition	Yellowstone Ecosystem							For the past three years we have provided funding for the Grand Teton National Park Wildlife Brigade, which helps park officials educate visitors about bears and assists in monitoring bear jams. We also help with presentations in the region by grizzly bear experts.		We are involved in securing bear-proof garbage bins in the Island Park, Idaho, area.	na

Table 4. Most important issues and messages address by IGBC agency and NGO information, education and outreach programs

		Most important issues and messages addressed in your information, education and outreach efforts
Name of agency or organization:	Ecosystem	
FWS	Bitterroot Ecosystem; Yellowstone; Nationally (U.S.)	safety in bear country, how to live with bears, the status of populations, the recovery program
Lolo National Forest	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak	How to properly store attractants; why it's important (to keep bears and humans safe); how to properly behave in bear country; what to do in the event of an encounter.
U.S. Forest Service, Okanogan-Wenatchee N.F.	North Cascades	Safety when outdoors in black bear habitat. We seldom sense interest in grizzly bear safety amongst the recreating public on the Okanogan-Wenatchee N.F.
North Cascades National Park	North Cascades	Behavior, biology of bears & that it is our choice whether they recover.
USFWS	North Cascades; Regionally	Sanitation, personal safety, Bear ID
USDA Forest Service, Flathead Natl. Forest	Northern Continental Divide	Continuing to raise awareness and remind Forest visitors about the Forest-wide food storage order. Provide info. on the why it is in place and what you can do to comply and stay safe & what happens when you don't keep a clean camp. Helping visitors understand bear behavior to stay safe while recreating (hiking, hunting...); with overall goal to reduce human/bear conflicts.
Rocky Mountain Ranger District, Lewis & Clark National Forest	Northern Continental Divide	Food Storage requirements; travelling and camping safely in bear habitat
USDA Forest Service	Northern Continental Divide Ecosystem	bear awareness, identification, biology, living with bears
Montana Fish, Wildlife & Parks	Northern Continental Divide Ecosystem	1. Bear Awareness & Safety, i.e. for urban interface areas & recreating in bear habitat. 2. How to properly use bear spray. 3. Current management of grizzly bear populations and communicating to the public that the recovery has been successful and now we are looking at how are we going to manage this growing population.

U.S. Forest Service (Flathead N.F, Lewis & Clark N.F, Helena N.F., Lolo N.F., Kootenai N.F)	Northern Continental Divide Ecosystem	Food Storage Order and how to store your food and attractants safely while recreating in bear country. All forests now have Forest food storage orders - even those that have had them in place for some time identified this as an important issue. Provide forest visitors info. on why it is in place and how to comply. Also helping visitors understand bear behavior to stay safe while recreating in bear country. Overall goal to reduce human/bear conflicts.
Confederated Salish and Kootenai Tribes	Northern Continental Divide; Regionally	eliminate attractants
Idaho Fish and Game	Selkirk-Cabinet-Yaak Ecosystem	bear identification, conflict avoidance strategies, sanitation
Montana Department of Fish Wildlife and Parks	Selkirk-Cabinet-Yaak Ecosystem	Conflict prevention at home, effective use of electric fencing to secure attractants, bear ID, hunting safely in bear country, addressing myths about bear behavior/biology, correct information on CYE grizzly bear population and recovery efforts
US Fish and Wildlife Service	Selkirk-Cabinet-Yaak Ecosystem	Bear identification, life history, conflict avoidance, bear spray training, local population levels and human caused mortality rates
US Forest Service	Selkirk-Cabinet-Yaak	Grizzly bear identification aimed at hunters and recreation users; and proper food storage in bear country
National Park Service - Grand Teton	Yellowstone	Bear ID, Make Noise, Carry Bear Spray, What to do if you see a bear.
MFWP	Yellowstone	human safety, conflict reduction, bear biology & conservation
Wyoming Game & Fish Dept.	Yellowstone Ecosystem	how to avoid conflicts
Idaho Department of Idaho Fish & Game	Yellowstone Ecosystem	Bear Identification, behavior, and human safety. Recovery information is secondary.
US Geological Survey, Interagency Grizzly Bear Study Team	Yellowstone; Northern Continental Divide	specifics of our research and monitoring projects and data
Kootenai Tribe of Idaho		Grizzly bear conservation and living in grizzly bear country

Vital Ground	All	Focus is on the need to conserve habitat, and the grizzly as an umbrella, keystone and indicator species for conservation.
Defenders of Wildlife	All; Regionally	promoting co-existence with grizzly bears and safety in bear country
Living with Wildlife Foundation	All; Regionally; Nationally (U.S.); Canada	Conflict prevention, securing bear attractants, bear-resistant products, use of bear spray
National Wildlife Federation	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak; Yellowstone; Nationally (U.S.)	advocacy for wildlife
National Parks Conservation Association	North Cascades Ecosystem	Importance of restoring grizzly bears to North Cascades National Park
Grizzly Bear Outreach Project	North Cascades Ecosystem; Selkirk-Cabinet-Yaak	Bear ID, Safety, and Behavior. One of our most important messages is that we are non-advocacy and science based. Depending on the audience, it can put a lot of people at ease. The fact that we tell people we have grizzly bears in WA is important. A lot of people don't know we have two bear species and that they are endangered and relatively low reproduction rate. We have a lot of messages but these are essential.
NOLS	North Cascades Ecosystem; Yellowstone; Regionally, Nationally (U.S.); Canada	Issue- knowledge about bears isn't what drives reactions during stressful encounters with bears. Message- our intelligent and disciplined behavior can allow us to cohabitate with bears in ways that are relatively safe for humans and bears.
WildBC, Habitat Conservation Trust Foundation	North Cascades; Selkirk-Cabinet-Yaak; Canada	habitat; basic system thinking concepts; hands-on experiences and getting kids and teachers outdoors
Yellowstone to Yukon Conservation Initiative	Northern Continental Divide ; Selkirk-Cabinet Yaak; Canada	Grizzly bears are indicators of healthy ecosystems and provide umbrella protection for a variety of other species. If we manage the land so that bears can survive, much of nature will be preserved. Bears need large, wild, roadless landscapes with few interactions with people to survive.
Boone and Crockett Club	Northern Continental Divide Ecosystem; Regionally; Nationally (U.S.)	conservation of wildlife, big game, and their habitat. The preservation and protection of the tradition of fair chase hunting in North America.

Endangered Species Coalition	Regionally	Importance of the ESA in survival and recovery of Grizzly bears, threats to bears, grizzlies as an umbrella species with ESA protecting habitat for other wildlife communities.
Natural Resources Defense Council	Regionally; Nationally (U.S.)	Building an understanding, awareness, appreciation for grizzly bears
Birchdale Ecological	Selkirk-Cabinet-Yaak Ecosystem; Regionally; Canada	Conservation oriented research, implementation of conservation management
Greater Yellowstone Coalition	Yellowstone Ecosystem	We focus on the value of grizzly bears to the Greater Yellowstone Ecosystem, the relative safety of recreating in bear country, and being sure to adhere to rules and advice regarding grizzlies, e.g., carrying bear spray, proper food storage, etc.

Table 5. How the effectiveness of current information, education and outreach programs offered by IGBC agencies and NGO's is monitored and evaluated, how current programs could be made more effective, and other comments about current programs.

		How is the effectiveness of your information, education and outreach efforts monitored or evaluated?	How could your organization increase the effectiveness of your information, education and outreach efforts?	Other comments about information, education and outreach related to grizzly bears.
Name of agency or organization:	Ecosystem			
FWS	Bitterroot Ecosystem; Yellowstone; Nationally (U.S.)	It is not.	more effective communication with hikers	
Lolo National Forest	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak	Number of problems encountered annually with either humans or bears.	We could increase the effectiveness if we received \$\$ for two bear rangers; one for the east zone and one for the west zone of the Forest.	
U.S. Forest Service, Okanogan-Wenatchee N.F.	North Cascades	We do not have funds to measure audience penetration with outreach efforts. We monitor news stories related to grizzly and black bear issues using Google Alerts.		
North Cascades National Park	North Cascades	We have no formal means for doing so.	More time spent on my part to reach local kids. Getting more buy-in from the North Cascades Institute for I&E/O.	Despite the impression I've given that the GBOP does ALL of our work - we do work with the public to increase bear-awareness in general. I can't quantify it because so much of it is worked into interactions our interpreters, wilderness rangers and

				other personnel have with visitors. But also, more financial support for the NCE's most well-known I&E "face", the GBOP, will help them further the incalculably important work they have undertaken.
USFWS	North Cascades; Regionally	it's not	Do more, staff adequately, fund adequately	We don't do enough and it kills bears and people. Managers authorize as little as possible to be able to say they are doing some. We are just too understaffed and funded to do more right now.
USDA Forest Service, Flathead Natl. Forest	Northern Continental Divide	We track numbers reached through various programs, and keep very informal records on how well visitors are complying with food storage (when visiting camps, is food stored properly, etc.) Evaluating the effectiveness of the different outreach methods would be a good future project -- perhaps not just for individual forest, but ecosystem?	Formal monitoring/evaluation of efforts and their effectiveness. Continue to work on having consistent messages and common signing, brochures	Updated ecosystem wide bear aware poster? (for TH's etc.) website info. template? making sure we're consistent in our bear spray trng.; is there a need for a nuisance bear in the area signing? need for cross boundary/agency discussion about problem bears in public sites, needed protocol?
Rocky Mountain Ranger District, Lewis & Clark National Forest	Northern Continental Divide	In an indirect way via compliance with food storage requirements (patrolling of campgrounds, hunting-season camps); also limited and incidental via discussion with persons who have had interactions with bears in our area	Target specific groups with workshops; we have discussed providing a hands-on workshop for hunters and outfitters to demonstrate proper food storage methods but have not yet managed to organize and schedule it; target school audiences with increasingly age-appropriate messages throughout school grades about safety around bears and about food storage. These would target key users, and also "bring up" generations of young people who are well-informed	Our main focus has been on food storage, as we believe this has been key to minimizing bear-human encounters and bear mortality in this area. The Front is an area where private landowners have been dealing with grizzly bear issues for a long time and their issues and problems need to be respected. I&E efforts focused on trying to convince local landowners about the value of grizzly bears on the landscape or in the ecosystem are not

			and understanding of bear issues from the start.	likely to be useful and may in fact alienate many. On the other hand, practical information and materials about how to coexist with bears (primarily provided through FWP?), how to hunt and travel safely on National Forest lands, how to adhere to our regulations (review of food storage methods and approved products), and pepper spray vs. firearms, would likely be appreciated and would help keep bear-human encounters minimal.
USDA Forest Service	Northern Continental Divide Ecosystem	Not currently monitored or evaluated	Funding, improving our facility, more professional quality I&E products	
Montana Fish, Wildlife & Parks	Northern Continental Divide Ecosystem	We have participants in the bear awareness programs fill out evaluations at the end of their program.	1. Need more staff for outreach efforts, 2. Create curriculum and lesson plans that provide consistent, most important messages. 3. Provide these lesson plans to volunteers and other outreach groups. 3. Narrow our focus somewhat by defining what are the top 3-5 messages we need to deliver.	
U.S. Forest Service (Flathead N.F, Lewis & Clark N.F, Helena N.F., Lolo N.F., Kootenai N.F)	Northern Continental Divide Ecosystem	No formal monitoring system in place. Numbers of I & E programs & rough estimate of children/adults reached are tracked for various reporting requirements. Informally through compliance in campgrounds with Food Storage Orders or numbers of problems encountered; informally in discussions with campers and seeing how much they know about bears/bear safety.	Fund new or continue to fund existing bear rangers; increase funding in general; target specific groups with workshops (hunters, outfitters, permittees); target school audiences to continue to reach the kids; continue to have consistent messages with common signing, brochures, quality I & E products; formal monitoring/evaluation of efforts & their effectiveness.	Updated ecosystem wide bear aware poster; website info. template; consistency in our bear spray training; Is there a need for cross boundary/agency discussions about problem bears in public sites, and needed protocol? Our main focus has been on food storage, as we believe this has been key to minimizing bear-human encounters and bear mortality in this area. The Front is an area where private landowners have been dealing with grizzly bear issues for a

		Evaluating effectiveness of the different outreach methods would be a good future project.		<p>long time and their issues and problems need to be respected. I & E efforts focused on trying to convince local landowners about the value of grizzly bears on the landscape or in the ecosystem are not likely to be useful and may in fact alienate many. On the other hand, practical information and materials about how to coexist with bears (primarily provided through FWP?) how to hunt and travel safely on National Forest lands, how to adhere to our regulations (review of food storage methods and approved products), and pepper spray vs. firearms, would likely be appreciated and would help keep bear-human encounters minimal.;</p> <p>For our forest, the face to face contacts that the bear rangers have been able to accomplish has been invaluable. Signs and brochures are extremely necessary, but a dedicated person in this role (seasonal) provides for the forest service, the same role that the Bear Mgmt Specialist serves for FWP. I & E efforts are a major part of the Bear Mgmt specialist role, as the area biologists for FWP are too busy to dedicate the time it takes for bear I&E. Forest Service biologists are in the same position, so the bear rangers have been invaluable in disseminating information and educating people on food storage, recreating safely, and young person education.</p>
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Confederated Salish and Kootenai Tribes	Northern Continental Divide; Regionally	feedback and informal evaluations	better coordination and communication with other I&E organizations	I would be interested in establishing direct contact with the IGBC
Idaho Fish and Game	Selkirk-Cabinet-Yaak Ecosystem	They really aren't. Just general feedback from the public.	Have more money to work with.	I/E is a long term investment, it's a slow and steady approach; the more local and pertinent you can make it, including personnel, the better.
Montana Department of Fish Wildlife and Parks	Selkirk-Cabinet-Yaak Ecosystem	In cooperation with USFWS, we did a local survey of residents regarding their knowledge about grizzly bears and recovery efforts in the CYE, we could repeat this survey at a later date to see if changes in knowledge have occurred. I also keep track of all conflict calls in my area and track whether call volume and type of call changes from season to season and year to year.	Having help from other agencies in the area	
US Fish and Wildlife Service	Selkirk-Cabinet-Yaak Ecosystem	We did a public attitudes towards bears telephone survey in 2007 and could repeat that at some appropriate time to gauge changes in knowledge or acceptance of bears.	Support the efforts of State Bear Management Specialists	

US Forest Service	Selkirk-Cabinet-Yaak	It is not formally monitored or evaluated. However, recreation staff and law enforcement personnel that encounter users on forest provide feedback to district recreation staff, wildlife biologists, and district rangers as to whether or not users are aware of food storage orders and information on bear identification. This may result in additional information pamphlets being secured and handed out or news releases being produced and released.	Maintain forest protection officer and recreation staff interaction with user groups on forest; maintain funding of IDF&G employees that focus on grizzly bear I and E efforts; link FS websites to Washington Department of Fish and Wildlife and IDF&G grizzly bear/black bear identification courses when they are completed	
National Park Service - Grand Teton	Yellowstone	GRTE just completed 2 social surveys that looked at the effectiveness of this type of material.	More NPS employees (paid or VIP) hitting the trails and roadsides to talk to visitors about bears. More time at bear education displays.	
MFWP	Yellowstone	by yearly changes in bear/human conflict numbers and monitoring bear population demographics	more individual contact	necessary, but not sure value is equal to effort. However, it has been effective as evident with YES grizzly population recovery.
Wyoming Game & Fish Dept.	Yellowstone Ecosystem	it isn't	Acquire a couple more bear ed, trailers, hire additional staff, streamline the number of brochures to a couple with a clear, consistent message	
Idaho Department of Idaho Fish & Game	Yellowstone Ecosystem	Not monitored or evaluated currently.	By making one person in charge of bear education, with no other additional duties.	I believe that given the potential for conflicts and liability that information, education, and outreach need to be a far higher priority for IDFG! Human safety and grizzly recovery hinge on human acceptance. Not that biology and enforcement are important, but I

				& E needs to be brought up to the same level of agency commitment.
US Geological Survey, Interagency Grizzly Bear Study Team	Yellowstone; Northern Continental Divide	website analytics, publications produced, informal feedback	Updating website with more user friendly content	We are also beginning to capture footage of our research activities to provide video on our website to enhance understanding of our research and monitoring activities.
Kootenai Tribe of Idaho		No specific monitoring is in place.	Provide additional staff support for a dedicated I&E /conflict specialist to better interface with the community	
Vital Ground	All	Our focus is to attract support for our habitat conservation mission. Effectiveness measured in number of donors, donations and ultimately the acres of habitat protected.	That's a good question. We need to reach a larger audience. Wish we had the budget for TV ads.	The IGBC can do a better job of providing timely and interesting information to its NGO partners so we can incorporate that info into our outreach materials. Plus, the IGBC website could be much more informative, current, visually appealing and user-friendly.
Defenders of Wildlife	All; Regionally	Internal Communications staff monitors press and use of and response to communication tools (i.e. website, Facebook, etc...), and occasionally solicit feedback from organizational members, supporters or broader segments of the public.	Increase funding to broaden the scope of our outreach efforts, develop a hunter advised outreach campaign promoting "hunting safety in bear country" (hunter workshops, tabling events, media, etc..).	
Living with Wildlife Foundation	All; Regionally; Nationally (U.S.); Canada	web site stats, media interview requests, requests for information via email and phone	Increased funding to ensure that the information clearinghouse function performed by LWWF related to bear conflict prevention and bear-resistant products (including testing of products) can continue into the future.	I would like to see a more coordinated effort to produce a few good informational materials that can be used in all grizzly occupied areas which might allow funding to be used on other outreach efforts and would

				lead to less conflicting information.
National Wildlife Federation	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak; Yellowstone; Nationally (U.S.)	number of emails/responses send in response to action alerts on some topic	hire a full time educator locally	Any effective education/outreach effort done by NGOs on a species like grizzly bears must be closely coordinated with state and federal agency efforts to be effective. Everything we've done has been done that way including PSAs we've ; provided to TV stations about sanitation citizens should do to avoid bear problems (black and grizzly bears). We did this about 6 years ago and they are no longer running. These, I think, are still on the IGBC website, at least they used to be.
National Parks Conservation Association	North Cascades Ecosystem	Support of funding for grizzly bear restoration	Commit more staff time and capacity to efforts	
Grizzly Bear Outreach Project	North Cascades Ecosystem; Selkirk-Cabinet-Yaak	Evaluation post presentations, feedback from meetings, informal surveys,	getting quicker response on hot spot areas, additional funds for more sophisticated evaluation of programs and public opinion surveys and messaging	

NOLS	North Cascades Ecosystem; Yellowstone; Regionally, Nationally (U.S.); Canada	Curriculum and incident statistics are analyzed by scientists like Steve Herrero and Tom Smith. State and federal wildlife and land managers are involved with the practices we use.	A small interesting book about grizzly bears would help our students learn about bears while they are hiking through bear habitat. Our biggest issue is not what information to teach students, but how to develop immediate action drills so they do what they are trained to do in a split-second reaction to a bear in front of them.	Videos that show real bears, explain real bear-human incidents, and demonstrate proper techniques, are always helpful.
WildBC, Habitat Conservation Trust Foundation	North Cascades; Selkirk-Cabinet-Yaak; Canada	not a high priority for this particular topic, evaluation is targeted for effectiveness of delivery models given packed curriculum and time restrictions educators face	link curriculum to action projects or monitoring efforts scientists are doing, via web with video etc. interactive	
Yellowstone to Yukon Conservation Initiative	Northern Continental Divide ; Selkirk-Cabinet Yaak; Canada	Indirectly through government policy decisions.	Ready-made materials that we could adopt and adapt; more capacity/staff time	
Bob Marshall Wilderness Foundation	Northern Continental Divide Ecosystem			
Boone and Crockett Club	Northern Continental Divide Ecosystem; Regionally; Nationally (U.S.)	Effectiveness is measured against our goals and outcomes focused on the conservation mission of the Club. We evaluate all of our summer programs using program specific evaluations which are filled out by our program participants. The school programs are developed to be integrated into each teachers' curricula therefore it is up to the teacher to evaluate what the students are learning as a	Provide a national training for staff to become well versed in IEO about Bears - black and grizzly. Provide consistency with IEO among organizations and agencies.	there are so many different means to educating the public about grizzly bears. It would be advantageous to have an IEO program for folks to become certified to provide the public with IEG. When new information is learned by the scientists, managers, etc. then updated training or an electronic means of staying current could be provided by WMI or IGBC.

		result of the field-based outdoor program we provide.		
Endangered Species Coalition	Regionally	Too soon to evaluate	more outreach to sportsmen, funding for additional staff time to do more outreach.	A 2009 MSUB poll indicated broad public support for grizzly bears, and specifically protection for GYE bears (even among respondents who opposed protections for wolves). I think we need to emphasize to the public (and particularly sportsmen) how the ESA's grizzly bear habitat provisions benefit all the other wildlife that shares the grizzlies range. That, and also remind the public how important the grizzly bear is as a western wildlife icon.
Natural Resources Defense Council	Regionally; Nationally (U.S.)		By having staff whose primary responsibility was education; by doing pre and post-program questionnaires to better gauge effectiveness.	
Birchdale Ecological	Selkirk-Cabinet-Yaak Ecosystem; Regionally; Canada	not real well	Hire someone to do better	I also do outreach to government agencies and industry through personal meetings. sharing results and relevant research and our management programs. I am an independent scientists who gets involved in implementing solutions to the problems we research. I generally work alone up here in Canada.

Greater Yellowstone Coalition	Yellowstone Ecosystem	We sense a growing recognition of the need for proper preparation when recreating in bear country. Thanks in part to the Wildlife Brigade, Grand Teton National Park visitors seem to have a higher level of understanding than in Yellowstone.	We could spend more time on the road, visiting with communities and giving presentations using grizzly bear experts to help raise awareness and people's appreciation for coexisting with bears.	This is becoming an increasingly important component of grizzly bear work around the Greater Yellowstone region, given the growing number of people recreating in the region, the increase in the bear population, and the likely rise in human-bear conflicts in the future.
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Table 6. Current staff and operating resource commitments of IGBC agencies and NGO's to information, education and outreach programs related to grizzly bears.

		About how much staff time is dedicated to information, education and outreach by your organization each year?	What is the approximate annual operating budget (not counting salaries or benefits) for grizzly bear information, education and outreach in your organization?
Name of agency or organization:	Ecosystem		
FWS	Bitterroot Ecosystem; Yellowstone; Nationally (U.S.)	10%	not specific; part of other duties
Lolo National Forest	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak	Approximately 25 people days (includes technician and professional time)	\$800 to \$1200.
U.S. Forest Service, Okanogan-Wenatchee N.F.	North Cascades	About 32 hours for the public affairs shop and about 10 for the seven ranger districts.	There is not a separate budget for outreach efforts related to grizzly bear information.
North Cascades National Park	North Cascades	Hard to say. I spend a couple of months working on staff education; our public contact people spend a great deal of time educating visitors.	Part of my salary -- say, \$12,000???
USFWS	North Cascades; Regionally	about 4-5 days of my time	\$4K
USDA Forest Service, Flathead Natl. Forest	Northern Continental Divide	estimated 150 days	This will vary depending on needs -- purchase of printed material, add'l bear resistant containers, etc. Could be up to \$2,000 or even 5, depending on project -- have received IGBC funds for specific projects and funds from FWP
Rocky Mountain Ranger District, Lewis & Clark National Forest	Northern Continental Divide	30-50% of four seasonal staff (June-Sept) in visitor contact and patrols, roughly 40-50 permanent staff-days for fall hunter patrol, roughly 3-5 permanent staff days on educational programs to schools or groups	No idea. Integrated into recreation and wildlife activities and therefore budgets.

USDA Forest Service	Northern Continental Divide Ecosystem	One FTE to staffing office and one part-time employee for weekends	No budget dedicated to this - funding comes out of appropriated project dollars
Montana Fish, Wildlife & Parks	Northern Continental Divide Ecosystem	We had a summer intern dedicated to developing a bear trail and bear awareness program: 400 hours. I spent about 150 hours of my time this year to write and manage a grant, deliver bear awareness programs, and recruit, train, and supervise an intern.	We are planning on having a highly interactive bear display in the MT Wild Center. This display should be designed to teach participants, "hands-on" how to use bear spray, though a similar Wii type set up. I am not sure how much this will cost. Other than that we do not have an operating budget for grizzly bear information, education, and outreach.
U.S. Forest Service (Flathead N.F, Lewis & Clark N.F, Helena N.F., Lolo N.F., Kootenai N.F)	Northern Continental Divide Ecosystem	Extremely variable by forest: Forest 1:150 days; Forest 2: 150 days of seasonal visitor contacts/patrols & 40-50 permanents staff days for fall hunter patrols; 3-5 days permanent staff days on educational programs; Forest 3 - approximately 25 people days; Forest 4 - 1 full time person staffing the office & 1 part time office staff on weekends; Forest 5: 60 days for seasonal bear ranger making direct contacts; 2-3 staff days on educational programs; 3- 5 days permanent personnel on Food Storage Order administration;	Varies greatly by forest: ranges from: no budget dedicated; integrated into wildlife and recreation budgets; \$800 - \$1200 up to \$5000 with funds from IGBC and/or FWP.
Confederated Salish and Kootenai Tribes	Northern Continental Divide; Regionally	1 full time position	variable by year
Idaho Fish and Game	Selkirk-Cabinet-Yaak Ecosystem	several hundred hours	\$30,000
Montana Department of Fish Wildlife and Parks	Selkirk-Cabinet-Yaak Ecosystem	Since I am the only one with MFWP that does IE&O in the CYE, at least 50% of what I do is related to IE&O.	\$15,000
US Fish and Wildlife Service	Selkirk-Cabinet-Yaak Ecosystem	a wild guess, but about 5% of one FTE	\$500 for my office, but USFWS Spokane contributed about \$5,000 to GBOP last year
US Forest Service	Selkirk-Cabinet-Yaak	less than 10 days annually	less than \$3,000 annually
MFWP	Yellowstone	unknown - in the YES hundreds of hours	in YES - <\$5000.

Wyoming Game & Fish Dept.	Yellowstone Ecosystem	~1,000 man days	\$7,000
Idaho Department of Idaho Fish & Game	Yellowstone Ecosystem	One full-time educator spends approximately 500 hours a year on grizzly related issues. A part-time bear education tech spends 1385 hours between May and October to contact the public.	Locally about \$2,500, plus whatever can be received from I & E grant from IGBC.
US Geological Survey, Interagency Grizzly Bear Study Team	Yellowstone; Northern Continental Divide	For IGBST and NCDE studies, approximately 30% FTE	
Kootenai Tribe of Idaho		about 15 man-days	various based on grants and in-kind matches
Vital Ground	All	About 1 FTE	Don't know. This is not Vital Ground's primary mission and our I&E efforts are designed to support our habitat conservation mission.
Defenders of Wildlife	All; Regionally	approximately 29 hours a week for grizzly specific outreach	FY2011: approximately 20,000 for prevention projects and outreach not including salaries or benefits and not including our grizzly compensation program
Living with Wildlife Foundation	All; Regionally; Nationally (U.S.); Canada	2900 hours	\$3,000
Montana Wilderness Association	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak; Yellowstone		
National Wildlife Federation	Bitterroot; Northern Continental Divide; Selkirk-Cabinet-Yaak; Yellowstone; Nationally (U.S.)	NWF has 3 drivers and information/education is one of them. We have a whole staff of several dozen educators but, again, only a very small part of this effort is directed at grizzly bear issues.	A rough guess would be 2-3 million, this would be impossible to tease out since it is integrated into all of our programs, especially nationally. On the local, Montana, level we have 1 part-time staff working on education (maybe \$20,000/year) mostly focused on connecting kids with nature and not grizzly bear issues.
National Parks Conservation Association	North Cascades Ecosystem	5% of one full time employee	N/A - not a specific line item

Grizzly Bear Outreach Project	North Cascades Ecosystem; Selkirk-Cabinet-Yaak	6 staff in the field working from 2-8 hours a week completely dedicate to in the field outreach = 90 percent of the information is devote to grizzly bears but depends on the month and presentations. Two part-time directors committed on average about 80 percent of their time to grizzly bears.	roughly 100,000
NOLS	North Cascades Ecosystem; Yellowstone; Regionally, Nationally (U.S.); Canada	Probably one half FTE per year, system-wide.	No specific budget for bear education
WildBC, Habitat Conservation Trust Foundation	North Cascades; Selkirk-Cabinet-Yaak; Canada	1 full time staff, on call staff ~ .5 in a year and contractors as needed. We have a province-wide network of WildBC facilitators (55) on contract to deliver WildBC programs in BC	not isolated in our program budget, gets put in with all other program costs. Too hard to estimate but very low as it is not a topic of high interest
Yellowstone to Yukon Conservation Initiative	Northern Continental Divide ; Selkirk-Cabinet Yaak; Canada	2-3 FTE	\$20,000
Bob Marshall Wilderness Foundation	Northern Continental Divide Ecosystem		
Boone and Crockett Club	Northern Continental Divide Ecosystem; Regionally; Nationally (U.S.)	1 full-time position for education, 1 full-time person dedicated to outreach, and 1 full-time person prepared 4 issues of Fair Chase publication.	There is no set amount specific to grizzly bear info, educ and outreach in our organization.
Endangered Species Coalition	Regionally	can't really quantify but we have 1/2 fte in Montana for ESA issues, including grizzly bear.	?? very little right now
Sierra Club	Regionally	10 hours	n/a

Birchdale Ecologiccal	Selkirk-Cabinet-Yaak Ecosystem; Regionally; Canada	25% of my time	\$10,000 includes my travel
Greater Yellowstone Coalition	Yellowstone Ecosystem	Probably about 500 hours per year	Several thousand dollars

Table 7. Average ranking of the importance of barriers to recovery and delisting by agency and NGO respondents across all grizzly bear ecosystems. (Scale: 1 = not important; 2 = somewhat important; 3 = very important; 4 = critically important).

Barriers to recovery and delisting	Ecosystem				
	YE	NCDE	SCY	BE	NC
Black bear hunters killing grizzly bears by mistake because they cannot tell the difference between species.	2.26	2.56	3.33	3	2.38
Killing of grizzly bears as a way to express anti-government sentiment or opposition to the Endangered Species Act.	1.67	2.09	2.25	2.36	1.94
Killing of grizzly bears by people who blame them for loss of access to public land or natural resource jobs.	1.60	2.22	2.17	2	1.63
Killing of grizzly bears to profit from their trophy value or to sell body parts like claws and gall bladders.	1.45	1.65	1.83	1.6	1.5
Killing of grizzly bears out of fear of potential attacks on people, livestock or property.	2.72	2.61	2.67	2.73	2.44
Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.	3.00	2.91	3	2.91	3.31
Conflicts between big game hunters and grizzly bears that result in defense of life and property kills.	3.13	2.96	2.92	2.64	1.75
Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.	3.45	3.74	3.42	2.91	3
Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.	2.90	3.13	2.33	2.55	2.19
Bear-human conflicts and defense of life and property kills that result from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.	2.94	2.57	2.58	2.55	2.75
Bear-human conflicts and defense of life and property kills or management removals that result from human use of infrastructure such as roads, campgrounds, mines, etc.	2.35	2.35	2.42	2.64	2.00
Lack of public awareness of the status of grizzly bears and the need for recovery under the Endangered Species Act.	2.58	2.13	2.33	2.55	3.06
Inadequate political support for actions necessary to recover of grizzly bears.	2.32	2.45	2.25	3	3.56
Inadequate political support for funding necessary to recover of grizzly bears.	2.58	2.77	2.58	3	3.75
Inadequate consideration of the needs of grizzly bears in land use or development planning.	2.58	3.17	2.42	2.64	2.88
Opposition to delisting of grizzly bears in the Yellowstone ecosystem based on the belief there are not enough bears or bear habitat.	3.13	NA	NA	NA	NA
Opposition to delisting of grizzly bears in the Yellowstone ecosystem based on lack of trust in states to manage a recovered population.	3.06	NA	NA	NA	NA
<i>Number of survey respondents providing rankings</i>	<i>30</i>	<i>25</i>	<i>12</i>	<i>12</i>	<i>16</i>

Table 8. Average ranking of effectiveness of current information, education and outreach efforts in addressing barriers to recovery and delisting by agency and NGO respondents across all grizzly bear ecosystems. (Scale: 1 = not currently addressed; 2 = not very effective; 3 = somewhat effective; 4 = very effective) The highest 5 values for each ecosystem are highlighted.

Barriers to recovery and delisting	Ecosystem				
	YE	NCDE	SCY	BE	NC
Black bear hunters killing grizzly bears by mistake because they cannot tell the difference between species.	3.13	3.05	2.92	2.82	2.85
Killing of grizzly bears as a way to express anti-government sentiment or opposition to the Endangered Species Act.	1.80	1.91	1.82	1.82	1.69
Killing of grizzly bears by people who blame them for loss of access to public land or natural resource jobs.	1.90	1.95	1.91	1.73	1.77
Killing of grizzly bears to profit from their trophy value or to sell body parts like claws and gall bladders.	2.10	2.09	1.83	1.91	1.62
Killing of grizzly bears out of fear of potential attacks on people, livestock or property.	2.61	2.73	2.55	2.45	2.38
Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.	2.35	2.55	2.58	2.36	2.71
Conflicts between big game hunters and grizzly bears that result in defense of life and property kills.	2.77	2.55	2.58	2.64	2.31
Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.	3.06	2.91	2.75	2.64	3.07
Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.	2.81	2.95	2.50	2.60	1.93
Bear-human conflicts and defense of life and property kills that result from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.	2.77	3.05	2.75	2.73	2.93
Bear-human conflicts and defense of life and property kills or management removals that result from human use of infrastructure such as roads, campgrounds, mines, etc.	2.77	2.64	2.58	2.36	2.50
Lack of public awareness of the status of grizzly bears and the need for recovery under the Endangered Species Act.	2.52	2.91	2.55	2.18	2.64
Inadequate political support for actions necessary to recover of grizzly bears.	2.20	2.52	1.92	1.90	2.21
Inadequate political support for funding necessary to recover of grizzly bears.	2.26	2.45	1.83	1.82	2.21
Inadequate consideration of the needs of grizzly bears in land use or development planning.	2.55	2.62	2.08	2.27	2.57
Opposition to delisting of grizzly bears in the Yellowstone ecosystem based on the belief there are not enough bears or bear habitat.	2.23	N/A	N/A	N/A	N/A
Opposition to delisting of grizzly bears in the Yellowstone ecosystem based on lack of trust in states to manage a recovered population.	2.29	N/A	N/A	N/A	N/A
<i>Number of Responses</i>	31	22	12	12	14

Table 9. Relative importance of various factors limiting the effectiveness of current information, education and outreach efforts by IGBC agency staff and NGO's. (1 = Not Important, 2 = Somewhat Important, 3 = Highly Important) Values greater than 2 (Somewhat Important) highlighted.

	Ecosystem				
	NC	SCY	BE	NCDE	YE
Answer Options	Ave. Rank	Ave. Rank	Ave. Rank	Ave. Rank	Ave. Rank
Other job duties or priorities.	2.43	2.42	2.45	2.42	2.35
Insufficient operating funds.	2.57	2.58	2.36	2.68	2.13
Not having the right printed materials such as brochures, cards, etc.	1.64	1.50	1.30	1.63	1.52
Not having good media contacts.	1.43	1.50	1.80	1.58	1.26
Insufficient credibility or public trust in the agency or organization.	1.93	2.17	2.40	1.68	1.83
Don't know what the right audience is.	1.71	1.50	1.91	1.33	1.26
Don't have the right message to reach key audiences.	1.92	1.33	2.00	1.63	1.43
Inconsistent messages.	1.86	1.67	1.90	1.95	1.73
Conflicting messages from other sources.	1.92	1.92	2.30	2.05	2.13
Don't have a good way to reach the right audience.	1.93	1.50	1.90	1.78	1.96
Don't have a clear focus for information, education and outreach efforts.	1.86	1.50	2.22	1.84	1.52
Lack of coordination among agencies and partners.	1.93	1.58	2.00	2.15	1.78
Can't measure effectiveness of efforts.	2.14	2.00	2.00	2.37	2.22
Don't make effective use of the internet or social media.	1.86	1.67	2.40	1.95	2.13
Number of respondents	14	12	10	19	23

APPENDIX A – SURVEY RESULTS

ONLINE SURVEY OF BARRIERS TO RECOVERY, DELISTING, AND THE EFFECTIVENESS OF CURRENT IE&O EFFORTS

Survey of Barriers to Grizzly Bear Recovery in the North Cascades Ecosystem

Fourteen individuals responded to the survey from the following agencies or organizations: Defenders of Wildlife (1), Grizzly Bear Outreach Project (3), USFWS (1), Conservation Northwest (1), National Parks Conservation Association (1), USDA Forest Service (3), Un-affiliated (1), Sierra Club (1), Northwest Connections (1), Washington Department of Fish and Wildlife (1)

Average ranking of the importance of potential barriers to recovery and the effectiveness of current information, education and outreach efforts. (Importance ranked from 0 = not important to 4 = critically important. Effectiveness ranked from 0 = not addressed to 4 = highly effective. Difference is average importance minus average effectiveness; the greater the difference, the larger the gap between importance and effectiveness.)

	Importance	Effectiveness	
	Average Rating	Rating Average	Difference
Black bear hunters killing grizzly bears by mistake because they cannot tell the difference between species.	2.36	2.85	-0.49
Killing of grizzly bears as a way to express anti-government sentiment or opposition to the Endangered Species Act.	1.93	1.69	0.24
Killing of grizzly bears by people who blame them for loss of access to public land or natural resource jobs.	1.64	1.77	-0.13
Killing of grizzly bears to profit from their trophy value or to sell body parts like claws and gall bladders.	1.50	1.62	-0.12
Killing of grizzly bears out of fear of potential attacks on people, livestock or property.	2.43	2.38	0.05
Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.	3.29	2.71	0.58

Conflicts between big game hunters and grizzly bears that result in defense of life and property kills.	1.79	2.31	-0.52
Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.	3.00	3.07	-0.07
Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.	2.21	1.93	0.28
Bear-human conflicts and defense of life and property kills that result from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.	2.71	2.93	-0.22
Bear-human conflicts and defense of life and property kills or management removals that result from human use of infrastructure such as roads, campgrounds, mines, etc.	1.93	2.50	-0.57
Lack of public awareness of the status of grizzly bears and the need for recovery under the Endangered Species Act.	3.00	2.64	0.36
Inadequate political support for actions necessary to recover of grizzly bears.	3.50	2.21	1.29
Inadequate political support for funding necessary to recover of grizzly bears.	3.71	2.21	1.50
Inadequate consideration of the needs of grizzly bears in land use or development planning.	2.71	2.57	0.14

Please identify any other important barriers to recovery and delisting of grizzly bears in the ecosystem or area where you work that are a function of lack of information; mis-information; or human attitudes, beliefs, or behaviors that could be addressed through information, education and outreach.

- Ensuring that agency leaders and legislators fully comprehend the very high level of support for grizzly bear recovery evident in WA. The vocal minority out-shouts the silent majority so the argument becomes one-sided and skewed inaccurately. There is an opportunity for WA to become a shining example of sustainable wildlife conservation in a way that seriously addresses the needs of people and wildlife simultaneously. We need to stress to influential leaders the hugely positive impact that carnivore conservation can have economically, ecologically, and socially; looking at the big picture over the long term, and what WA could be, or on the other hand, stands to lose, if conservation is not addressed adequately as an important driver for positive social change. There is also a desperate need for funding and political will to recover the NCE population before it is too late. Every requirement for successful recovery is in place, except the political will to move forward. If active recovery measures began (e.g. augmentation), then public support would rise even higher according to our research, primarily because it would be considered a "reality", a positive local effort, and something that befits WA's growing reputation as an increasingly important hub for carnivore conservation.
- More outreach materials should cover the overall importance of umbrella and keystone species and how the entire ecosystem suffers with the loss and lack of these species.
- The biggest barrier to grizzly bear recovery in the North Cascades at present is a lack of understanding by elected officials of the low level of public opposition and the high level of public support for GB recovery. They are completely buffaloed by small but vocal (and often unethical) opposition groups who have them convinced it is a third-rail issue.
- Lack of funding to expand what we are already doing.
- Linking bear recovery to local wants and needs will aid in success.
- Continuing misperception in the North Cascades that Canada is a backdoor solution to any grizzly shortage on the US side, and that any bears in the US Cascades are visitors from Canada that doesn't need US protection..
- Squash rumors that GB are currently being relocated via black helicopter ops and the like. There is a lack of knowledge by the public that GBs are even a component of NC. Biggest barrier to making progress in NC is lack of funding to move EIS forward. USFWS not engaged at policy level in issue anymore.

Of all the barriers listed above, which 3 do you believe are the highest priority for the ecosystem or area where you work?

First

- Defense of life and property by hunters and recreationists
- Political will to champion active recovery.
- Fear of attacks on livestock or children.
- Lack of agency will/political support/funding for more aggressive recovery actions
- Political Support
- lack of funding
- Elected official funding support for recovery
- Fear of attacks.
- Lack of political support for funding recovery
- development of an environmental impact statement and record of decision to address recovery actions

Second

- Animal husbandry and livestock depredations
- Continued partnership building with traditionally non-allied organizations towards a common goal of intact ecosystems for people and wildlife.
- Anti-government sentiment and lack of appreciation for wildlife.

- Fear of meeting perceived opponents (Farm Bureau, etc.) head on in public arena
- Political Funding
- lack of political will
- Elected official general support for recovery
- Loss of freedoms (private land management, garbage habits.
- Lack of public concern about small threatened bear populations
- adequate funding to complete nepa
- more resources into education
- increase public awareness of GB

Third

- A carnivore-wide approach to outreach that doesn't single out species, but helps the public understand the ecological importance of intact trophic structures.
- Bear and human conflicts due to attractants.
- Need to show a greater agency presence in the outreach we do. Right now the agencies are invisible behind the GBOP screen. There is no trust for agencies on this issue on either side of the issue.
- Lack of public awareness of the status of grizzly bears and the need for recovery under the Endangered Species Act.
- good consistent messaging
- Education about human activity impacts to grizzly habitat
- Uneducated myths.
- Lack of public understanding about the threats facing to small bear populations
- funding to implement recovery actions once a decision is made

Reflecting on the information, education and outreach efforts you are most often involved with, please indicate how important each of the following factors are in limiting the effectiveness of your communication with the public.

	Not important	Somewhat important	Highly important	Rating Average	Response Count
Other job duties or priorities.	0.0% (0)	54.5% (6)	45.5% (5)	2.45	11
Insufficient operating funds.	9.1% (1)	18.2% (2)	72.7% (8)	2.64	11
Not having the right printed materials such as brochures, cards, etc.	45.5% (5)	45.5% (5)	9.1% (1)	1.64	11
Not having good media contacts.	72.7% (8)	27.3% (3)	0.0% (0)	1.27	11

Insufficient credibility or public trust in the agency or organization.	45.5% (5)	27.3% (3)	27.3% (3)	1.82	11
Don't know what the right audience is.	54.5% (6)	36.4% (4)	9.1% (1)	1.55	11
Don't have the right message to reach key audiences.	20.0% (2)	70.0% (7)	10.0% (1)	1.90	10
Inconsistent messages.	18.2% (2)	81.8% (9)	0.0% (0)	1.82	11
Conflicting messages from other sources.	20.0% (2)	50.0% (5)	30.0% (3)	2.10	10
Don't have a good way to reach the right audience.	36.4% (4)	36.4% (4)	27.3% (3)	1.91	11
Don't have a clear focus for information, education and outreach efforts.	45.5% (5)	45.5% (5)	9.1% (1)	1.64	11
Lack of coordination among agencies and partners.	36.4% (4)	54.5% (6)	9.1% (1)	1.73	11
Can't measure effectiveness of efforts.	18.2% (2)	45.5% (5)	36.4% (4)	2.18	11
Don't make effective use of the internet or social media.	45.5% (5)	54.5% (6)	0.0% (0)	1.55	11

Are there other factors that affect your ability to communicate effectively with the public?

- We just don't do much agency GB outreach
- Lack of interest among the public; lack of an "ask" of the public
- Mostly conflicting priorities.

Considering all the factors listed above that affect your ability to communicate with the public, which 3 are the most important?

First

- Insufficient Operating funds
- Adequate funding for long term comprehensive approach to outreach on the ground.
- Don't have a good way to reach the right audience.
- Lack of time to work on GB issues

- Funding
- insufficient operating funds - Key to increasing hours for staff to reach more people, and with updated information
- Other priorities
- Consistent, interagency messages.
- reaching the right audience-elected politicians
- resources and materials
- need better focus

Second

- Insufficient public trust
- Time limitations given other responsibilities.
- Don't know who the right audience is.
- Lack of agency support to work on GB issues
- Other Priorities
- Tested messages and consistent messaging
- Don't have a good way to reach the right audience
- More hard-copy publications for general public.
- inconsistent messages by various agency employees, not directly involved with grizzly bear recovery
- messages
- lack of funding

Third

- Can't measure effectiveness
- The fact that real steps toward recovery are not in place in the NCE hampers our ability to get full public buy-in as augmentation is not currently a reality.
- Lack of funding.
- Lack of funding to work on GB issues
- Misinformation from other sources
- Lack of an "ask" of the public - what can they do to help
- Reasons for why grizzly bear recovery is important.
- conflicting messages regarding the effects of recovery of bears and the effects to public land users
- coordination with allies
- low priority work

How could current efforts to address the following barriers to recovery and delisting of grizzly bears be improved in the ecosystem or area where you work?

Black bear hunters killing grizzly bears by mistake because they cannot tell the difference between species.

- Additional education
- Mandatory ID test by WDFW. Expanded information in hunting regs. Improved understanding by hunters of legal consequences of killing grizzly bears.
- More outreach in hunter safety courses and at trail heads where hunting occurs.
- More use of the bear trailer - mandatory ID test by state
- Monitor effectiveness of WDFWs new bear identification information for hunters on their website

- More funding to reach more hunters. We obviously don't have BB hunters killing GB that we know of. And, if we don't want it to happen in the future, we need to be reaching more hunters. Our staff is now presenting at hunter safety classes.
- Seeing live examples, first-hand experience.
- better hunter education
- more public education
- improve hunter ID training

Killing of grizzly bears as a way to express anti-government sentiment or opposition to the Endangered Species Act.

- Not sure this can even be addressed regardless of what is done.
- Tough one as it is a culturally-held opinion. Increased publicizing of legal consequences of illegal killing.
- Not sure outreach will help this view people have.
- N/A
- Anti-aggressive therapy!
- Make penalties more visible.
- don't know
- more public education, harsher penalties
- not sure how to deal with crazies

Killing of grizzly bears by people who blame them for loss of access to public land or natural resource jobs.

- Not sure this can even be address regardless of what is done
- Presentations to user groups, preceded by key one on one meetings.
- Outreach in hunter safety courses.
- N/A but we could get better facts out - if we had them
- Could happen in the future. Although most of the NC is public land.
- Show jobs created and ecosystem improvements as a result of bears.
- more public education, harsher penalties
- improve outreach to recreational trails/outdoor groups

Killing of grizzly bears to profit from their trophy value or to sell body parts like claws and gall bladders.

- More enforcement; outreach to user groups
- Increased communication with hunting groups, hiking orgs and ORV organizations to be the "eyes and ears" in the field and become part of the solution.
- USFWS LE worked with EA group - they don't
- Educate locals. For example, penalties to everyone involved.
- harsher penalties
- raise public profile of poaching cases made related to this; in WA that includes a recent wolf case

Killing of grizzly bears out of fear of potential attacks on people, livestock or property.

- Work with Hollywood to put disclaimers on movies that paint bears in an unrealistic light; education to livestock owners about good husbandry practices; more coexistence projects
- Increased print material in visitor centers etc. to quell these unreasonable fears. TV and radio PSAs.
- Outreach in hunter safety courses.
- better publication of low numbers of actual events
- Again, we need to anticipate the future. Need to educate relative risks especially now with the news of human mortalities in other regions.
- Be aware education and recognition of other options.

- more public education
- add resources to GBOP

Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.

- Work with Hollywood to put disclaimers on movies that paint bears in an unrealistic light; education to livestock owners about good husbandry practices; more coexistence projects
- Increased print material in visitor centers etc. to quell these unreasonable fears. TV and radio PSAs. Increased promotion of non-advocacy information dissemination about general carnivore country safety measures that ensure the public feels a sense of "fairness, familiarity, and control".
- Discuss these fears in community meetings and teach people how to avoid unwanted encounters.
- better publication of low number of events
- See above, and with a focus on ranchers.
- Dispel fear through education.
- more education
- add resources to GBOP

Conflicts between big game hunters and grizzly bears that result in defense of life and property kills

- More hunter education; closing areas to hunting when conflicts escalate
- Close liaison and real working partnerships with guide outfitters and hunting orgs to keep hunters and bears safe.
- Outreach in hunter safety courses, when purchasing hunting licences and at hunting trail heads.
- Better info on how to avoid or respond to situations
- see above, with a focus on hunters.
- Creation of fear of humans by grizzly bears.
- education
- improve outreach to hunters via WDFW outreach (currently this effort is all but gone) and add resources to GBOP

Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.

- Additional education; collaborate with industry
- Legal measures to fine people who do not abide by bear smart practices.
- Door to door outreach in problem communities, campground outreach, community meetings.
- More public outreach
- more funding to reach more people. I would like to see ads in major newspaper about bear awareness and safety.
- Use of US Fish and Wildlife education trailer for residents in rural areas.
- keep doing the excellent job you're doing now
- more partnering with NGO's on education
- improve public outreach via WDFW outreach (currently this effort is all but gone), ban bear feeding, and add resources to GBOP

Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.

- More outreach by farm agencies about husbandry practices; incentives for husbandry practices; tighter Forest Service conditions on grazing allotments
- Audience-specific workshops to share info.
- One on one meetings with livestock owners.
- This is not addressed and needs to be - 1 on 1 w/stock growers
- This area is not being met. We need different venues/strategies to help ranchers improve their husbandry practices.
- Education of grazing permittees by range technicians.
- keep working with ranchers as you're doing now
- more partnering with NGO's on education
- improve outreach to operators via WDFW outreach (currently this effort is all but gone) and add resources to GBOP

Bear-human conflicts and defense of life and property kills that result from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.

- Additional education; meetings with county commissioners, etc.
- Radio and TV PSAs to focus on safety and legal implications.
- Trail head outreach and more information at park headquarters where access passes are sold.
- N/A for GB, state handles for BB
- News releases highlighting bear/human conflicts. Continue education efforts in ranger stations and campgrounds.
- more partnering with NGO's on education
- add resources to GBOP

Bear-human conflicts and defense of life and property kills or management removals that result from human use of infrastructure such as roads, campgrounds, mines, etc.

- More education, brochures, etc.
- Better signage in campgrounds and a standardized approach to campground design and safety measures between agencies.
- More outreach materials in problem areas.
- Get better info to public to support restrictions on construction
- Signs in campgrounds warning of the dangers of bear/human conflicts.
- education and penalties
- increase awareness of USFW planning efforts and add resources to GBOP

Lack of public awareness of the status of grizzly bears and the need for recovery under the Endangered Species Act.

- Not sure doing anything more will help on this
- GBOP does this well but toes a non-advocacy line. A more advocacy approach is required to reach broader audiences to make a difference on this one.
- More outreach to recreationist groups
- Television PSA's about GB's... Newspaper coverage. More ways to reach people via our color booklet!
- Emphasizing that grizzly bears in North Cascades naturally migrated here and emphasizing that humans have lived near grizzlies for many years in other places.
- much more publicity about the plight of small, fragmented populations
- the grizzly bear outreach project has been very successful getting the message out on grizzly bear recovery and status in the north cascades

- more partnering with NGO's on education
- to reach the broadest audience, employ mass media in effort; attach GB discussion to regional salmon recovery forums (forums exist in all watersheds)

Inadequate political support for actions necessary to recover of grizzly bears.

- Wait another 10 years
- GBOA more advocacy approach is required to reach broader audiences to make a difference on this one.
- Upper-level Agency managers too timid to properly brief Congressionals on the actual situation
- Educate general public about the lack of support
- Highlighting the positive effects grizzlies can have on ecosystems.
- whatever gains public support will eventually gain political support. This is the most urgent need of all.
- Need congressional direction in budget advice to initiate development of an environmental impact statement
- more partnering with NGO's on education
- identify funding strategy that won't raise anyone's taxes

Inadequate political support for funding necessary to recover of grizzly bears.

- Wait another 10 years
- GBOA more advocacy approach is required to reach broader audiences to make a difference on this one.
- See above
- First people need to know 1. we have gb in NC, 2. why we need them, 3. that fed status, 4. what they can do to help them recover gb's and
- Educate general public about the lack of support
- Again, emphasizing the positive effects grizzlies can have on ecosystems.
- Same as above
- There has been state political support for funding in the past, but a lack at the federal level to initiate completion of an environmental impact statement to address recovery.
- more partnering with NGO's on education
- see above

Inadequate consideration of the needs of grizzly bears in land use or development planning.

- Think this is okay due to the ESA and ESA requirements.
- GBOA more advocacy approach is required to reach broader audiences to make a difference on this one.
- Lack of political support/will to back agency managers when they call for such consideration
- Include management guidelines in current and upcoming National Forest Land Management Plan revisions
- Huge need and it takes people working at the city and county levels.. Attending meetings, meeting one on one with commissioners etc.
- Work with relevant agencies to make sure they consider grizzly habitat
- Work with county commissioners in rural areas of Northeastern Washington
- Better liaison with local planners and land managers
- Currently being addressed in forest plan revision. Since 1997 have been managing under forest direction for "no net loss" of core area
- more partnering with NGO's on education
- most GB management in NC occurs on federal lands, but there is a need to better engage county level growth planning efforts

Please provide any other comments you would like regarding how the Interagency Grizzly Bear Committee and its partners can advance grizzly bear recovery and delisting through information, education or outreach.

- One on ones are essential. A comprehensive, planned approach to information dissemination by working with sociologists, ecologists, and agency personnel is essential. It is vital to provide adequate funding for long term efforts on the ground so that proactive measures pay dividends during recovery steps. These proactive measures can mitigate more expensive reactive management options in a huge way. A much greater emphasis on the importance of serious community outreach is needed. Many people voice their support for outreach, but it seldom translates to the levels needed to secure sufficient funding.
- Consistent messages, responding immediately and effectively to anti-GB campaigns and events, provide issue support to ecosystem agencies when a large issue comes up.
- I look forward to talking about this on Nov 2nd.
- Perhaps highlight communities that have learned to live with grizzly bears.
- More press releases and media opportunities for the general media to raise the level of public awareness. Each IGBC subcommittees needs to identify the main message it would like for its recovery area.
- increased efforts at focus audiences (landowners, recreationalist, etc.); higher profile with general public; and provide funding for these

Survey of Information, Education and Outreach Barriers to Grizzly Bear Recovery & Delisting in the Bitterroot Ecosystem

Ten of 19 individuals employed by 4 state and federal agencies invited to respond to the survey did so. Responses by agency include: U.S. Forest Service (6), MT Fish, Wildlife and Parks (2), and Idaho Fish and Game (1).

Two of 3 individuals employed by NGO's that are actively involved in grizzly bear issues within the Bitterroot ecosystem responded to invitations to complete the survey; one from the National Wildlife Federation and one from the Defenders of Wildlife.

Given the small number of responses, both agency and NGO responses were included in the tabulation. The 2 non-government responses did not result in any differences in the relative rankings in the tables, compared to the agency-only responses.

Average ranking of the importance of potential barriers to recovery and delisting and the effectiveness of current information, education and outreach efforts. (Importance ranked from 1 = not important to 4 = critically important. Effectiveness ranked from 1 = not addressed to 4 = highly effective. Difference is average importance minus average effectiveness; the greater the difference, the larger the gap between importance and effectiveness.)

Potential Barrier to Recovery and Delisting	Importance	Effectiveness	Difference
Black bear hunters killing grizzly bears by mistake because they cannot tell the difference between species.	3.00	2.82	0.18
Killing of grizzly bears as a way to express anti-government sentiment or opposition to the Endangered Species Act.	2.36	1.82	0.54
Killing of grizzly bears by people who blame them for loss of access to public land or natural resource jobs.	2.00	1.73	0.37

Killing of grizzly bears to profit from their trophy value or to sell body parts like claws and gall bladders.	1.60	1.91	-0.31
Killing of grizzly bears out of fear of potential attacks on people, livestock or property.	2.73	2.45	0.28
Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.	2.91	2.36	0.55
Conflicts between big game hunters and grizzly bears that result in defense of life and property kills.	2.64	2.64	0.00
Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.	2.91	2.64	0.27
Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.	2.55	2.60	-0.05
Bear-human conflicts and defense of life and property kills that result from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.	2.55	2.73	-0.18
Bear-human conflicts and defense of life and property kills or management removals that result from human use of infrastructure such as roads, campgrounds, mines, etc.	2.64	2.36	-0.28
Lack of public awareness of the status of grizzly bears and the need for recovery under the Endangered Species Act.	2.55	2.18	0.37
Inadequate political support for actions necessary to recover of grizzly bears.	3.00	1.90	1.10
Inadequate political support for funding necessary to recover of grizzly bears.	3.00	1.82	1.18
Inadequate consideration of the needs of grizzly bears in land use or development planning.	2.64	2.27	0.37

Please identify any other important barriers to recovery and delisting of grizzly bears in the ecosystem or area where you work that are a function of lack of information; misinformation; or human attitudes, beliefs, or behaviors that could be addressed through information, education and outreach.

- Current state laws that allow baiting of black bears (Idaho)
- Probably one of the biggest barriers to recovery in the Bitterroot Ecosystem is the lack of overall public support for recovery. Most outreach on living with bears is focused on black bears, knowing that much of this information can be applied to living with grizzlies as well. This is helpful, we should probably revisit developing some strategic communications centered around grizzly bear recovery in the Bitterroot.

- Lack of funding for additional Bear I&E agency staff, both state and federal.
- Disagreement between feds/state over management of ESA including current wolf re-introduction. Use of ESA other than species recovery i.e. - political purposes. Bear baiting issues between Idaho/Montana not consistent.
- This area of North central Idaho has very low higher education rate. Work in the school systems is likely the best bet for changing beliefs.

Of all the barriers listed above, which 3 do you believe are the highest priority for the ecosystem or area where you work?

First

- Hunter education/mistaken ID/ungulate kill care information
- Developing trust and political support for coexistence in the outlying areas (the edges of occupied habitat)
- Bear Baiting
- Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.
- I haven't been directly involved in Grizzly Bear Management in this area for a couple years because I moved to Lakeview OR, which is why I didn't provide many specific comments.
- Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.
- accidental or purposely killing of bears
- Bear Baiting
- Human attitudes and beliefs
- Inadequate consideration of the needs of grizzly bears in land use or development planning

Second

- Preserving and securing intact habitat/ corridors and linkage zones
- Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.
- I don't remember the exact mortality numbers, but if I remember correctly, mis-identification by bear hunters and self-defense by hunters are big causes of mortality that we may be able to influence through a focused approach to the issue (information/education, increase awareness, and seasonal closures if warranted.
- Conflicts between big game hunters and grizzly bears that result in defense of life and property kills.
- Disagreement between the State and Feds on management efforts of an ES, i.e. the wolf in Montana
- Misinformation
- Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.

Third

- Better information and execution of sanctions on illegal killing and bad sanitation practices that lead to unnecessary killing
- Funding for preventative management (sanitation/electric fence projects, field assistants, etc.)
- Conflicts between big game hunters and grizzly bears that result in defense of life and property kills.
- Inadequate political support for actions necessary to recover of grizzly bears.
- Using the ESA for other than species recovery, i.e. as a political statement

- Lack of information
- Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.

Reflecting on the information, education and outreach efforts you are most often involved with, please indicate how important each of the following factors are in limiting the effectiveness of your communication with the public.

	Not important	Somewhat important	Highly important	Rating Average
Other job duties or priorities.	9.1% (1)	36.4% (4)	54.5% (6)	2.45
Insufficient operating funds.	9.1% (1)	45.5% (5)	45.5% (5)	2.36
Not having the right printed materials such as brochures, cards, etc.	70.0% (7)	30.0% (3)	0.0% (0)	1.30
Not having good media contacts.	30.0% (3)	60.0% (6)	10.0% (1)	1.80
Insufficient credibility or public trust in the agency or organization.	0.0% (0)	60.0% (6)	40.0% (4)	2.40
Don't know what the right audience is.	27.3% (3)	54.5% (6)	18.2% (2)	1.91
Don't have the right message to reach key audiences.	20.0% (2)	60.0% (6)	20.0% (2)	2.00
Inconsistent messages.	50.0% (5)	10.0% (1)	40.0% (4)	1.90
Conflicting messages from other sources.	20.0% (2)	30.0% (3)	50.0% (5)	2.30
Don't have a good way to reach the right audience.	30.0% (3)	50.0% (5)	20.0% (2)	1.90
Don't have a clear focus for information, education and outreach efforts.	11.1% (1)	55.6% (5)	33.3% (3)	2.22
Lack of coordination among	20.0% (2)	60.0% (6)	20.0% (2)	2.00

agencies and partners.				
Can't measure effectiveness of efforts.	22.2% (2)	55.6% (5)	22.2% (2)	2.00
Don't make effective use of the internet or social media.	0.0% (0)	60.0% (6)	40.0% (4)	2.40

Are there other factors that affect your ability to communicate effectively with the public?

- Difficult to counter propaganda and mis-informtion from grizzly bear advocates (and to a lesser degree people who hate grizzlies)
- Not enough time and money to hire assistants
- Hasn't been a job priority. G. Bears are something new Learn as we go.
- Political situation concerning wolf and grizzly recover in Idaho
- There is not a Grizzly Bear population in the Bitterroot therefore the issue is not very relevant here.
- Lack of trust for Federal Govt.

Considering all the factors listed above that affect your ability to communicate with the public, which 3 are the most important?

First

- Countering misinformation from NGOs like NRDC on threats facing grizzly bears; real experts in agencies and other NGOs can't get their stories heard by the media.
- Insufficient operating funds
- agency coordination (bear baiting)
- Insufficient operating funds
- Other job duties or priorities
- the current political situation in idaho is critical
- Insufficient credibility or public trust
- Lack of Trust
- other job duties/priorities

Second

- Putting the risks associated with grizzly bears in an appropriate probability context
- Not enough time to effectively cover all the basis alone
- other sources
- Other job duties or priorities
- Insufficient operating funds.
- Other job duties / responsibilities
- Lack of funds or personnel to target
- insufficient operating budge

Third

- Getting hunters to behave in less lethal ways when hunting in grizzly country.
- Conflicting messages from other sources
- inconsistent messages (FW&P commissioner in MT saying bear spay is not as effective as a firearm)
- Inconsistent messages
- Don't have a clear focus for information, education and outreach efforts.
- Lack of coordination among agencies/partners
- Media generally not interested or opposed
- insufficient use of social media such as facebook/twitter...this would help reach the next generation of forest users

How could current efforts to address the following barriers to recovery and delisting of grizzly bears be improved in the ecosystem or area where you work?

Black bear hunters killing grizzly bears by mistake because they cannot tell the difference between species.

- required hunter education courses like that done by FWP
- Continue the bear ID testing approach; continue with the ongoing "hands on" hunter safety and hunter education workshop efforts on the south end; acquire funding assistance for the FWP R2 Hunting in Grizzly Bear Country Educational Trailer Project; Develop a video that trains hunters and quizzes hunters on how to tell the difference between the species and the sexes of both species (Similar to Take a Closer Look)
- continue bear aware posters use of media
- The current trailhead signs that we are using are a great outreach tool, and we should continue to post these in more locations. Institute a bear ID test in Idaho, similar to what Montana uses.
- Increase time during the state's hunter's education training to discuss the differences between black/grizzly bears. Increase public media during hunting season.
- Continue current efforts and expand outreach efforts to social media. Complete online bear ID quiz on IDFG's website and other websites as well. Not a huge issue in the Bitterroot eco. 1 g.bear killed in Bitterroot since 1940's.
- mandatory training by fish and game before license
- Hunter education classes and more education with outfitters and guides
- Change Idaho baiting laws to resemble Wyoming's where there are Grizzly bears, no processed food, must be in a container etc.

Killing of grizzly bears as a way to express anti-government sentiment or opposition to the Endangered Species Act.

- more information on sanctions involved
- There is a lack of public and political support and there are trust issues; need to work with/mitigate with communities on this lack of tolerance; the willingness of humans to coexist is key; maintain and establish community and public group partnerships; prioritize high risk areas; implement proven non-lethal deterrent practices; collaborate with communities on education and outreach;
- Increase fines and penalties for poaching, increase rewards for information
- Probably not going to change these people's minds in the short term. Lots of distrust, anti-gov views in a small percentage of population.
- increase enforcement and prosecution
- Does not apply
- Work on the next generation through school programs

Killing of grizzly bears by people who blame them for loss of access to public land or natural resource jobs.

- more information on sanctions that result...publication of sanctions
- same as above
- Increase fines and penalties for poaching, increase rewards for information
- Not sure. Similar to answer above.
- increase enforcement and prosecution
- Does not apply
- Work on the next generation through school programs

Killing of grizzly bears to profit from their trophy value or to sell body parts like claws and gall bladders.

- to my knowledge, this isn't much of an issue
- same as above and increase amount of undercover law enforcement efforts to nip the trade; follow the money
- Increase outreach/media efforts regarding regional poaching of grizzly bears.
- Stiffer violator penalties with mandatory, long-term license revocations
- Does not apply
- Not a current problem in my area

Killing of grizzly bears out of fear of potential attacks on people, livestock or property.

- better information to put these incidents into appropriate context
- Same as above
- Continued and expanded on the ground communication by bear management specialists.
- Increase outreach and education in communities where little to no outreach has been completed. Increase the number of proactive projects with livestock owners (i.e. electric fencing projects).
- Continue current efforts and expand outreach, I&E efforts by hiring staff or individual that does nothing but bear I&E.
- increase enforcement and prosecution
- Through education and outreach including psa's, working with ranchers/livestock industry directly
- Work on the next generation through school programs

Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.

- better information on probabilities involved...context
- Same as above
- Continued and expanded on the ground communication by bear management specialists.
- Increase PSA's and attendance at outreach events such as county fairs etc...
- Continue current efforts and expand outreach, I&E efforts by hiring staff or individual in each ecosystem that does nothing but bear I&E.
- increase enforcement and prosecution
- See above answer
- Work on the next generation through school programs. Get a food storage program in place before we have a viable population of bears so the Grizzly bear is not blamed for the regulation.

Conflicts between big game hunters and grizzly bears that result in defense of life and property kills.

- I think there may need to be mandatory training for hunters in key areas although I know this will be difficult. Also, mandatory carrying of bear spray.
- Continue with the ongoing hunter safety and hunter education efforts on the south end; acquire funding assistance for the FWP R2 Hunting in Grizzly Bear Country Educational Trailer Project; further develop and launch the Safety for People/Safety for Bears WGA and MOGA bear encounters/avoiding/mitigating workshops; distribute free DVD's of the "Staying Safe in Bear Country" video (produced by the staying safe in bear country society, distribute free bear pepper spray and Critter Gitters to hunters; develop a common sense "woods-savvy/bear wise" self-policing hunter/outdoorsman mentoring program.
- Bear Aware - need to reach bow hunters in particular

- Increase outreach and media regarding the use of bear spray, develop a bear spray incentive program...etc...
- Continue and expand current efforts. Expand coverage of when people do right - instead of wrong.
- increase enforcement and prosecution
- Outreach to hunters and through education classes and to guides/outfitters
- Keep pushing Bear aware education.

Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.

- Need to do work much more closely with county authorities to establish ordinances
- Same as above
- Outreach on how to limit bear attractants is already handled fairly well. Most outreach is done with black bears in mind, but since it applies to grizzlies too, it is not a wasted effort. This outreach should continue and we should continue to brainstorm for new ways to get this message out there.
- Increase funding for proactive projects and outreach
- City Ordinances with enforcement, Sub Division ordinances
- Of course, this is more of an issue with black bears in the Bitterroot. Continue efforts. Educate home/cabin owners annually with I&E mailings, or host open house meetings to inform them. difficult to answer.
- increase enforcement and prosecution
- psa's, outreach to homeowners, garden clubs, civic groups, website
- Work on the next generation through school programs. Get a food storage program in place before we have a viable population of bears so the Grizzly bear is not blamed for the regulation.

Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.

- Livestock grazing retirements (voluntary) in conflict areas are key. Things like the USSES summer pastures grazing of sheep in the Centennials need to be exposed for the disasters they are.
- Encourage good stewardship; increase the amount of funding going toward landowner assistance, reimbursement, etc.; give folks the tools, knowledge and resources to help themselves; push electric fence and develop more incentive programs
- Increase funding for proactive projects and outreach
- See above answers
- Grazing is not a large issue in my area and potential conflicts are likely to be rare.

Bear-human conflicts and defense of life and property kills that result from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.

- Try to be more effective at communicating the messages we are already attempting. I don't think that generally, however, this is a huge issue because the bears are pretty tolerant of human misbehaviors-- usually.
- Start enforcing the state and local feeding ordinances; increase funding for assistance with monitorin and enforcing local ordinances and state laws; write more food order tickets, etc
- Increase outreach, postive media attention and PSA's (in cooperation with NPS?)
- increase enforcement and prosecution
- Public awareness campaign, evening presentations at campgrounds, psa's etc.

- Work on the next generation through school programs. Get a food storage program in place before we have a viable population of bears so the Grizzly bear is not blamed for the regulation.

Bear-human conflicts and defense of life and property kills or management removals that result from human use of infrastructure such as roads, campgrounds, mines, etc.

- Need better zoning, on federal lands, of placement of such infrastructures.
- Maintain linkage and corridors; limit motorized traffic and access in core habitat areas where linkage is important; safe and secure habitat will allow the bears from adjacent ecosystems to connect
- Increase outreach, media attention and PSA's (in cooperation with USFS, Mining Co., Logging Co. etc...)
- increase enforcement and prosecution
- see above answer
- Work on the next generation through school programs. Get a food storage program in place before we have a viable population of bears so the Grizzly bear is not blamed for the regulation.

Lack of public awareness of the status of grizzly bears and the need for recovery under the Endangered Species Act.

- This is important in areas like the Bitterroots and North Cascades especially. However, building a case for recovery on the back of the ESA is not necessarily the best approach given the problems with delisting of bears and wolves. People won't believe species can be delisted once recovery is achieved.
- Show the opposition where and what the bears are doing; show the success
- Big issue for the Bitterroot--we need to develop more I&E strategies on this.
- Increase outreach, TV Media, Internet PSA's etc...
- more PR programs
- Newspaper articles, op-eds, psa's
- This would need to be very strategic and based on biology while acknowledging the political part of any decisions.

Inadequate political support for actions necessary to recover of grizzly bears.

- elect better politicians...this isn't something the IGBC can address very specifically. Must be a personal contact kind of thing not an education campaign; this must be done by NGOs.
- Get key people in key positions; get the right folks involved in politics;
- Big issue for the Bitterroot--we need to develop more I&E strategies on this.
- TV Media, Internet PSA's etc...
- Developing consistent policies between neighboring states
- Not in the next few years

Inadequate political support for funding necessary to recover of grizzly bears.

- Very tough to change with an educational campaign especially in this climate. I have no ideas.
- Same as above.
- Big issue for the Bitterroot--we need to develop more I&E strategies on this.
- TV Media, Internet PSA's etc...
- National USFS issue
- Not in the next few years

Inadequate consideration of the needs of grizzly bears in land use or development planning.

- Perhaps development of model land use planning regulations for consideration by county governments.
- Same as above
- Big issue for the Bitterroot--we need to develop more I&E strategies on this.
- Increase outreach to land developers, real estate agents etc...
- Does not apply
- There needs to be clarification on where bears are desired and where they would be acceptable if they moved into the area.

Please provide any other comments you would like regarding how the Interagency Grizzly Bear Committee and its partners can advance grizzly bear recovery and delisting through information, education or outreach.

- I think it is important to involve NGOs who are supportive of IGBC's efforts and not litigants in the official deliberations of the IGBC and its subcommittees. A lot of push back comes from litigious NGOs that the IGBC is unable to counter because of the lack of an NGO official presence on the committees.
- Acquire more funding for on the ground efforts.
- Good luck - the misinformation will continue to flow we need to provide facts in response
- I/E efforts in the bitterroot specific to grizzly recover will be limited and constrained in Idaho given the current situation

Survey of Barriers to Grizzly Bear Recovery in the Selkirk-Cabinet-Yaak Ecosystem

Twelve individuals responded to the survey from the following agencies or organizations: The Lands Council, Kootenai Tribe/Kootenai Valley Resource Initiative, Washington Department of Fish and Wildlife, Montana Fish, Wildlife & Parks (2), BC Fish, Wildlife and Habitat Section, Idaho Department of Lands, Idaho Dept. of Fish and Game (2), Lincoln County, USDA Forest Service, Grizzly Bear Outreach Project

Average ranking of the importance of potential barriers to recovery and the effectiveness of current information, education and outreach efforts. (Importance ranked from 0 = not important to 4 = critically important. Effectiveness ranked from 0 = not addressed to 4 = highly effective. Difference is average importance minus average effectiveness; the greater the difference, the larger the gap between importance and effectiveness.)

Potential Barriers to Recovery	Importance Average Rating	Effectiveness Average Rating	Difference
Black bear hunters killing grizzly bears by mistake because they cannot tell the difference between species.	3.33	2.92	0.41
Killing of grizzly bears as a way to express anti-government sentiment or opposition to the Endangered Species Act.	2.25	1.82	0.43

Killing of grizzly bears by people who blame them for loss of access to public land or natural resource jobs.	2.17	1.91	0.26
Killing of grizzly bears to profit from their trophy value or to sell body parts like claws and gall bladders.	1.83	1.83	0.00
Killing of grizzly bears out of fear of potential attacks on people, livestock or property.	2.67	2.55	0.12
Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.	3.00	2.58	0.42
Conflicts between big game hunters and grizzly bears that result in defense of life and property kills.	2.92	2.58	0.34
Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-beques, etc.	3.42	2.75	0.67
Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.	2.33	2.50	-0.17
Bear-human conflicts and defense of life and property kills that result from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.	2.58	2.75	-0.17
Bear-human conflicts and defense of life and property kills or management removals that result from human use of infrastructure such as roads, campgrounds, mines, etc.	2.42	2.58	-0.16
Lack of public awareness of the status of grizzly bears and the need for recovery under the Endangered Species Act.	2.33	2.55	-0.22

Inadequate political support for actions necessary to recover of grizzly bears.	2.25	1.92	0.33
Inadequate political support for funding necessary to recover of grizzly bears.	2.58	1.83	0.75
Inadequate consideration of the needs of grizzly bears in land use or development planning.	2.42	2.08	0.34

Please identify any other important barriers to recovery and delisting of grizzly bears in the ecosystem or area where you work that are a function of lack of information; mis-information; or human attitudes, beliefs, or behaviors that could be addressed through information, education and outreach.

- Possible need to be more proactive with bear incident data when an incident makes headlines (to put incident in more realistic perspective)
- Human erosion of bear access to spawning salmon is not being addressed
- People need to be aware that grizzly bears can now be found at all elevations throughout the year in the Selkirks. The previous (and correct) belief was that they are only in the valley bottom in the spring. With population expansion that is no longer the case. People need to be "bear aware" throughout the entire time bears are out of the den. This includes a lot of private land in the valley.
- It is hard to support an animal that is controlling the economic base of the county

Of all the barriers listed above, which 3 do you believe are the highest priority for the ecosystem or area where you work?

First

- Practical ways to live in bear country - safely -- without the perception of "infringing" on humans.
- Educating hunters (both black bear hunters on ID and all hunters on how to handle encounters)
- Educating enforcement on importance of citing violators of MT's anti-wildlife-feeding law
- road and rail mortality mitigation
- hunter ID
- attractants, sanitation, pet food, bird food, etc., on private land
- the fact that the bear is controlling our economy is first in importance
- hunter education
- awareness / support for proper food storage

Second

- Educating bear habitat residents and visiting recreationists about keeping food & garbage secured to avoid drawing bears
- Requiring more from MT's bear hunters
- changing the COS response rules to bear complaints
- Bear human conflict from garbage, bird feeders, etc.
- bear hunter mistaken identify kills
- the fact that bears are placed above humans second
- conflict avoidance strategies for homeowners
- mistaken identity by black bear hunters

Third

- Educating all about actual statistical probability of grizzly bear encounter of any kind (low risk, rather than perceived high risk)
- Increasing awareness of local presentations on bears (like CAC meetings where Kasworm presents)
- getting hunters to manage meat such that it does not bring them into conflict with grizzly bears
- bear human conflict from unsafe human behavior
- public attitudes about bear recovery influenced by the perception of the threat of an attack
- People in our country need access to obtain firewood to heat our homes and manage our forests before we lose it to fire !!!
- misinformation regarding human-bear encounters

Reflecting on the information, education and outreach efforts you are most often involved with, please indicate how important each of the following factors are in limiting the effectiveness of your communication with the public.

	Not important	Somewhat important	Highly important	Rating Average	Response Count
Other job duties or priorities.	0.0% (0)	25.0% (2)	75.0% (6)	2.75	8
Insufficient operating funds.	12.5% (1)	37.5% (3)	50.0% (4)	2.38	8
Not having the right printed materials such as brochures, cards, etc.	62.5% (5)	37.5% (3)	0.0% (0)	1.38	8
Not having good media contacts.	75.0% (6)	12.5% (1)	12.5% (1)	1.38	8
Insufficient credibility or public trust in the agency or organization.	25.0% (2)	37.5% (3)	37.5% (3)	2.13	8
Don't know what the right audience is.	62.5% (5)	37.5% (3)	0.0% (0)	1.38	8
Don't have the right message to reach key audiences.	75.0% (6)	12.5% (1)	12.5% (1)	1.38	8
Inconsistent messages.	50.0% (4)	12.5% (1)	37.5% (3)	1.88	8
Conflicting messages from other sources.	25.0% (2)	37.5% (3)	37.5% (3)	2.13	8
Don't have a good way to reach the right audience.	50.0% (4)	37.5% (3)	12.5% (1)	1.63	8

Don't have a clear focus for information, education and outreach efforts.	50.0% (4)	50.0% (4)	0.0% (0)	1.50	8
Lack of coordination among agencies and partners.	50.0% (4)	37.5% (3)	12.5% (1)	1.63	8
Can't measure effectiveness of efforts.	25.0% (2)	37.5% (3)	37.5% (3)	2.13	8
Don't make effective use of the internet or social media.	37.5% (3)	50.0% (4)	12.5% (1)	1.75	8

Are there other factors that affect your ability to communicate effectively with the public?

- Time is a very big problem
- Inadequate funding - which results in the necessity of other duties/priorities is certainly the largest limiting factor

Considering all the factors listed above that affect your ability to communicate with the public, which 3 are the most important?

First

- agency credibility/trust
- Time (i.e., currently competing with attention on wolves)
- insufficient public trust
- My time available
- Inadequate funding, inadequate funding, inadequate funding
- Lack of funding
- other job duties

Second

- Funds for staffing (i.e., we recently cut all outreach positions to meet lower state budget)
- Inconsistent message between sources
- Conflicting info
- Other priorities (required because of inadequate funding)
- competing job tasks
- lack of funds

Third

- Inability to measure effectiveness
- my own abilities
- Ineffective use of internet and social media
- burn-out

How could current efforts to address the following barriers to recovery and delisting of grizzly bears be improved in the ecosystem or area where you work?

Black bear hunters killing grizzly bears by mistake because they cannot tell the difference between species.

- Require ID training of bear hunters (instead of just voluntary)
- Require hunters to re-certify with the MFWP species ID test before every season, and consider including a video portion on the test.
- Having hunters take the mandatory bear ID test more than once in their lifetime.
- greater education efforts-proactive efforts
- Complete and publish IDFG's web based training/exam
- Development of Idaho bear ID test and making it mandatory statewide for all black bear hunters
- it happens but not enough to modify program
- More of what we have been doing for 20 years (I & E)
- Increase hunter contact patrols. Require bear hunters to take a bear identification test.

Killing of grizzly bears as a way to express anti-government sentiment or opposition to the Endangered Species Act.

- Increase advertising of local CAC meetings (where Wayne Kasworm speaks). in Libby/Troy areas.
- Foster better relationship with public as a government employee
- Have NGO's and GO have hot links to good griz education videos. Saturate viewers by having these available on several sites.
- Not that much of an issue. Continue to be open and honest about recovery efforts
- open roads so people can get firewood and enjoy our forests
- Have not seen this in 20 years
- Increase law enforcement presence.

Killing of grizzly bears by people who blame them for loss of access to public land or natural resource jobs.

- Use of latest data on actual acreage of bear habitat "set-asides"
- Increase advertising of local CAC meetings in Libby/Troy areas.
- The National Forest system should do a better job of explaining why roads are closed to motorized access.
- see 2 above
- Not that much of an issue. Continue to be open and honest about recovery efforts
- open access
- Have not seen this in 20 years
- Replace gates with permanent closures (boulders, berms, etc.) wherever possible to improve acceptance.

Killing of grizzly bears to profit from their trophy value or to sell body parts like claws and gall bladders.

- Currently not addressed, but not seen as a problem either
- see 2 above
- Not much of a current issue, although current Idaho law allows the sale of bear parts. Better funding to have a full-time presence would help. The current enforcement position is only partially funded.
- I do not think it happens
- Have not seen this in 20 years
- Increase law enforcement presence.

Killing of grizzly bears out of fear of potential attacks on people, livestock or property.

- Use of latest data on actual attacks and comparison with other sources of threats to people and livestock
- Increase advertising of local CAC meetings in Libby/Troy areas.
- Better education on bear behavior and life history
- greater enforcement presence and prosecution

- see 2 above
- Just try to reach more people through different types of media
- it is a problem because bears do attack people
- More of what we have been doing for 20 years (I & E)
- Local community outreach / presentations.

Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.

- Increase advertising of local CAC meetings in Libby/Troy areas.
- presenting public level reviews of grizzly status and biology
- see 2 above
- Try to reach more people through different types of media
- it is happening more all the time
- More I & E
- Local community outreach / presentations.

Conflicts between big game hunters and grizzly bears that result in defense of life and property kills.

- Increased promotion of use of bear spray rather than firearms as defense
- Require hunters to re-certify with the MFWP species ID test before every season, and consider including a video portion on the test.
- hands-on training about how to hang meat or, lone out electric fences
- see 2 above
- Current efforts seem to be working. Continue or expand field contacts. Mail out brochures to bear and elk hunters prior to the season (we did that for the first time this year).
- the more bear we have the more of a problem it will be,,,
- Promote spray, more I & E
- Conduct additional hunter contact patrols.

Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.

- Increased use of GBOP's "Hide Your Food" (bears need 20,000 calories per day) campaign
- Educate enforcement (incl MFWP) on need to give-out warnings/citations for violations of MT's "no feeding wildlife" law (MCA 87-3-130)
- Fund Bear Aware much more, these people should be BC gov employees and paid reasonable salaries
- see 2 above
- Need a bigger public media campaign. Try to work with local county commissioners to get sanitation requirements. Work with state legislators to get laws that we can enforce and cite people who create nuisance wildlife.
- always a problem
- need more money to continue efforts
- Increase visitor contact patrols, law enforcement.

Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.

- Use of latest data on actual attacks and comparison with other sources of threats to people and livestock
- Educate enforcement (incl MFWP) on need to give-out warnings/citations for violations of MT's "no feeding wildlife" law (MCA 87-3-130).
- see 2 above

- Work with local livestock producers on private land. Include requirements in permit on USFS land. But is hasn't been much of an issue in the Selkirks
- more bear more problems
- more cash to do the job
- Work one on one with permittees.

Bear-human conflicts and defense of life and property kills that result from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.

- Increased use of GBOP's "Hide Your Food" (bears need 20,000 calories per day) campaign
- Educate enforcement (incl MFWP) on need to give-out warnings/citations for violations of MT's "no feeding wildlife" law (MCA 87-3-130).
- see 2 above
- Tie this in with attractants, bird feed, etc. Same thing applies.
- more cash
- Increase visitor contact patrols.

Bear-human conflicts and defense of life and property kills or management removals that result from human use of infrastructure such as roads, campgrounds, mines, etc.

- work with the railways to describe the problem and then propose ways to reduce kills; hire a road and railway mortality biologist in our Branch
- see 2 above
- Not much of an issue. Continue to work with USFS and Id Parks and Rec to provide bear resistant trash cans. Educate public at these facilities
- we need the roads,campgrounds,mines a lot more than the bear, look at our economy
- not seen as a problem for us
- Increase visitor contact patrols

Lack of public awareness of the status of grizzly bears and the need for recovery under the Endangered Species Act.

- Increase advertising of local CAC meetings (where Wayne Kasworm speaks).
- see 2 above
- Continue current outreach. Most in the local communities are probably aware of recovery efforts but may not be aware of status
- ESA needs rewritten
- not an issue for us
- Local community outreach.

Inadequate political support for actions necessary to recover of grizzly bears.

- Increase advertising of local CAC meetings (where Wayne Kasworm speaks).
- Present a new set of strike rules for our CO Service and clearly describe to the decision makers why a more prevention oriented set of rules would SAVE money and generate better conservation results
- see 2 above
- Local politicians are fairly engaged and somewhat supportive. Higher ups may be out of reach - too politically driven. Not interested in solving problems
- I think there is too much support
- Educate politicians.

Inadequate political support for funding necessary to recover of grizzly bears.

- Increase advertising of local CAC meetings (where Wayne Kasworm speaks).

- review current grizzly bear response rules and revise them to reflect current best practices
- see 2 above
- Same as above. We're doing what we can but money is tight and it's not a popular stand to provide more money for ESA now, at least with the current Idaho legislature (both state and federal level)
- a lot of money has been spent in recovery efforts
- Most cash controlled by research instead of managers. we already know what we need to do we just need to apply what we know
- Educate politicians.

Inadequate consideration of the needs of grizzly bears in land use or development planning.

- Grizzlies are often over considered in Land Use planning such that there are too many habitat constraints which builds resentment and distracts from the real problems of mortality and lack of access to salmon
- see 2 above
- This is good on federal land. Pretty good on state land. More work with local levels (county gov, planning and zoning) would benefit, but an uphill battle on economy vs value of wildlife. We are making some headway.
- inadequate support for the needs of people in land use or development planning
- Plenty of consideration on public lands. Need to work on the spring range on private ground.
- Educate local planning commissions.

Please provide any other comments you would like regarding how the Interagency Grizzly Bear Committee and its partners can advance grizzly bear recovery and delisting through information, education or outreach.

- In Washington state we need to concentrate on the Selkirks, where we KNOW we have a few grizzlies among many black bears, rather than the North Cascades, where actual grizzly use is vague.
- Funding is very important and lacking in the Selkirks. The current Sec 6 allocation, which is the sole source of funding, is inadequate to support much of a program. This results in less time, little research, limited public outreach, and a shift in priorities because our time is picked up by other sources (e.g., wildlife management, fishery enforcement). A stable funding source would result in a bigger and consistent public outreach effort. It is definitely fund-limited at this time. For the most part, the pieces are all there. We just can't afford to utilize them because we don't have the funded man-hours to use them. IGBC has the resources, we just don't have the funding to use them due to a lack of staff.
- Get the money from the research biologists and give it to the managers. Do we really need a multimillion dollar DNA study to count the bears? The number won't mean a thing. Far better to spend that cash on I & E and management.

Survey of Barriers to Grizzly Bear Recovery & Delisting in the Northern Continental Divide Ecosystem

Twenty-two out of 34 individuals working for state and federal agencies invited to participate responded to the survey. Responses came from the following agencies: U.S. Forest Service (6), MT Fish, Wildlife and Parks (14), Blackfeet Tribe (1), Glacier National Park (1)

Five of 13 individuals working for the following NGOs responded to the survey: Natural Resources Defense Council, Vital Ground Foundation, Boone and Crockett Club, and Living With Wildlife Foundation.

Tabular results provided below include only agency responses. Given the small number of non-government entities, no separate tabulation is provided for these responses. (Including the 5 non-government responses in the tables resulted in only minor changes in absolute values and did not result in any differences in the relative rankings in the tables.) The comments and responses to open-ended questions by non-government respondents are included and identified as NGO input.

Average ranking of the importance of potential barriers to recovery and delisting and the effectiveness of current information, education and outreach efforts. (Importance ranked from 1 = not important to 4 = critically important. Effectiveness ranked from 1 = not addressed to 4 = highly effective. Difference is average importance minus average effectiveness; the greater the difference, the larger the gap between importance and effectiveness.)

Potential Barrier to Recovery and Delisting	Importance	Effectiveness	Difference
Black bear hunters killing grizzly bears by mistake because they cannot tell the difference between species.	2.37	3.12	-0.75
Killing of grizzly bears as a way to express anti-government sentiment or opposition to the Endangered Species Act.	1.94	2.00	-0.06
Killing of grizzly bears by people who blame them for loss of access to public land or natural resource jobs.	2.06	2.13	-0.07
Killing of grizzly bears to profit from their trophy value or to sell body parts like claws and gall bladders.	1.50	2.24	-0.74
Killing of grizzly bears out of fear of potential attacks on people, livestock or property.	2.44	2.76	-0.32
Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.	2.78	2.59	0.19
Conflicts between big game hunters and grizzly bears that result in defense of life and property kills.	2.83	2.65	0.18
Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.	3.67	3.06	0.61
Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.	3.11	3.00	0.11
Bear-human conflicts and defense of life and property kills that result from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.	2.39	3.24	-0.85
Bear-human conflicts and defense of life and			-0.71

property kills or management removals that result from human use of infrastructure such as roads, campgrounds, mines, etc.	2.17	2.88	
Lack of public awareness of the status of grizzly bears and the need for recovery under the Endangered Species Act.	2.00	3.06	-1.06
Inadequate political support for actions necessary to recover of grizzly bears.	2.18	2.56	-0.38
Inadequate political support for funding necessary to recover of grizzly bears.	2.47	2.47	0
Inadequate consideration of the needs of grizzly bears in land use or development planning.	2.94	2.65	0.29

Please identify any other important barriers to recovery and delisting of grizzly bears in the ecosystem or area where you work that are a function of lack of information; mis-information; or human attitudes, beliefs, or behaviors that could be addressed through information, education and outreach.

- Resentment of the ESA
- I and E about the exact requirements to delist in the NCDE. The population is recovered and we need to move on.
- Mortality on private lands due to improper storage of attractants and livestock including chickens, turkeys etc.
- People's tolerance for grizzlies will erode if formal delisting process isn't initiated soon and actively supported by agencies and NGOs. Tolerance for grizzlies will likely suffer if there is "no end in sight (think wolf), and as conflicts increase in marginal surrounding habitat.
- bear managers and specialists need to be more transparent and forthcoming with information - not just when in crisis or response mode, but proactively
- Groups opposed to Grizzly bear delisting,
- Conflict with other recreation uses—some people would like to pick berries or ride horses or walk dogs or camp or hunt without worrying about grizzly bears; 2. Concern that FWP cannot regulate bear numbers
- The ESA process, The effect of losing one bear to poaching, or other losses, The Process that needs to be followed and how public can be part of it both for funding and political and public support, cost of not getting Gb delisted and value of GBs to local economy
- I think we're missing some electronic media campaigns. I think we're missing at the county or city planning levels, real estate offices, chambers of commerce. Presence in the woods by Agency people
- more emphasis on the agricultural communities where bears are moving into
- I believe grizzly bears in the NCDE are recovered. Now we need to maintain what we have. The loss of a few bears each year is sustainable and not proof that current efforts are failing. Need to do more research, development and testing for electric fencing and pushing that message to the public. It is not dangerous or expensive and can probably save them (and agencies) big \$ in the long run.
- Need to be able to help landowners carry through with prevention projects. This includes funding, correct information, trained help, and partnerships.
- NGO Input:
 - The Number One impediment to grizzly recovery in all ecosystems is a genuine fear of grizzly bears fed by a lack of knowledge, awareness, and appreciation for the species; Number Two is the anti-govt., anti-regulation extremist element that thinks poaching is an acceptable response; Number Three is the "Slob

Homeowner" who doesn't know, or doesn't care that they're endangering themselves, their families, their neighbors, and the state animal with their careless behavior.

- Need to get better information about the effectiveness of bear spray out to hunters. People insisting on feeding birds and other wildlife and lack of enforcement of the regs. Private property rights (you can't tell me how to live on my land). Promotion of growing your own food - going organic, etc. without any mention of potential conflicts with grizzlies that might result. Lots of turnover of residents moving into or buying property in the NCDE. The "I've lived here for 50 years and never had a grizzly problem before" attitude. People wanting to see grizzlies and doing reckless things to get the opportunity to see them. Making sure that people know WHAT things are bear attractants - especially things that might now be obvious but might have a strong odor. Making sure that people know that if they want to have fruit trees, they are likely going to draw bears in. Lots of apple trees and orchards in the NCDE especially around Flathead Lake and the reservation. We need to work more with the tribal bear managers to help get information to people on the Flathead Indian Reservation! working with local trash haulers to help find solutions to unsecured garbage.

Of all the barriers listed above, which 3 do you believe are the highest priority for the ecosystem or area where you work?

First

- Bear human conflicts resulting in injury
- Funding for the work (monitoring and mgmt) is #1
- Reducing bear/human conflicts at home and when recreating
- Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.
- fear of physical attacks
- easier availability and access to preventative actions and attendant equipment (elec fence/dumpsters, etc.
- Funding
- peripheral habitat conflicts with attractants and hobby livestock
- Anger over increasing populations resulting in more hunters, ranchers, and land users killing bears.
- reduce hunter/bear interactions
- Addressing garbage, wildlife/bird feeding, and chickens on private land.
- Additional funding for grizzly bear management specialists by providing additional trained help and operations.
- NGO Input:
 - inadequate political support and funding
 - Providing support to CSKT tribal bear managers to help reach people on the res who grow crops or raise animals.
 - Land use and development planning.

Second

- Mistake ID grizzly kills
- Bear Attractants
- How to balance development with sustaining current and increasing population - habitat quality -- this goes hand-in-hand with reducing conflicts
- Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.

- food attractants
- emphasize and train w/ pepper spray; greater public exposure of same
- Groups opposed to Grizzly bear delisting
- Removing GB due to irresponsible human activities
- Increasing habitat needs for bears beyond the NCDE which would probably be land use planning.
- Garbage management and other attractants like birdfeeders.
- develop better outreach for the Ag communities where bears occur
- Use of electric fencing to resolve issues.
- Continue working with landowners and recreationists on living and recreating in and adjacent to the recovery area.
- NGO Input:
 - public education and support
 - Working with local haulers to find viable solutions to unsecured garbage throughout the NCDE.
 - Inadequate handling of attractants

Third

- Inadequate handling of attractants
- Residential subdivision of bear habitat creating conflict sinks.
- Continue to work on gaining public support for GB mgmt./recovery
- Black bear hunters killing grizzly bears by mistake because they cannot tell the difference between species.
- land development
- hunter training in bear conflict prevention
- Education and public support - outreach to those who are not familiar with details.
- Anything that reduces the risk of either human or bear mortality from surprise encounter. Continue that message or human presence in the field.
- Getting hunters to carry bear spray.
- maintain "open space" for bears- influence county planning efforts
- Acknowledge that bears are recovered.
- Get political support to help move local governments toward requiring bear resistant containers and providing landowners with information about securing bear attractants.
- NGO Input:
 - inadequate handling of attractants
 - Trying to convince hunters that bear spray IS effective and if a viable method of defending oneself against grizzlies. The bear managers might be a good group to do this since all of them carry it in the field.
 - Lack of necessary funding.

Reflecting on the information, education and outreach efforts you are most often involved with, please indicate how important each of the following factors are in limiting the effectiveness of your communication with the public.

	Not important	Somewhat important	Highly important	Rating Average	Response Count
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Other job duties or priorities.	0.0% (0)	53.3% (8)	46.7% (7)	2.47	15
Insufficient operating funds.	0.0% (0)	40.0% (6)	60.0% (9)	2.60	15
Not having the right printed materials such as brochures, cards, etc.	33.3% (5)	60.0% (9)	6.7% (1)	1.73	15
Not having good media contacts.	46.7% (7)	46.7% (7)	6.7% (1)	1.60	15
Insufficient credibility or public trust in the agency or organization.	40.0% (6)	40.0% (6)	20.0% (3)	1.80	15
Don't know what the right audience is.	64.3% (9)	28.6% (4)	7.1% (1)	1.43	14
Don't have the right message to reach key audiences.	40.0% (6)	46.7% (7)	13.3% (2)	1.73	15
Inconsistent messages.	33.3% (5)	46.7% (7)	20.0% (3)	1.87	15
Conflicting messages from other sources.	40.0% (6)	26.7% (4)	33.3% (5)	1.93	15
Don't have a good way to reach the right audience.	42.9% (6)	42.9% (6)	14.3% (2)	1.71	14
Don't have a clear focus for information, education and outreach efforts.	33.3% (5)	40.0% (6)	26.7% (4)	1.93	15
Lack of coordination among agencies and partners.	26.7% (4)	53.3% (8)	20.0% (3)	1.93	15
Can't measure effectiveness of efforts.	6.7% (1)	46.7% (7)	46.7% (7)	2.40	15
Don't make effective use of the internet or social media.	33.3% (5)	26.7% (4)	40.0% (6)	2.07	15

Are there other factors that affect your ability to communicate effectively with the public?

- There should be some consistency between ecosystems when giving out the I&E funds - This process will hopefully change that
- staff time
- Need more hands-on workshops for electric fencing.
- Not an agency priority and state and feds have conflict in how to address.
- Right On - how effective is the message; how effective is food storage compliance; ...
- having the time with other job responsibilities
- Lack of help. Grizzly bear conflict specialists are spread too thin and don't have the necessary trained help to communicate with the public as effectively as possible.
- NGO Input:

- Need to work with people who are experts in marketing messages and people in the social sciences to figure out effective ways of reaching the people we need to reach. Need people who have ties with various special interest groups (hunters, outfitters, beekeepers, bird watchers) to become liasons between us and the members of these groups.
- Need the agencies to provide the nonprofit organizations with current and consistent message for distribution. Nonprofits can reach our audiences very effectively; but we need the agencies to do a better job of communicating with us.

Considering all the factors listed above that affect your ability to communicate with the public, which 3 are the most important?

First

- funding
- who is the correct audience - really?
- Insufficient operating funds
- staff time
- Insufficient operating funds.
- Other time constraints.
- define the audience
- Can't measure effectiveness of efforts
- I'm answering not just for myself, but for the FWP staff that handle bear-related issues...1. Other job duties or priorities.
- Lack of time and conflict with other priorities
- Consistent message, partnership for message, signs, etc among agencies.
- Time, other duties.
- time
- Having additional trained MT FWP bear specialists and assistants.
- NGO Input:
 - Money
 - funding
 - LACK OF FUNDING!!!!
 - Lack of coordination among agencies and partners.

Second

- other duties
- success evaluation
- Limited time with other duties - why bear rangers and bear mgmt specialist are important
- targeting right audience
- Other job duties.
- Public is constantly changing.
- outreach materials beyond printed brochures
- Don't have a good way to reach the right audience
- Insufficient funds to focus on outreach on top of other bear-related duties
- Public mistrust
- Being able to reach the youngsters.

- funding
- Need adequate funding for additional positions, training, operations, materials and equipment.
- NGO Input:
 - Time
 - other job duties(not enough time due to full time job)
 - Lack of cooperation and coordination between NGO's and agencies..
 - Lack of clear focus

Third

- inconsistent messages
- new media
- credibility with public - larger problem than just bears
- effective media materials
- Clear focus.
- Many members of the public don't want to listen.
- insufficient time & funds
- Conflicting messages from other sources
- Not using the most current media effectively to reach some audiences.
- Partners not working effectively together
- measuring effectiveness
- Having a consistent message presented by agencies and partners. For example: the use of bear spray. Bear biologists tend to support the carrying of bear spray, game wardens tend to lean toward guns.
- NGO Input:
 - Lack of Educator Coordination
 - inconsistent and conflicting messages
 - Lack of funding!!!!!!!!!!!!
 - Insufficient operating funds

How could current efforts to address the following barriers to recovery and delisting of grizzly bears be improved in the ecosystem or area where you work?

Black bear hunters killing grizzly bears by mistake because they cannot tell the difference between species.

- we've already done a lot in this area
- Enhance bear ID testing (new photos again)
- Continue on-line test for black bear hunters; continued outreach thru hunter's education; reminders thru the media during hunting season, postings at key trailheads, license counters, materials available for outfitters to share with clients
- Make it mandatory that potential black bear hunters must pass an ANNUAL VIDEO (not just still pictures) of grizzly/black bear identification prior to administering hunter licenses
- mandatory ID test every three years plus a court system willing to penalize
- Require test for hunters in all western states like the MT test; only require it to be passed with one (two max) tries; & not issue licenses to those who have to repeatedly take it to pass.
- k-12 ed, hunter ed, interp signage at campgrounds, trailheads
- Current hunter edu. and ID testing are effective and should be maintained.
- mandatory bear ID; increased penalty
- More rigorous ID testing for black bear hunters

- Continued requirement of the bear ID test and continued printing of the ID diagrams in the hunting regulations. More face-to-face outreach on this, education with outfitters and awareness with hunter education students.
- End Spring Black Bear Season until griz delisting, If not Black bear hunters must choose an area in the NCDE, if they choose they must go through additional training / testing. Then the actual hunters are known in each area and if GB mortality from shooting would have names to start from.
- Stronger warnings on license, brochure, hunt in pairs.
- I think MFWP ID test does a good job of this.
- continue I&E efforts to get the word out
- Perhaps tighten up requirements for taking and passing the bear ID Test.
- Idea of taking a test good idea. Currently too easy to have someone else take the test or pass without knowing the difference. Should be taken every year prior to buying a black bear tag. Increase penalty for mistaken ID.
- NGO Input:
 - Bear ID tests must be taken in person; test retaken every 3 years; stiff fines for violations; eve stiffer for unreported kills
 - Tough one... In these instances, are hunters taking enough time to identify what they are shooting?
 - There needs to be a more rigorous test for people applying for black bear tags - especially for out-of-state hunters

Killing of grizzly bears as a way to express anti-government sentiment or opposition to the Endangered Species Act.

- not sure
- not a big issue
- Hard to change this view, but if we can show that we can take species off the list, like wolves, it will show that ESA can work. Bears in the NCDE/Yellowstone are recovered - we need to learn the lessons from Yellowstone ecosystem and get the NCDE delisted in a timely fashion.
- none
- Enforcement and prosecution are already taken seriously.
- not a problem
- I don't think this can be changed. Education in schools to counter the perpetuation of those values.
- Prosecute to fullest extent available make a prison sentence mandatory in federal pen. Also add high reward to solicit public to turn in violators.
- This and next ones are more poaching related. Some people just don't follow the rule of law. Greater TIP rewards?
- Higher fines and more deterrent.
- this is a tough one... not sure what can be done here
- Frivolous lawsuits by environmental groups to "protect" grizzly bear habitat and the wolf debacle have done much to affect public attitudes toward grizzly bears.
- Hard to get people with these beliefs to change their opinions. I think they are a minority and I would focus on where working with the public to reduce conflicts is most effective.
- NGO Input:
 - Educate these folks that they're delaying recovery, delisting, and a return of state management; stiff fines and jail-time.
 - How do you appeal to this person? Try to show and prove success stories of working within the ESA.
 - This is tough - if people are anti-government, I think the only way to reach these people is through peer pressure - through the groups that they support (NRA for example) and associate with.

Killing of grizzly bears by people who blame them for loss of access to public land or natural resource jobs.

- not sure
- not a big issue
- challenging to address - continue to encourage the public to get involved in land mgmt. decisions -- learn about proposed actions, comment on proposals, talk with mgrs.; continue agency work with diverse groups/organizations to request input, ideas on proposed mgmt. actions - collaborative planning
- See answer from above. Show public that we can get bears off the endangered species list. Also making sure we don't have more restrictive land use issues after delisting than while species was listed.
- none
- See above.
- what jobs DO gbears generate; \$ generated
- There are natural resource job that should be allowed - wood product jobs - logging put some time restriction time of year - winter and train successful bidder on how to avoid bear interaction. also reward for avoiding bear conflict
- see above
- not a problem from my perspective
- Bear pops in the NCDE are recovered. Now is not the time to initiate more access restrictions in adjoining areas. Tell the public the truth that the market for timber has bottomed out, regardless of efforts to protect grizzlies.
- Hard to know reasons for people killing grizzly bears. For this group, like the ant-government group, it is hard to get people to change their opinions about bears
- NGO Input:
- Educate these folks that they're delaying recovery, delisting, and a return to state management; stiff fines and jail-time.
- See above....
- Again, a tough group to get through to. Try to encourage people in this group to find an alternative way to profit from the bears such as outfitting or tour guiding.

Killing of grizzly bears to profit from their trophy value or to sell body parts like claws and gall bladders.

- i and e efforts on crackdowns of poaching rings
- not a big issue
- Not aware that this has been a huge issue in NCDE
- increase law enforcement resources
- See above.
- not a problem
- I don't think this is an issue in the NCDE
- Same as killing for anti gov sentiment. incentives for turning crime in.
- see above
- poaching can only be reduced by help from the public
- Enforcement is already doing all they can. Isn't really something you hear much about around here.
- At this point, I don't think this is a significant issue in the NCDE. Instead of education, enforce existing laws and fines.
- NGO Input:

- Publicly expose these people as anti-conservation and anti-sportsman who are abusing Montana's state animal and squandering natural resources.
- INCREASE PENALTIES!!!
- Articles in hunting and outdoor magazines about the fines associated with black market body part sales.

Killing of grizzly bears out of fear of potential attacks on people, livestock or property.

- not sure
- This is a tough one... Perhaps better compensation for confirmed losses? Perhaps banning free ranging chickens and hogs in occupied grizzly habitat? We need more I and E relative to chickens as a "gateway drug" for grizzly bears.
- Base-fund annual assistance for all bear managers
- More education of landowners - using cooperative projects with NGO's to show benefits of electric fencing; cleaning up property; one on one education with landowners.
- general ed programs, k-12 ed, hunter ed, interp signage at campgrounds, trailheads
- Increase and maintain funding for FWP bear/conflict specialists. They are the most effective tool in both education and mitigation of conflicts or potential conflicts.
- 'living with wildlife' type approach; increased funding for preventative measures
- Work with people to mitigate available attractants. Create properties that are not appealing to bears.
- More people on the ground; expanding partnerships to keep people on the ground working with communities and landowners
- If hunting then require bear spray like we have food storage orders on state and federal land.
- FWP/Tribes having bear managers is a huge plus for this
- better/more outreach on "living with bears" ????
- Keep pushing the pepper spray message and the research proving its effectiveness.
- Again, another difficult area to quantify because it is hard to know why people kill bears. Education could be focused on showing how bears and people can overlap and that attacks are very rare or can be prevented in many cases.
- NGO Input:
 - Better quality and quantity of education as to the true dangers of grizzlies and how/why to coexist with them exist
 - Outreach programs in these areas to focus on ways to co-exist, and the tools available to help, (bear resistant containers, electric fencing, bear spray)
 - Having bear specialists and outreach groups at community outreach events, hunting and fishing expos and agricultural events.

Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.

- one on one, working with people who express the concerns
- Same as above
- continued work thru hunter's ed courses; continued work thru media when conflicts occur to share appropriate messages on behavior/biology
- Base-fund annual assistance for all bear managers
- Same as above - delisting w/in NCDE
- target ed for livestock activities, meetings, events

- See above.
- increased availability of preventative measures & equipment
- More people on the ground; expanding partnerships to keep people on the ground working with communities and landowners
- Enhance the education of those not presently in area where GB are not but maybe. Model the Rocky Mt Front. Land owners have operation practices that result in minimal risk of conflict. Assist landowner in change to human behavior also behavioral modification to bears that are found in new areas.
- FWP/Tribes having bear managers is a huge plus for this
- This is probably a valid fear so the best improvement might be to emphasize the effort to delist grizzlies and manage the population more closely.
- definitely need more outreach tailored to the Ag communities
- The Tim Manleys and Jamie Jonkels in this world are invaluable. There is nothing like one-on-one contact with the public. Make sure they have all the tools (eg. culvert traps, electric fencing) and support possible.
- Having good population estimates is very helpful. Agency coordination on messages that are presented are consistent.
- NGO Input:
 - Same response as the previous question plus consistent I & E outreach on the economic, ecological, and quality of life values of bears and the intact ecosystems they represent.
 - See above
 - working with ag groups to help get them the information they need to prevent conflicts. Writing articles for ag magazines, outdoor magazines, etc. and asking these groups to post information on their web sites.

Conflicts between big game hunters and grizzly bears that result in defense of life and property kills.

- continue efforts with hunters to educate on carcass safety when leaving an animal in the woods
- This has not been dealt with much in the NCDE - we could do a lot more here?
- continued education on issue through the hunter's ed. program; add'l media work during hunting season; info at license counters
- More education in hunter education courses - requirements of an educational pamphlet when buying a license?
- k-12 ed, hunter ed, interp signage at campgrounds, trailheads
- Incentivize use of and increase outreach about the effectiveness of pepper spray--including subsidizing purchase and replacement. Require possession for access to some high-conflict areas.
- pepper spray training & exposure; sport shows
- Bear spray and incorporate bear ed. into hunter regs and education
- Continued promotion and improvement of "Hunting Safely in Grizzly Bear Country" brochure. The brochure probably needs to be revised, graphics updated and consistently distributed amongst ecosystems. Maybe the updated version could also be modified into some tips to be distributed using other communication mediums.
- Require Bear spray in all areas (fed and State lands) where food storage orders apply. Class before you hunt those areas on how to use spray
- Multimedia approach, warnings, reminders of past incidents. Have groups like RMEF give out lifting winches rather than rifles at banquets, perhaps build more game poles on the forest
- More info on the effectiveness of bear spray, perhaps subsidize the cost of bearspray for hunters. Require it in some areas.
- keep up the current outreach efforts

- Keep pushing the bear spray. Keep pushing the message to leave carcasses left overnight in a visible place, away from the gutpile, etc.
- Educate hunters about bear behavior, how to hunt safely in bear country, emphasis effectiveness of bear spray. I think a video that interviews hunters that have used bear spray effectively.
- NGO Input:
 - Impress upon hunters their responsibilities as Sportsmen to behave ethically, hunt safely, carry bear spray, and not needlessly take the life of our state animal; stress the damage done to the image of hunters & hunting with the 96% of Americans, and 81% of Montanans who no longer hunt.
 - Improve education efforts regarding bear spray versus bullets. Bear spray training at hunter ed courses?
 - Need to work directly with hunting groups to encourage them to carry bear spray and to use it. Also need to do a better job reaching hunters as they purchase their tags - hunter ed classes, more info in hunting regs, etc. also need to publish info in hunting magazines that people purchase nationwide.
 - Require hunters to carry bear spray in grizzly bear habitat.

Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.

- We do a lot on this
- This is the most critical issue and we hammer the media with this message but to date still remain somewhat ineffective.
- continue to encourage homeowners associations, neighborhoods to set up their own bear aware program - police themselves, offer support thru materials, visits by bear conflict specialists, ability to apply for special funding through the state? to support purchase of bear resistant containers, electric fencing? done thru the FWP Foundation? IGBC?
- Base-fund annual assistance for all bear managers
- More one on one contacts with landowners - more bear mgmt specialists for state and also multifunded bear rangers to give electric fencing workshops; more displays on this topic at community events from the bear mgmt specialists.
- k-12 ed, hunter ed, interp signage at campgrounds, trailheads
- Increase funding for bear/conflict specialists and mitigation materials.
- sport show testimonials & demonstrations
- Watershed coordinators to build local community organizations that work with neighbors to mitigate attractants
- Grizzly bear activity in the NCDE has escalated local community interest in outreach programs and solutions to bear-human conflicts. This demand is time-consuming for FWP R2 Wildlife Management Specialists and difficult to balance with the needs of research trapping, managing wildlife and day-to-day activities. Funding shortfalls limits R2's hiring of additional assistance for wildlife management specialists, so we've worked closed with NGOs to get the work done. We should continue to explore partnerships or other long-term arrangements to get this type of work done, as the bear population grows and the demand for this work continues.
- Trap and remove bear - fine individuals for attractant including chickens, ducks, sheep and goats that are free roaming. No strike against the bear in those cases but severe conditioning of bear as released. Assist public to do things right and educate those on problems and penalties they cause and could incur.
- Continue the positive work of FWP/Tribal bear managers; provide information to CofCommerces, Welcoming Bureaus, Real Estate Agencies
- More funding for bear-resistant products.

- again, keep hammering home the message that a "fed bear is a dead bear"
- Keep pushing the existing messages. Lots of great ideas on using electric fencing. Let's get all these ideas together and out to the public. Offer more electric fence workshops to the public.
- Continue efforts to educate people about living in bear country, identifying and securing attractants. Need to show people how to secure or protect attractants.
- NGO Input:
 - FWP needs to continue and expand its Living in Bear Country efforts and work with homeowners to address problems neighborhood-wide; Second and third offenses, however, need to bring stiff and increasing fines.
 - Again, education and outreach needs to be improved. Expanded and mandated use of bear resistant containers. More info and education on deterrents available and how to co-exist. Improve enforcement of ordinances in communities where they exist. Add ordinances in communities where they are needed. Expand the use of bear resistant containers. Increase penalties in areas where ordinances already exist. There has to be public "buy in"
 - work with realtors to get info to people new to the NCDE, work with audobon and other recreational groups to get information out.
 - Get tougher - cite people who do not manage their attractants appropriately.

Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.

- not sure
- Grazing allotments on public and corporate timberlands lands will always be an issue. Perhaps we could work with Plum Creek and Stoltze more???
- ensure there is key handout and/or video/dvd that is available to new landowners-available thru realtors, chambers, extension service
- Base-fund annual assistance for all bear managers
- Electric fencing and see above.
- target livestock activities, meetings, events
- See above.
- increased availability of preventative measures/equipment
- See above.
- Provide relief for livestock (producers) and work to prevent future conflict. Trap Bear and Place in area where livestock not present Livestock would be a marked offense but all GBs male and female get at least 3 strikes dependent on situation. May have to keep bear in confinement and condition for short time before release.
- Continue positive work of FWP/Tribal bear managers; get USDA agriculture service involved; Maybe partner fencing with Electric companies
- Higher fines. If fines for killing a bear are only the cost of a couple cows the rancher will consider it a worthwhile risk to kill a bear.
- we already do a good job on this one
- Chickens and fruit trees are huge issues with grizzly bears in western Montana. Target chicken owners and those with fruit trees to put up electric fencing.
- Continue working with livestock owners on the effectiveness of electric fencing. Increase the opportunities to help livestock owners complete effective fencing and husbandry practices.
- NGO Input:

- Same as the previous response
- See above
- Need to focus on projects like the Blackfoot Challenge is doing mapping attractants on ranches and showing growers and hobby farmers where collared bears are traveling on their property. Make sure they have access to info on securing attractants and work with groups who might be able to help fund projects to secure attractants on ranches.
- More "on-the-ground" outreach like the Blackfoot Challenge range rider program.

Bear-human conflicts and defense of life and property kills that result from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.

- Continue and increase current efforts
- This has been quite positive - Bartelbaughs and Park Service lead..
- Consistent messages across all agencies, organizations; is there one key brochure to use?
- Base-fund annual assistance for all bear managers
- I would suspect this is more of a problem in GNP - more education of pvt landowners on feeding wildlife.
- k-12 ed, hunter ed, interp signage at campgrounds, trailheads
- n/a
- let's weed out a few!
- Human safety in all most cases except total stupidity should be priority. If stupidity prevails it would be an legal punishable offense.
- This could only get worse with increasing population of both bears and people, continue messages in all media
- this one is primarily a problem in national park situations - again, keep the information flowing to the public
- Keep pushing the existing messages.
- Continue programs that promote safe behavior around bears and continuing to stress not to approach or feed bears.
- NGO Input:
 - All entities need to step up efforts to educate both residents and visitors that the NCDE is not "Disneyland with bears" but a true wild ecosystem with big wild critters who don't tolerate foolish behavior; those feeding bears need to be fined early and often.
 - Improve education efforts. Again, increase penalties for feeding, approaching too closely, etc.
 - Maybe using tv to reach mainstream people and publishing information about how these activities and irresponsible behavior has gotten people and wildlife into trouble. Use spokespeople like Jack Hanna in short info spots that play on tv. Work with the USFS and Glacier to make sure that people are receiving the appropriate information. Make sure that sources of information do not conflict and cause confusion.
 - Increased outreach efforts; and cite violators.

Bear-human conflicts and defense of life and property kills or management removals that result from human use of infrastructure such as roads, campgrounds, mines, etc.

- not sure
- I think that this is now a minor issue.
- continued work with agencies/organizations/companies for mitigation actions

- Not a huge problem - campgrounds fairly controlled with lots of opportunity for I & E. Bear rangers and campground hosts can be extremely effective.
- seasonal closures where appropriate
- n/a
- Enforce appropriate food storage. Education/ lower speed limits on roads in linkage areas
- Mining and other commercial activities that cause conflict would be a mitigatable event at the cost of business. like waterfowl death from oil well or mining toxic discharge ponds- a condition of permit for commercial activity. Camp grounds and public recreation every developed site or known site with consistent public use - trail heads warning signs and a major effort to trigger user to actually be cautious. and know what to do increase of encounter including must have pepper spray hard sided campers food storage orders.
- FWP Bear managers and FS specialists to monitor and enforce current regulations
- more outreach?
- The time has come to electrify some key campgrounds, firecamps, etc. I have no doubt this can be done safely and esthetically.
- In the past much of the focus has been on these type of activities on federal and state lands because of the ESA. Few removals or conflicts are a result of these infrastuctures.
- NGO Input:
 - Bear managers, educators, and those building infrastructure need to be in the same room planning proactively before facilities/roads leave the drawing boards
 - See above
 - Publish articles in outdoor magazines and nature-type periodicals to help educate people about the effects that these landscape features have on grizzlies. Use these sources to rally support from people and legislators.

Lack of public awareness of the status of grizzly bears and the need for recovery under the Endangered Species Act.

- emphasize numbers of bears and recovery goals--they are recovered
- Not a big issue.
- When communicating on a mgmt./conflict issue, weave in conservation message; available to speak with local civic groups, chamber of commerce, homeowners assoc.
- Not sure this is a problemnot a big issue
- Not an issue, NCDE grizzlies are biologically recovered. That message should be carried by the agencies and NGOs in support of USFWS delisting process.
- deemphasize ESA; state management authority
- WE should give the details on what it takes to get GB off the list and what happens after delisting. Do not provide any time line since there is then expectation. Also show cost to do but the advantage of doing it the right way the first time and ask the public to assist. Get the public involved directly. Support for funding to get through the process - public support to enhance opportunity for funding.
- I don't think this would change people's minds one way or the other.
- more outreach?
- If they haven't got this message they are living on the moon.
- I think most people have no idea of the status of the grizzly bear what is needed for recovery. A consistent message is very important.
- NGO Input:
 - More consistent, high quality education, targeted to key audiences

- Increase education efforts
- Information about the bear's status should be available in places that get a lot of visitor traffic.

Inadequate political support for actions necessary to recover of grizzly bears.

- not sure
- Lots of political support for delisting but not necessarily long term conservation and presence on the landscape.
- Continued, regular communications with local (city/county) leadership to offer mgmt. updates and state leadership (local representatives); invite on 'field trips' to discuss habitat and mgmt. issues
- NCDE has had political support & \$.
- ed for voters and politicians
- See above. Political support should be built for delisting in the NCDE and GYE.
- use wolf model of state management
- Reinforce importance of grizzly bear biologically, economically, and philosophically
- See above - without public support why would there be political support.
- It would be nice to have the counties help on land use planning. Federal funds probably won't increase so this could be a big issue. However, much of the work has been accomplished to recover the bear but some actions need to continue in perpetuity.
- I think grizzly bears in the NCDE are recovered. Now we just need to maintain numbers and habitat and delist them.
- Unfortunately, grizzly bears get very political very quickly. There are so many different levels of government with differing opinions makes it difficult to get broad political support.
- NGO Input:
 - Educate legislators on the social, economic, political, and ecological benefits of grizzlies and working cooperatively toward recovery for the state of Montana.
 - Keep in mind the political, and public, fiasco that was(is) wolf delisting. Federal, state agencies and NGOs need to improve communication and COOPERATION!!
 - Campaigns around election time to let people know that the legislators we elect MUST support grizzly recovery efforts if the bears are ever to come off the Endangered Species List. Encourage groups with strong support and lobbies to encourage the people they support in office to vote for actions that will help move the bears towards de-listing.

Inadequate political support for funding necessary to recover of grizzly bears.

- not sure
- This is huge - we need to educate and hammer DC area congressman and women about the need to pay for this work so hunters do not have to foot the entire bill. This represents the greatest I and E failure to date at a national level. We need to pursue a trust for the states allocated by congress for bears and wolves.
- Continued, regular communications with local (city/county) leadership to offer mgmt. updates and state leadership (local representatives); invite on 'field trips' to discuss habitat and mgmt. issues
- see above
- ed for voters and politicians
- NCDE grizzlies are biologically recovered. Funding should be directed toward providing resources and personnel required to continue to help people live with bears, mitigate conflicts, and acquire and manage habitat.
- who is the IGBC; what do they do; accomplish; public has no idea

- Demonstrate to decision-makers the high standard of science necessary for delisting and conservation strategy that will withstand court appeal.
- Put the blame for no funding square where it belongs and let public know that their help would change.
- Maybe not funding for recovery but funding to monitor after recovery. Very big question
- I think there should be a tax on every new home outside of city limits that goes towards resolving wildlife conflicts of all types.
- Funding for grizzly bear management is inadequate. The operation budget must cover mileage, drugs, radio collars, telemetry flights, field equipment, prevention supplies, educational materials, and personnel needs. Also, inadequate funding for monitoring the grizzly bear population.
- NGO Input:
 - Same as previous response
 - See above.
 - Need to interface more with our state legislators and let them know that without their support in DC, we will not be able to continue work that leads to grizzly recovery. Let our legislators know what the funding priorities are.

Inadequate consideration of the needs of grizzly bears in land use or development planning.

- hard for FWP to influence
- We still fail here as well at the County level. Perhaps targeting MACO and their planning directors with more wildlife related guidance? We usually bump up against property rights issues.
- Continued involvement in local (county planning) state, federal land use planning projects -- written and verbal feedback, comments on proposed projects; participation in public meetings, one-on-one conversations with project leaders.
- Make mandatory the inclusion of grizzly bear awareness brochures in real estate packets.
- Much work ongoing on highway planning/overpasses. Connectivity needs to be continued to be highlighted.
- ed for planning boards, land trusts, etc
- Develop and maintain standards to help Counties and agencies consider grizzlies and grizzly habitat in planning decisions.
- we're there
- Plain language summary of effects of development on grizzly bear given to planners and decision makers
- Land development planning can possibly be directed by providing incentives for developers to avoid areas, conservation easements. Conservation corridors paid for with private and public funds
- Involvement in county land use planning to reduce conflicts between all wildlife and people. I do think if the Forest Service is an adjacent land manager to a development, the FS should comment. FWP should comment on effects to wildlife habitat.
- become more proactive with planning boards, etc.
- I don't see a need to do more on federal land. Biggest problems are on private land. Need more teeth in subdivision review processes and enforcement.
- Forest plans tend to take grizzly bears in to account. The main issue is subdivision and human developments. Land use planning needs to address grizzly bears. This is usually done on a local level, but more support could be given from the IGBC.
- NGO Input:
 - Educate decision-makers on the unintended, and negative consequences of poorly planned land use and development, and its cost in dollars, public safety, and sound wildlife management.

- Working more with land planning authorities and developing a relationship with them whereby biologists or other appropriate people can comment on land use permits DURING the permitting process.
- Continued work with county planners.

Please provide any other comments you would like regarding how the Interagency Grizzly Bear Committee and its partners can advance grizzly bear recovery and delisting through information, education or outreach.

- Personal contact is key
- Federal process to reach delisting so the average person can understand exactly where the benchmarks are and how long it will take us to get there. We are recovered functionally in the NCDE but not process wise... society will not tolerate for too long... Simple concise explanation and timeline would be helpful so we do not lose the support for the grizzly bear that has been built for so long (we lost it for wolves).
- Have the IGBC I&E folks from different ecosystems talk to each other to see if there are opportunities to share resources (bear rangers) in adjoining ecosystems. Feels like we have all the pamphlets/brochures/etc. that we can use - but there is no substitute for face to face time with a real person. Especially on pvt lands w/ pvt landowners where we are getting the largest proportion of our mortalities w/in NCDE.
- the committee and its partners could try targeting specific (one) audiences each year and distribute high-quality educational materials to educators
- Be very clear that grizzlies in the GYE and NCDE are biologically recovered. I struggled with the tone of even this survey--that barriers exist to that end. We're there. We need to communicate that message and pivot toward efforts to manage attractants, recreation, and development so that we can maintain recovered status. We need to assure that we find ways to maintain or increase funding for bear/conflict specialists and programs even post-delisting; as bears continue to expand and thrive the need will increase, not diminish.
- The issue with bears is on private land, not public. Closing more roads does little more than help agencies feel good. Need to focus on bears being attracted to private residences. Need to emphasize bear numbers are recovered - now we want to maintain them.
- who is the IGBC - public has no idea (nor do many within fed and state agencies); who are partners?
- Need to work as a unit NCDE individual biologist are working hard but administrators have to have to come to some consensus on priority put effort in priority and get public to buy into those priorities
- I think the Forests also need to have a more permanent field presence for bear mgmt similar to FWP bear managers. Not the exact role, but supportive.
- Due to the management removals being the main reason for grizzly bear mortality, efforts need to be focused on increasing funding and positions to deal with human/bear conflicts. These positions deal directly with landowners and recreationists that live and play in grizzly bear country. Financial and political support for these positions is critical. Right now, personnel and budgets are limited. These biologists deal with both the humans and the bears on a daily basis and are largely responsible for increasing public acceptance of grizzly bears.
- NGO Input:
 - I believe there needs to be public "buy in" prior to delisting. There needs to be support and confidence in attractant storage methods, and the use of deterrents.
 - There needs to be more cooperation between agencies and NGO's and agencies need to provide funding to NGO's who might be more effective in reaching certain groups of people. Need to have a group of educational materials that are not affiliated with only one entity and can be used by all people working in human-bear conflict prevention. Need to recognize the efforts of ALL working in this arena

- and help make sure that efforts are not being duplicated and groups aren't fighting for funding to do similar work. Niches should be established and consistent funding provided to those filling the niches.
- Use the nonprofit partners more effectively to help spread the message. IGBC experts write articles and info to be distributed through partner networks

Survey of Information, Education and Outreach Barriers to Grizzly Bear Recovery & Delisting in the Yellowstone Ecosystem

Twenty-seven out of 40 individuals employed by six state and federal agencies invited to respond to the survey did so. Responses by agency include: U.S. Forest Service (8), MT Fish, Wildlife and Parks (6), Wyoming Game and Fish (5), National Park Service (5), Idaho Fish and Game (2), and USGS (1).

Ten invitations to participate in the survey were sent to 7 NGO's within the greater Yellowstone area that are actively involved in grizzly bear issues. Three individuals from the National Outdoor Leadership School, National Wildlife Federation, and Endangered Species Coalition responded. Two additional non-government responses were submitted by a professor from the University of Wyoming and a graduate student from the University of Idaho.

Tabular results provided below include only agency responses. Given the small number and low response rate among non-government entities, no separate tabulation is provided for these responses. (Including the 5 non-government responses in the tables resulted in only minor changes in absolute values and did not result in any differences in the relative rankings in the tables.) The comments and responses to open-ended questions by non-government respondents are included and identified as NGO input.

Average ranking of the importance of potential barriers to recovery and delisting and the effectiveness of current information, education and outreach efforts. (Importance ranked from 1 = not important to 4 = critically important. Effectiveness ranked from 1 = not addressed to 4 = highly effective. Difference is average importance minus average effectiveness; the greater the difference, the larger the gap between importance and effectiveness.)

Potential Barrier to Recovery and Delisting	Importance	Effectiveness	Difference
Black bear hunters killing grizzly bears by mistake because they cannot tell the difference between species.	2.24	3.20	-0.96
Killing of grizzly bears as a way to express anti-government sentiment or opposition to the Endangered Species Act.	1.64	1.76	-0.12
Killing of grizzly bears by people who blame them for loss of access to public land or natural resource jobs.	1.60	1.88	-0.28
Killing of grizzly bears to profit from their trophy value or to sell body parts like claws and gall bladders.	1.40	2.00	-0.6

Killing of grizzly bears out of fear of potential attacks on people, livestock or property.	2.07	2.56	-0.49
Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.	3.00	2.32	-0.68
Opposition to delisting of grizzly bears in the Yellowstone ecosystem based on the belief there are not enough bears or bear habitat.	3.12	2.24	0.88
Opposition to delisting of grizzly bears in the Yellowstone ecosystem based on lack of trust in states to manage a recovered population.	3.16	2.28	0.88
Conflicts between big game hunters and grizzly bears that result in defense of life and property kills.	3.24	2.84	0.4
Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.	3.48	3.08	0.4
Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.	2.88	2.80	0.08
Bear-human conflicts and defense of life and property kills that result from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.	2.88	2.80	0.08
Bear-human conflicts and defense of life and property kills or management removals that result from human use of infrastructure such as roads, campgrounds, mines, etc.	2.24	2.76	-0.52
Lack of public awareness of the status of grizzly bears and the need for recovery under the Endangered Species Act.	2.64	2.40	0.24
Inadequate political support for actions necessary to recover of grizzly bears.	2.16	2.17	-0.01
Inadequate political support for funding necessary to recover of grizzly bears.	2.56	2.20	0.36
Inadequate consideration of the needs of grizzly bears in land use or development planning.	2.56	2.64	-0.08

Please identify any other important barriers to recovery and delisting of grizzly bears in the ecosystem or area where you work that are a function of lack of information; mis-information; or human attitudes, beliefs, or behaviors that could be addressed through information, education and outreach.

- very strong and well-funded anti-delisting advocacy among NGOs including litigation.
- We currently respond to the NGO's press, we need a strategic campaign where we are one step ahead of the NGO's.
- UFWs continually communicates the problems bears face and fails to acknowledge success and successful state programs.
- inform the public that the opposing view is propaganda
- Seems like now the USFWS needs to show data about grizzlies' use of other food sources in the face of white bark pine decline.
- The Wyoming public is showing an increasing amount of frustration and feels that the government believes that a bear's life is more important than a human life/livelihood.
- misleading propaganda by special interest groups - being able to respond adequately
- My perception that some stakeholders that were supportive of the original recovery plan goals changed the bar when the goals were reached and the bear was delisted in 2007. Wrong answer for probably any charismatic ESA species.
- We are biologically recovered in the GYE. NGO lawsuits prevent delisting of a recovered population. I don't think this can be addressed by education.
- Bears need to be allowed to expand. Need agreement on expansion areas.
- Need to ensure that agencies require attractant management on public lands in areas that recovered population expands into.
- Environmental groups - is there an economic benefit to keeping the bear listed?
- Improve public education in areas where grizzlies are expanding range but there are no food storage regulations or bear conservation ethics.
- We have not publicized the number of conflicts each year
- Lack of commitment and support by IDFG to manage people in regards to preventing bear/human conflicts. Lack of local ordinance to create bear smart communities. Obsolete hunting & grazing practices.
- Unsure
- NGO Input:
 - Increase fear levels (vulnerability) and educate the efficacy of making noise and carrying bear spray
 - Better information and data on the efficacy of bear spray to hunters and (to a much lesser extent) to hikers. More emphasis on removal of livestock on FS lands in areas of conflicts, giving the FS new tools to not renew allotments in such circumstances in a way that doesn't destroy livelihoods (e.g. provision of grazing in alternative areas).
 - The extent to which the "domestication" of bears occurred under Roosevelt and forward, has affected a realistic impression of how strong bears are. More info about how much weight they can lift; how much leverage they have in their arms, etc., might help people to understand bear capacity
 - It seems like some "environmental groups" shoot conservation in the foot when they use legal action to disrupt recovery programs.

Of all the barriers listed above, which 3 do you believe are the highest priority for the ecosystem or area where you work?

First

- reducing hunter-related grizzly bear mortality
- how to get support of NGO advocacy groups
- Protecting habitat through land acquisitions and conservation easements
- Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.
- Communicate success
- funding
- Education about tolerance of bears and how to behave in bear country
- Public awareness of the status of grizzly bears
- Bear-human conflicts and defense of life and property kills that result from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.
- hunter - bear conflicts
- Opposition to delisting of grizzly bears in the Yellowstone ecosystem based on the belief there are not enough bears or bear habitat.
- Anti-ESA sentiment
- NGO obstruction to delisting
- Need public acceptance of expansion & grizzly habitat needs as core habitat is filled
- Building public support for delisting through engaging stakeholders
- food storage issues
- Bear hunter conflicts
- Demonstrate the need for delisting to the public
- Hunters
- Lack of commitment and support by IDFG to manage people in regards to preventing bear/human conflicts.
- communicating science on the status of bear populations & habitat
- Funding
- NGO Input:
 - Hunter vs. grizzly encounters
 - killing of bears by elk hunters on park periphery
 - political independence and appreciation for political conflicts
 - Education that helps people understand how bears and people can cohabitate. This needs to be based on success stories.

Second

- improving human food management throughout the ecosystem
- reduce hunter related grizzly mortality
- Addressing food & garbage storage issues
- Bear-human conflicts and defense of life and property kills that result from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.
- communicate the negative impacts on ESA and other programs by failing to move forward.
- selling agency ability to manage
- Proof that bears will shift to other food sources with loss of WBP

- Issues surrounding livestock related conflicts
- Opposition to delisting of grizzly bears in the Yellowstone ecosystem based on the belief there are not enough bears or bear habitat.
- recreational use and bear conflicts - how to behave in bear country
- Opposition to delisting of grizzly bears in the Yellowstone ecosystem based on lack of trust in states to manage a recovered population.
- Public distrust of management agencies
- Hunter caused mortalities, better attractant management
- Knowledge of and commitment to reduce attractants
- meeting (not exceeding) mortality parameters
- killings based on fear of potential injury to people or livestock
- Political and funding barriers for an ongoing program to conserve bears
- Importance of food storage...
- Garbage
- Lack of local ordinance to create bear smart communities.
- developing trust in states & FS to manage populations and habitat
- On the ground communication
- NGO Input:
 - Effectiveness of bear spray
 - better management of development on the GYA periphery
 - a commitment to larger and larger ecosystem management
 - Attitudes about long term success and survival of the ESA in a crashing economy

Third

- increasing bear spray use by all
- improve methods for demographic monitoring, which could relax mortality standards, provide more agency flexibility (particularly the states), and thus more support for grizzly bears in general
- Addressing hunter-caused grizzly mortalities
- Bear-human conflicts and defense of life and property kills that result from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.
- Communicate the need to make progress in other areas such as the Bitterroot
- informing public that opposition view is not correct
- Proving that grizzlies have a positive economic impact because of tourism and wildlife viewing opportunities
- Fear of attacks and conflicts/hunter-bear conflicts
- Opposition to delisting of grizzly bears in the Yellowstone ecosystem based on lack of trust in states to manage a recovered population.
- misleading propaganda by special interest groups - being able to respond adequately
- Belief that bear numbers are still inadequate
- Management removals as a result of a very robust population. Wyoming would like to manage at a static level, so mortalities at the current level are not really a biological problem.
- Reduction of defense of property/defense of life (during hunting) mortalities
- Continuing outreach efforts
- hunter conflicts resulting in bear deaths

- Environmental Groups getting some benefit from listed species
- Importance of human awareness and proper behavior in g. bear habitat.
- Opposition to delisting by NGOs
- Obsolete hunting & grazing practices.
- how to live with bears in areas of recent expansion
- Increase in bear resistant infrastructure and bear spray education
- NGO Input:
 - Achieving delisting of the recovery population (if this isn't done, the state's will lose interest in cooperating in grizzly recovery and management)
 - Sustainability, which includes a long view, inclusion of the whole ecosystem, and both economic and ecological efficiency.

Reflecting on the information, education and outreach efforts you are most often involved with, please indicate how important each of the following factors are in limiting the effectiveness of your communication with the public.

	Not important	Somewhat important	Highly important	Rating Average	Response Count
Other job duties or priorities.	8.3% (2)	50.0% (12)	41.7% (10)	2.33	24
Insufficient operating funds.	16.7% (4)	58.3% (14)	25.0% (6)	2.08	24
Not having the right printed materials such as brochures, cards, etc.	50.0% (12)	50.0% (12)	0.0% (0)	1.50	24
Not having good media contacts.	75.0% (18)	25.0% (6)	0.0% (0)	1.25	24
Insufficient credibility or public trust in the agency or organization.	29.2% (7)	58.3% (14)	12.5% (3)	1.83	24
Don't know what the right audience is.	70.8% (17)	29.2% (7)	0.0% (0)	1.29	24
Don't have the right message to reach key audiences.	66.7% (16)	25.0% (6)	8.3% (2)	1.42	24
Inconsistent messages.	43.5% (10)	39.1% (9)	17.4% (4)	1.74	23
Conflicting messages from other sources.	16.7% (4)	54.2% (13)	29.2% (7)	2.13	24
Don't have a good way to reach the right audience.	25.0% (6)	54.2% (13)	20.8% (5)	1.96	24

Don't have a clear focus for information, education and outreach efforts.	58.3% (14)	33.3% (8)	8.3% (2)	1.50	24
Lack of coordination among agencies and partners.	33.3% (8)	58.3% (14)	8.3% (2)	1.75	24
Can't measure effectiveness of efforts.	12.5% (3)	50.0% (12)	37.5% (9)	2.25	24
Don't make effective use of the internet or social media.	16.7% (4)	54.2% (13)	29.2% (7)	2.13	24

Are there other factors that affect your ability to communicate effectively with the public?

- need more social science research on how to transfer messages most effectively
- NPS is reactive rather than proactive with media messages.
- no
- I wonder if sometimes our local/regional audience gets weary of bear conflict stories. The national audience seems to relish bear stories, however.
- Too frustrated. People feel that even though they have made concessions for grizzly bears, they will never be delisted and their efforts are for nothing/go unnoticed.
- audiences that are not interested
- funding
- not really
- Overall I think the public messages are more effective than agency expertise on the litigation side.
- We have a very effective outreach program on the BDNF & reach thousands of people every year. 2012 will likely be the last year for this program due to funding.
- Most of the public doesn't participate in our outreach efforts
- Willingness to have a strong message that may be unpopular.
- No
- Lack of budgetary & manpower resources to do the job as it needs to be done.
- Funding for on the ground personal
- NGO Input:
 - Media interest in soliciting extreme positions rather than sensible positions and treating extreme positions as credible. Also, like wolves, people tend to think grizzly bears are more dangerous than they are based on real data and comparisons with other more common risks regularly confronted.
 - If I had funding to help cover my job responsibilities, I could spend more time coordinating with agencies and actually doing bear outreach.

Considering all the factors listed above that affect your ability to communicate with the public, which 3 are the most important?

First

- getting the right message
- Lack of funding.
- inconsistent messages
- Inconsistent messages
- funding
- Insufficient time & staff given the other priorities faced by a national park communication office
- Do not have a good way to reach the right audience.
- Can't measure effectiveness of efforts.
- funding
- Other job duties or priorities.
- Conflicting recovery messages from NGO's
- Using correct media
- Funding
- Lack of clear focus and priority messages
- maintaining a clear focus for information, ed, outreach efforts
- Other job duties and priorities
- Don't have a good way to reach target audiences
- Lack of staffing
- other job duties
- Funding
- NGO Input:
 - Ability to measure effectiveness of efforts
 - difficult to influence media to provide appropriate emphasis on non-extreme positions (this is common for many issues, not just grizzly bears)
 - Funding for my time to do this instead of my primary job description

Second

- funding necessary to deliver this message
- Not making use of social media.
- Lack of coordination among agencies and partners.
- conflicting messages from other sources
- public trust
- insufficient funding for materials & again staff time
- Can't measure effectiveness
- Don't make effective use of the internet or social media.
- time
- Other job duties or priorities.
- Understanding what works and motivates people to change.
- Credibility of government
- Meaningful engagement with the general public in a format they participate in
- inconsistent messages
- Other job duties

- Lack of funding
- insufficient funds
- Other job duties
- NGO Input:
 - Inconsistent messages
 - inadequate operating funds...problems in raising money for messaging
 - networking with other bear educators

Third

- provide consistent effort and message coordinated among all agencies
- Not measuring success/failure.
- Can't measure effectiveness of efforts.
- credibility
- agency coordination
- perhaps the right, eye-catching materials that can capture visitors and locals attention?
- Do not use social media (or national media like the National Ad campaign)
- Conflicting messages from other sources.
- coordination among agencies and partners
- Conflicting messages from other sources
- Having effective tools/advice for people that are involved in conflicts
- Conflicting messages from government and NGOs
- Inconsistent funding and emphasis on conservation education
- having good media contacts and the right message
- Can't measure effectiveness
- Lack of commitment by agency
- lack of clear focus
- Conflicting messages
- NGO Input:
 - Lack of coordination among agencies
 - History of misinformation about levels of injury/death risks posed by grizzly bears.
 - materials to give to the public

How could current efforts to address the following barriers to recovery and delisting of grizzly bears be improved in the ecosystem or area where you work?

Black bear hunters killing grizzly bears by mistake because they cannot tell the difference between species.

- required education, perhaps more severe consequences
- have each state require a web based training for hunt permits to be able to distinguish between the two species
- Change legal shooting hours to sunrise and sunset instead of one-half hour before sunrise and sunset. Better inform hunters on areas occupied by grizzly bears. Continue requirements for completion of on-line identification tests.
- Keep improving the education material and make the tests harder. A failing grade should mean you cannot hunt. Stiffer fines as well.
- This is a minor factor but all states should have mandatory bear ID tests like Montana

- not a large issue in the YES. efforts are at near maximum efficiency
- Provide identification materials with hunting licenses & offer classes
- continued focus on identification in spring hunts
- mandatory id test every time apply for tag, not just one time. Higher fines.
- Use Montana's certification process for bear tags
- Better hunter ID under a variety of environmental conditions
- Mandatory testing in all 3 states
- It is difficult to gauge overall effectiveness of Montana's black/grizzly bear identification program. It remains unknown how many mistaken identity issues are avoided through education. We still have issues annually where grizzly bears are mistakenly shot during black bear season. I'm not sure what level or type of additional education would prevent this. I do feel the US Fish & Wildlife Service needs to take a stronger position on prosecution of people who mistakenly shoot grizzly bears. Currently the USFWS is reluctant to prosecute anyone that claims they did not know it was a grizzly bear. This has something to do with how the federal statute reads. The State's position is that these types of offenders should be prosecuted. Montana has successfully prosecuted these type of violations in the past.
- Mandatory training
- Make sure paper-based information is always readily accessible to hunters, such as at state and federal offices, retailers.
- more bear ID quizzes or mandatory bear ID exams for hunters
- Make passing of online bear ID test mandatory.
- current efforts are good
- Increase requirements of identification between species
- NGO Input:
 - WY could have a bear ID course like MT's and ID's and better outreach to hunters in all 3 states, but especially WY.
 - I think there should be a test for bear recognition, and throw in some malamutes along with the bears.
 - Required online training with video, a test for bear ID, and a certificate

Killing of grizzly bears as a way to express anti-government sentiment or opposition to the Endangered Species Act.

- not sure, this is a tough one, but not a huge problem
- Not a big problem, but start educating children in areas with this attitude so problem is reduced in the future.
- I imagine this is a very small percentage of people. I don't have a good idea how big of a problem this is. I would rather spend time addressing issues that apply to a broader group of people.
- Show folks how it actually hurts management flexibility
- not the issue it was 25+ years ago
- not an issue
- Higher fines/jail time.
- not sure this is an issue
- Increase public education
- I don't think much is occurring in Wyoming
- Likely can't be addressed by government or pro-grizzly NGOs
- This sentiment or activity is not currently an issue in R3 of Montana FWP
- More press on ESA

- They need to be delisted with limited hunting
- Better explanation to public of how whole process functions.
- not a priority for I&E
- Unknown
- NGO Input:
 - Emphasize costs (punishments) for such actions when they occur and make punishments severe.
 - I don't talk with any hunters that represent this view, but I'm certain they are out there.
 - I think this is a sociological issue related to extreme political polarization. Preservationist attitudes, views of nature without humans as part of the ecosystem, and spending millions of dollars "managing" recoveries of wolves and bears fuel this fire.

Killing of grizzly bears by people who blame them for loss of access to public land or natural resource jobs.

- same as above
- strong enforcement message
- Not a big problem, but start educating children in areas with this attitude so problem is reduced in the future.
- I don't know how big of a problem this is, but imagine it is a small group of people that would not absorb any education material if it was offered. Rather focus efforts where we will have biggest impacts for the safety of bears and people.
- Same as above
- not the issue it was in the past
- not an issue
- Higher fines/jail time.
- not sure this is an issue
- Increase education
- I don't think much is occurring in Wyoming
- Difficult to address by government or pro-grizzly NGOs
- This sentiment or activity has not been documented as an issue in R3 of Montana FWP
- Better communication with the general public about ESA
- They need to be delisted with limited hunting
- Better explanation to public of how whole process functions.
- not a priority for I&E
- Increase knowledge on funding and why access is decreasing. If possible decrease time area closed due to bears and inform public on why a safety concern exists.
- NGO Input:
 - Emphasize costs (punishments) for such actions when they occur and make punishments severe.
 - see above.
 - The biggest fix to this is delisting so the states can use more practical management approaches (than USFWS).

Killing of grizzly bears to profit from their trophy value or to sell body parts like claws and gall bladders.

- same as above
- strong enforcement message
- Not a big problem in GYA.

- I don't think it is a problem in the Yellowstone ecosystem but maybe I am wrong???
- This is an insignificant problem that has been vastly overstated
- not the issue it was in the past
- Remind of federal regulations/laws and penalties for such actions
- improve upon CI networks
- Higher fines/jail time.
- not sure this is an issue
- Don't see this as a major issue for grizzly bears
- I don't think much is occurring in Wyoming
- Extremely large fines & restitution/jail time
- While this activity was more prevalent in the 1980's and 90's. Since 2002 this type of poaching activity has not been reported or detected in R3 of Montana FWP
- Enforcement
- make cases with stiff penalties and publicize widely
- Not an issue.
- not a priority for I&E
- Decrease black market access, increase penalties.
- NGO Input:
 - Emphasize costs (punishments) for such actions when they occur and make punishments severe.

Killing of grizzly bears out of fear of potential attacks on people, livestock or property.

- more education, particularly about bear spray
- education regarding how to prevent/avoid attacks, food management
- Not a big problem, but start educating children in areas with this attitude so problem is reduced in the future.
- Figure out where this type of killing is happening and target these areas with better "How to Safely Live/Work/Recreate in Bear Country" information.
- More public training opportunities on how to avoid conflicts. When people get hands on exposure they remember things better
- a very real issue.... it happens... usually justified
- Minimize media sensationalism, counter with positive bear stories
- continued public education efforts-workshops, seminars
- most folks are good about calling before this step is taken
- Not a major issue re: delisting
- I don't think much is occurring in Wyoming
- Increased emphasis on attractant management and bear spray
- Fear, continues to be a factor in how humans interact with grizzly bears throughout SW Montana. Each time someone dies as a result of a bear encounter this fear is heightened. Sensationalized media coverage, inaccurate released information, or speculations released to the media play a huge role in driving this fear based mentality. Often the lack of understanding by the media, or the lack of a strong factual message from agencies leads to speculation and fear. I feel every message should include an inherent risk statement of recreating in areas frequented by grizzly bears. Bear spray should continue to be a primary focal point of any message. We stress it as a first line of defense to be used instead of a weapon in most instances.
- not sure

- Maintain the current strong effort of public education.
- Publicize the stats for attacks on people; very low
- Better education regarding real risk percentages.
- increased emphasis on living with bears in areas of recent expansion
- Education on what to do to avoid attacks and increase funding to provide incentives on private lands to provide bear resistant alternatives.
- NGO Input:
 - I don't feel this is much of an issue except for livestock related concerns and property. For livestock, need to emphasize removal of livestock from grizzly habitat via incentives. For property damage concerns need to do better at informing people how to avoid such damage and punishing them more when bears are killed because people don't follow the information provided.
 - Education by Tom Smith & Steve Hererro so people know what the epidemiology says really matters.

Opposition to grizzly bear population increases based on fear of potential attacks on people, livestock or property or due to other conflicts.

- more education
- build awareness on what the population is, and how it will be managed
- Not a big problem, but start educating children in areas with this attitude so problem is reduced in the future.
- Continue to educate the public about safety in bear country. Find new and innovative ways to get the message out. If possible, talk to Discovery and Animal Planet TV channels to see if we can influence some of their programming.
- Same as above
- a very real issue.... it happens.... justified fear
- Educate about proper behavior in bear country -- videos, workshops, PSAs
- Minimize media sensationalism, counter with positive bear stories
- work with NGO's to reach agreement, grizzlies are recovered
- Show more statistics and data on bear attacks, causes, etc to show the human influence on each situation.
- not sure this is an issue
- More public education
- I don't know how to answer this as we are not trying to increase numbers in Wyoming
- Continued/increased education on living with bears
- largely same as above. State and Federal agencies need to rethink and adapt educational efforts to meet the changing landscape. areas once thought to be "safe" due to a lack of grizzly bears are now occupied habitat. Over the past several years FWP has investigated the killing of grizzly bears in areas previously believed to be unoccupied habitat.
- not sure - maybe a real fear
- Maintain the current strong effort of public education.
- Publicize the stats for attacks on people; very low
- Better education regarding real risk percentages.
- do not use the message that we need population increases to recover bears...increased emphasis on living with bears in areas of recent expansion
- Education on what to do to avoid attacks, increase knowledge on bear populations, and increase funding to provide bear spray and bear resistant containers to the public for use on public and private lands.

- NGO Input:
 - Show statistics (very low)
 - I think it is important to be able to kill bears in areas where population increases are deemed socially unacceptable but that this determination needs to be based on real risks to people or property and not applied where the habitat is acceptable for grizzly bears except for the livestock or property.
 - Acknowledge that this is a real risk, but like driving cars, the risk is manageable.

Opposition to delisting of grizzly bears in the Yellowstone ecosystem based on the belief there are not enough bears or bear habitat.

- more education
- further education regarding historic range and carrying capacity
- Implement strategic marketing campaign on this issue.
- My question to these people is how many bears are enough? There are a lot of bears and how can anyone argue this? I feel like this is something that we can't educate people about - you are either on the enviro side or not. I don't have any good ideas for this question.
- Get the FWS to quit overstating the treats to bears and instead focus on the success of recovery. We need to share the facts that there are three times as many bears or more than when the dumps were open and bears have greatly expand in the area.
- there will never be enough for those opposed
- work with NGO's to reach agreement on modeling
- More use of data and stats to show increase in bear-human conflicts in region as a result of more bears, more people, less room for both.
- having logical conversations, put aside personal gain and politics
- Education helpful for the public at large. Professional litigants, however, seem to be advancing an anti-multiple use agenda w/the bear as a leveraging issue.
- Better education on the success of recovery
- Politically driven agenda; hard to address
- Continue with Study Team work & focus on outreach with new science & data.
- For some interest groups there will never be enough bears or bear habitat. Based on experience over the past couple years it seems to me that bears continue to recover in spite of human activity and in fact they are constantly expanding their range and habitat use. These educational efforts and discussions must be based on the reality of our situation. While residents living in Gardiner and West Yellowstone expect and accept an occasional grizzly bear in town, a bear frequenting within the city limits of Bozeman will most likely meet greater opposition.
- Honest communication about how many and habitat
- Quit trying to give this message. Rather, say there are enough bears for the available habitat, and habitat is sufficient to support recovery under the ESA.
- Complete a more accurate pop method and publicize
- Better explanation of bear population dynamics.
- find ways to communicate science in a way people can understand
- Increase knowledge on bear populations and biology
- NGO Input:
 - This is tough. In fact, there aren't "enough" bears or habitat for bears to ever again not be conservation reliant. We need to do better at making distinctions between what's adequate for delisting (e.g. no

longer an emergency room situation) and what would make bears not conservation reliant (as they'll always be reliant). Some of this opposition is related to using the bears (as a listed species) to accomplish other objectives (such as fewer roads, less logging, more wilderness) that are not directly related to the status of bears except as a ploy. Much of this opposition resulted because of problems in delisting wolves; if recovered wolves can't be delisted without endless litigation, what hope is there for bears?

- I think info on how grizzly bears kill black bears for food is important to help balance the image of bears.

Opposition to delisting of grizzly bears in the Yellowstone ecosystem based on lack of trust in states to manage a recovered population.

- state based outreach
- education re: the need to monitor and keep conservation strategy in place and "alive"
- Implement strategic marketing campaign on this issue.
- I think the Conservation Strategy should be highlighted more. We need to keep reminding the public that a plan already exists to re-list the bears should they run into problems. The alternative to finding a common ground solution is not good (Act of Congress).
- Its helpful to compare success with other species (falcons etc.) Also Montana has the best wolf program and so on
- we have been doing it for 30 years... it has worked
- Offer public workshops with agency & state reps discussions
- provide accurate information on current large predator management programs and their success
- better partnership building among stakeholders
- States should avoid current conflict such as allowing hunting of black bears over bait in grizzly bear habitat.
- having logical conversations, put aside personal gain and politics
- As per previous answer, distrust of State agencies appears to have roots in opposition to any management that could include hunting as a tool
- Better education on the success of recovery
- Tone down hunting rhetoric and the "need" to kill bears
- Outreach on the power of the ESA- emergency listing is effective when things go south for species.
- As with all species the State will have to continue to address all issues associated with grizzly bear recovery and management. A transparent and open approach to management will address some of this opposition. There however will always be some entities that expect and fear the worst when it comes to state management. Montana has in the past and will continue into the future to demonstrate sound management practices regarding grizzly bears. However there are and will be times that management will include the lethal removal of grizzly bears from the system. This will never fit with some extreme interests. This interest group was very vocal during the Soda Butte Incident in 2010.
- Needs to be spelled out clearly for the public
- Continue with fair management and express to compassion for the bear
- Better explanation to public of how whole process functions.
- states & USFS must demonstrate commitment to the conservation strategy
- Increase public awareness on how much the states are already doing and how management would continue after delisting.
- NGO Input:

- I think there will always be some concern over hunting and the state's plans include hunting. The states can be sure that their plans for hunting are not implemented in ways that can be (correctly) interpreted as population expansion control into areas of acceptable habitat. Setting take quotas in terms of female bears instead of any bear would help in this regard and making these quotas conservative. Both WY and ID have little credibility in this regard because of the wolf situation.
- I have a lot of faith in the Game & Fish people I have made in the state of Wyoming. The lack of trust I feel is with state officials who want to attract more hunters.
- Clarify that delisting includes population thresholds for relisting.

Conflicts between big game hunters and grizzly bears that result in defense of life and property kills.

- more hunter education, bear spray requirements
- carrying of bear spray, requiring speed of carcass removal
- Move hunting seasons back to later in year when bears are denned. This would result in better hunting (more elk at lower elevations), safer hunting for hunters, and safer for bears as well.
- I think we can Educate until the cows come home AND still lose bears to DLP with hunters. Big game hunters and bears do not mix well. I don't think we should give up educating, we just need to realize we are going to lose bears.
- Wyoming in particular needs more contact with hunters and evaluate how to deal with earlier elk seasons.
- usually unavoidable encounters.... outcome depends on bear and hunter
- Work with outfitters, & increase educational materials for individual hunters
- Partner with hunting organizations to promote hunters safety and bear conservation
- recognize that this will continue to occur given bear numbers
- better education, higher fines if hunter found at fault
- continue info and ed
- Don't see this as a significant issue against de-listing. Self-defense seems to be well publicized
- Most of these don't have an education solution. We need a non-lethal defense product that is useful to hunters.
- Increased emphasis on bear spray and how to use it.
- Collaborate with UDAP to develop bear spray that mounts on hunting rifle.
- Continued education of hunters on bear awareness, food storage, inherent risk, pepper spray. Over the past several hunting seasons we have seen a level of fear about grizzly bears in areas being over ridden by the presence and desire to kill an elk. Example: "is it safe to go hunt in xx creek of the Ruby now that a hunter killed a grizzly bear" The thought that removal of one bear from the system makes it safe to go. People with little or no experience in dealing with bear encounters wanting to hunt in areas that have a history of conflict. Education and information efforts should focus on matching a hunters experience and preparedness level to the proper area to hunt. on numerous occasions over the past several years I have had very open and frank discussions with people who have no business hunting in grizzly bear country, I have given them other alternatives or areas to hunt. Another educational effort or requirement that could be implemented would be to have all successful non-resident big game combination license holders complete both a bear id and bear safety review prior to receiving their license. This would be more of a mandatory educational review covering how to hunt in grizzly bear country, food storage, what to do in case of an encounter, use of pepper spray etc. could be available on FWP's website.
- Mandatory bear spray in recovery zone
- Maintain and improve the current effort of public education.
- Need to get accurate safety info into big game hunting circles/groups

- Make passing of online bear ID test mandatory for ALL hunters.
- additional agency field presence...this has long been a tough one to address
- Education, public announcements, on the ground communications about avoiding conflicts. Providing bear spray and education on use during hunting seasons.
- NGO Input:
 - Find ways to better educate people on the efficacy of bear spray (vs. guns). Make bear spray more user-friendly for hunters
 - There has to be much better outreach. Experimental programs mandating carrying bear spray in certain hunt areas would be a helpful step. More emphasis on good big game hunting practices would be helpful too...what is being done is okay but needs to be expanded.
 - If we are going to have hunters and grizzlies, there will be conflict.
 - Encourage states to reissue elk tags for hunters who quickly report bears feeding on their fresh carcass.

Bear-human conflicts and defense of life and property kills or management removals that result from inadequate handling of attractants such as garbage, bird feed, pet food, bar-be-ques, etc.

- food storage as a preventive measure
- Expand bear-wise community programs.
- A huge area where we can continue to educate. There are no excuses for bears dying due to unattended bear attractants. This is a no brainer and fairly easy to do. Continue to get out into subdivisions and educate at local fairs etc... Offer free walk arounds on private property to evaluate bear-proofness.
- There is a lot of information on this topic, but it does not seem to be making it to the appropriate people. These messages should be evaluated for local and regional audiences.
- we have made great progress, but the need to do better continues
- Keep driving home the rules for living in bear country. Offer workshops on how to bear-proof residential areas.
- Keep the conflict prevention out in front of the public perpetually
- continue to promote bear wise community programs
- higher fines if human found at fault
- Continue to work with counties to make these things part of an ordinance rather than a choice.
- continue info and ed
- Curiously there seems to be significant opposition from local government entities couching food storage/attractant management as restricting the public. Perhaps highlighting public safety aspects could help.
- This is tough, we have covered people up in education with only limited results. Probably need to look at what works and motivates people then develop a strategy.
- Increased availability of bear resistant bins along with education on attractants. New people to educate all the time
- Continue & expand outreach efforts; focus on cost share for infrastructure for public.
- FWP in Region Three has and continues to ramp up both the education and enforcement efforts associated with food storage for both black and grizzly bears. This past summer enforcement and grizzly bear conflicts staff initiated grid searches of West Yellowstone, Gardiner and Cooke City to identify and address food storage issues. Written warnings were given to anyone with food storage issues and follow-up inspections were done with repeat violators receiving citations. FWP has found that in some instances the monetary amount of the fine is not enough to stop those persons involved in feeding situations. FWP has turned to the courts with sentencing recommendations that include probation and future jail time for those who create these public safety situations and directly lead to the management removals of bears.

- Continued funding for this type of effort
- attain and improve the current effort of public education.
- Need to publicize/promote successes of "bear safe" communities and promote required bear resistant garbage cans, etc.
- Increased education and local ordinances.
- increased emphasis on living with bears, especially in areas of recent expansion
- Education, consistent signs, and on the ground communications about handling of attractants and avoiding conflicts. Providing bear spray and bear resistant infrastructure and education on use
- NGO Input:
 - Peer pressure, appeal to norms
 - More emphasis/effort on what is currently being done with special emphasis on working with County authorities on county regulations (with respect to garbage, not the other items in this list). Bird and pet food issues need to be address directly to landowners by sending people who complain about bears the right information such as NWF's brochure "Bears: pointers for peace coexistence".
 - see above
 - Education and demonstration programs.

Bear-human conflicts and defense of life and property kills or management removals that result from livestock husbandry practices.

- one on one work with producers
- Not sure, conduct study on issue to see if anything can be done.
- I don't know much about this so don't have any good ideas at this point in time.
- Grizzly bear conflicts should be addressed in light of new techniques and tools and these should be publicized regionally when success occurs (electric fence around chicken coops etc)
- it is more an issue of expanding bear population numbers and distribution, not husbandry
- Continue working with individual ranchers/farmers through one on one conversations.
- Link conflict prevention methods to decreasing the potential for livestock depredations.
- promote carcass management programs in all states
- higher fines if human found at fault
- continue info and ed
- My perception is that this is less of a practical issue preventing de-listing.
- I don't know of changes that can be made to husbandry practices that would reduce livestock kills, so it isn't a matter of education, it is a situation of lack of techniques.
- Dead animal removal programs along with bear friendly allotment management practices on federal/state land
- Continued assessment of the risk vs reward of certain livestock practices in grizzly country. There should also be an accepted risk by livestock operators grazing on public and state wildlife management area lands, that does not automatically include removal of bears doing what bears do on lands set aside for wildlife. "Pet" livestock such as a pet goat on the edge of the wilderness should not be considered a "livestock damage" situation. Bee operations continue to have a very negative impact on bears when it comes to conflicts. More responsibility by the bee yard owner to utilize electric fencing would go a long way in addressing these types of situations.
- Work one on one with livestock operators
- Need to get good info and success stories within the livestock community
- Changing of grazing practices.

- increased emphasis on appropriate livestock mgmt techniques, especially in areas of recent expansion. Increased use of innovative programs like the carcass disposal service provided in Park City WY
- Exploring alternatives with livestock producers to avoid conflicts. Increase out riders, use of bear dogs, use of guard dogs, fencing, and other ideas that could be researched as alternatives.
- NGO Input:
 - NWF's livestock grazing allotment retirement program is the most effective at this. DOW's conflict avoidance program is also effective. Agencies could provide these kinds of efforts more recognition and support. Too typically, agencies (state and federal) only acknowledge their own efforts.
 - Education and demonstration programs. Encourage strategic use of electric fences.

Bear-human conflicts and defense of life and property kills that result from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.

- more education
- training on how to behave in bear country
- Implement strategic education campaign, especially targeting children to reduce problem in the future.
- Do a better job at getting the message out via new technology. Possible create an app that talks about staying safe in bear country.
- Unfortunately people will always do stupid things. In my opinion penalties for these behaviors should be severe and widely publicized. Individuals who violate them should also be identified
- people are naive.... always will be.... may be down to fear tactics
- Continue & increase educational materials & programs related to this message.
- use IGBC influence at the national level to increase understanding and awareness as well as inappropriate messages delivered through various media.
- higher fines if human found at fault
- Better signs. Patrols with education.
- continue info and ed
- People like bears! Unsafe/unconscionable behavior seems to be part of the public DNA with this species. My Spring Break analogy is when someone yells "shark" off Panama City beaches people launch themselves out of the water. Bear! at Spring Breeak in Yellowstone launches people out of their cars.... go figure
- This is tough, we have covered people up in education with only limited results. Probably need to look at what works and motivates people then develop a strategy.
- Questionable success in Yellowstone. Not sure there is an answer but continued education is the best hope
- Continue and expand outreach \$\$\$\$
- I'm not sure what anyone can do when people purposefully put themselves in harm's way through their own ignorance or stupidity. Potentially the best education for other resulting from these unfortunate yet predictable outcomes is to address the poor behavior directly through the media and individual contacts. That is to declare it to everyone exactly what it was, poor judgment, stupidity, address the root issue and cause directly.
- Continued funding for this type of effort
- bear safety info in the parks, visitor centers
- Better education regarding real risk percentages.
- continue with current efforts and more agency field presence throughout occupied habitat
- Education, public announcements, on the ground communications about avoiding conflicts. Providing bear spray and education on use
- NGO Input:

- More rangers on the ground, verbally educating at bear jams, on trails, etc. Also, perhaps increase fear levels?
- This is mostly an issue in the Parks and is being addressed fairly well there. There is lack of consistency between Yellowstone and Glacier, however.
- the message that leaving carcass waste attracts bears, and can lead to the spread of CWD (if in the area)
- Education

Bear-human conflicts and defense of life and property kills or management removals that result from human use of infrastructure such as roads, campgrounds, mines, etc.

- same as above
- Provide bear-proof devices, improve education media.
- Information from ongoing research efforts on these impacts should be translated to normal speak and make available to media outlets.
- bears are using these same areas...conflicts will occur
- Again this takes concerted educational outreach through various sources.
- continue with campground programs and DOT awareness programs
- higher fines if human found at fault
- continue info and ed
- More education. More food storage/attractant management orders and enforcement of same with emphasis on public safety
- This is not a big issue in Wyoming
- More emphasis on bear recovery/linkage zones in EIS process
- Continue with and expand outreach- funding key here. Collaborate w/ NGOs on consistent BBA message
- continued signing efforts of these areas, with specific details beyond "entering grizzly bear country" FWP R3 has gone so far as to post areas of conflict with "aggressive bear in area", or "recent mauling" types of signage. People tend to become complacent to "standard" messages or repeated talking points.
- Improved signing and presence of agency personnel
- continued public outreach. Develop partnerships with community-based NGOs
- Better education regarding real risk percentages.
- continue with current efforts and more agency field presence throughout occupied habitat
- Education, consistent signs, and on the ground communications about handling of attractants and avoiding conflicts. Providing bear spray and bear resistant infrastructure and education on use
- NGO Input:
 - There needs to be more road closures. Only retain open roads where absolutely essential. Restricting motorized access and enforcement is needed more often than currently exists.
 - Campgrounds are a problem if waste is left there, but they are also areas to get a message to hunters and families.
 - Education

Lack of public awareness of the status of grizzly bears and the need for recovery under the Endangered Species Act.

- perhaps more proactive education by agencies?
- Implement strategic education campaign.
- As stated earlier it is imperative that these successes of recovery be acknowledged in all communications (there are 3 or more times as many bears as when the dumps were open; they occupy a much broader distribution,

etc). Also we need to communicate that it is important for the ESA as a whole that successful programs are allowed to move forward under other programs.

- most of society trusts what we have determined, only the self-interest financial motivated oppose.
- Work with stakeholders & partner groups to enlist their help in reaching broad audiences beyond the regional scope.
- emphasize status in every outreach effort
- engaging video on topic shown at visitor centers, fwp offices, online
- continue info and ed
- Tough one. With highly charged anti-ESA sentiment there seem to be influential factions on both sides of the de-listing argument. See anti-multiple use, anti-hunting comments
- Better education on the success of recovery
- Continued education through internet and TV. People don't read so newspapers not helpful
- Expand the use of PSAs in 3 states to help stakeholders understand how important recovery is.
- You tube
- Improve this message by all practical outlets: Say there are enough bears for the available habitat, and habitat is sufficient to support recovery under the ESA.
- continued public outreach. Develop partnerships with community-based NGOs
- Better explanation to public of how whole process functions.
- focus message on conservation success story that grizzly bear recovery has been
- Increase funding for on the ground and public announcements as to what is going on with the status of bears.
- NGO Input:
 - This is hard because the Courts have reinforced this perception of what defines a recovered population by the public too often.
 - It is confusing because it has flip-flopped.

Inadequate political support for actions necessary to recover of grizzly bears.

- not really a problem
- briefings with elected officials
- Change the people through education, the people elect the politicians.
- I do not think this is a big issue. There have been many changes made by agencies and states to recover bears.
- it is increasing
- Seems that this element lies with conversations between the IGBC managers & congressional delegations.
- utilize influence of IGBC to address political shortcomings
- more lobbying?
- not sure if this is even an issue
- Recovery actions seem to be well-supported
- We have political support at this point.
- Broad based NGO pressure on legislators
- Continued efforts of sound management, and information related to all facets of the issues at hand. Promotion of public support through sound management and realistic objectives related to recovery occupied habitats.
- not sure
- one-on-one contacts w/key politicians
- Better explanation to public of how whole process functions.

- beyond my realm of expertise as field level person
- Education to politicians as to the benefits of bear on the land scape. Increasing public support for bears, so that the politicians see the public support.
- NGO Input:
 - Delisting species when they have reached recovery goals without so much litigation will help gain the political support needed. Better and more convincing information on the economic value of grizzly bears to the local economy is needed.

Inadequate political support for funding necessary to recover of grizzly bears.

- needs to occur at high levels among agencies, perhaps coordinated by IGBC
- briefings with elected officials; focus NGOs on partnering/funding efforts
- Further pursue establishing a trust.
- Funding is always an issue and will become more difficult in the future, however we need to communicate that moving the bear into similar management status as other wildlife (deer, elk, etc) can reduce cost.
- funding is always marginal and not a solid commitment from agencies.
- Could Defenders of Wildlife, or similar advocacy group offer reimbursement program similar to wolves?
- same as above
- better outreach on what grants are available.
- not sure if this is even an issue
- Well supported recovery actions in my view
- We have funding.
- Broad based NGO pressure on legislators
- From a state management perspective we have become somewhat dependent on Federal funding related to these types of species. Any transition to state management must come with adequate funding to continue current and future levels of management necessary for the issues related to the species. I cannot foresee a future scenario where less funding will be needed to manage this ever expanding population. Success in this instance will come at additional monetary needs for management.
- not sure
- one-on-one contacts w/key politicians
- Better explanation to public of how whole process functions.
- beyond my realm of expertise as field level person
- lobby for increase in funding for state and federal agencies for bear management and public safety
- NGO Input:
 - Better and more convincing demonstrations of the economic value of grizzly bears (such as NPCA's Yellowstone Gateway report of a few years ago) would be helpful. The agencies should help distribute and publicize such reports including putting them or links to them on their websites.
 - Tie expenses to an income line, like hunting licenses so the project is economically self-sufficient, sustainable, and recession proof.

Inadequate consideration of the needs of grizzly bears in land use or development planning.

- an agency education/cultural issue
- briefing of elected officials all levels
- Do more to purchase land and conservation easements.
- It will be important to expand bear considerations in areas that grizzlies are currently recolonizing.

- this has been done for a long time and is considered continuously
- Work closely with local community leaders -- county commissioners, town council, county planners.
- Produce a publication/guide that showcases communities in the Yellowstone Ecosystem that have ordinances for attractant management in bear habitat. Provide the history, challenges and results of land use planning from the prospective a community planner.
- work with county commissions and land use planners, create overlays of bear distribution
- more outreach to counties/cities
- not sure if this is even an issue
- Another tough one politically. No good answer here. Restrictions on development are historically resented. Tales tough decision-makers to restrict development based on wildlife.
- Work with county P&Z and Boards of County Commissioners
- We still fail to address bear needs and adaptability. Need to address expanding habitat needs in face of white bark declines. Need agreement on expansion area.
- As mentioned earlier future use of public lands must take into account the presence of this species on the landscape. It may be time for the State and Federal Agencies who administer public lands to reset expectations of lands use in grizzly bear habitat. Inherent risk considerations for those who chose to graze public lands. Standardized food storage orders and rules throughout the region is paramount. The current lack of food storage rules on known grizzly bear habitat areas is problematic.
- provide standardized guidelines
- Develop partnerships with community-based NGOs
- Better explanation to public of how whole process functions.
- continue current efforts to work with county planners, increased emphasis on areas bears are projected to expand into
- Unknown.
- NGO Input:
 - Better distribution and production of information on the economic values of wildlife like grizzly bears and distribution of this to County officials along with information on how to integrate grizzly needs into land use planning.
 - Utilize TNC and other organizations to conserve bio-geographical islands and corridors. Have USFS and BLM do a wholesale land swap to unload checkerboard land and fill in the gaps around ecosystems.

Please provide any other comments you would like regarding how the Interagency Grizzly Bear Committee and its partners can advance grizzly bear recovery and delisting through information, education or outreach.

- a recognition by the committee that this is an extremely important task and the ramping up of priority to address by the committee
- Develop a strategic plan and implement it.
- The IGBC needs to publish and make widely available the successful recovery of bears and the need for prompt delisting
- Locally, people love presentations (with visuals) provided by experts, such as wildlife biologists. Perhaps we should produce a professional video that can be shown locally in visitor centers and may also play on PBS stations, etc.
- identify a new, national spokesperson who understands the need for wildlife management
- doing a good job, seems more a political/court room issue

- I&E less important at this stage than better effectiveness countering litigation efforts. Science seems to be trumped in the courts.
- We need a big campaign on the success of recovery. We need to determine how to reach people on the attractant management and human behavior in bear country messages (what works).
- Keep what funding is available as close to the ground as possible. Capitalize on PSAs with consistent messaging. Focus on youth. Engage with stakeholders.
- develop key messages that can be supported by science
- agencies must lean more on the opinions and experience of field staff primarily our grizzly bear specialists on these matters. Managers need to both rely on and incorporate this experience when dealing with grizzly bear issues.
- Looking forward to a more coordinated I&E effort
- I firmly believe that the biological and enforcement work done to recover the grizzly in the Yellowstone Ecosystem has been done very well, but that the human relations aspect has been done only at the token level, with no real commitment by any of the partners at the state or federal level. I am not talking about bear conflict managers, but staff working on the human aspects of education and acceptance by changing attitudes, ordinances, and laws.
- NGO Input:
 - Increase vulnerability to user groups and increase awareness of the efficacy of bear-safe behaviors (carrying bear spray, making noise, etc.)
 - Perhaps more regular production and posting of press releases. Less emphasis on attacks such as occurred at the last (Missoula) winter meeting as this just fed the media misinformation addiction. I'm unaware of anything the IGBC has ever done to emphasize the economic value of having healthy populations of grizzly bears and this should be done.
 - We need a grizzly bear education conference for teachers.

ONLINE SURVEY OF ECOSYSTEM IE&O SUBCOMMITTEE CHAIRS

North Cascades

1. Is there an active I&E subcommittee or working group for your ecosystem:

a. Yes X (please answer questions 2 -7) (*qualified sorta-kinda*)

b. No (please skip to question 8)

2. Which IGBC agencies have members assigned to your I&E subcommittee or working group?

USFS has one from two forests, Park Service used to have one but the position is unfilled, WDFW likewise.

3. Do all the agency members participate actively on your I&E subcommittee or working group?

One USFS person does. Otherwise it is a USFWS show, with total lack of interest/staffing from other agency I&E orgs

4. Which, if any, NGOs are active members of your I&E subcommittee or working group?

None: the subcommittee voted years ago to exclude non-agency folks from the actual subcommittee, although we work closely with GBOP and Ecosystems NW

5. How often do you meet

At the twice-yearly subcommittee meetings, if the agencies feel it is important for their people to use limited travel funds to show up. Otherwise it is a phone/email operation.

a. Face-to-face:

b. By teleconference:

6. What other tools (e.g. email, webinars, social media) do you use to communicate within your I&E subcommittee or working group?

email and/or phone

7. What actions has your I&E subcommittee or working group taken following the I&E workshop held last fall?

none

8. How do you decide on funding requests to submit to the overall IGBC I&E Committee in response to the call for requests issued each year?

We put out a call for proposals. If there are multiple proposals, we share those among the I&E subcommittee, Technical Subcommittee and the chair. We then discuss via email and conf call to reach decisions, then make recommendations to the main subcommittee, who make the final calls.

9. Do you have any recommendations to improve coordination of I&E within your ecosystem?

I have recommended for years that the I&E subcommittee be staffed up, with each agency identifying and supporting their member. Unfortunately, the agencies have lost, through budget and position attrition, many External Affairs/I&E staff/positions. So there are fewer people to the same (or more) amount of work. I realized this slippery slope some years ago, so I went to Chris Morgan and suggested the formation of GBOP to handle the outreach efforts the agencies were not making. This has been a double-edged sword since agency management now abdicates GB outreach almost completely to GBOP. If GBOP folds, the subcommittee will have NO resources. Meanwhile, the public sees GBOP as the source of bear info, not the agencies or IGBC.

10. Do you have any recommendations to improve coordination of I&E between your ecosystem and other ecosystems, the overall IGBC I&E Subcommittee or IGBC Executive Committee?

I have recommended for decades that IGBC hire a full-time GS-12/13 level Information Officer to provide support to IGBC on external affairs issues and controversies, serve as the spokesperson for the IGBC and grizzly bear recovery, and to support and encourage the subcommittees. This advice has been ignored and, unfortunately, I don't see that changing. Worse, until it does, IGBC will continue to lose relevance, the public will lose tolerance for GB as incidents, based on an expanding population, increase, and the bear will ultimately pay the price. I could go on about this but I think it is a moot point.

I listened to remarks after the last IGBC meeting from folks lamenting the failure of our I&E efforts and thought back to how those same folks have fought to divert funding and support away for I&E for 20 years. The same folks who would not support development of effective I&E were the very ones whining about how it wasn't working.

Bitterroot Ecosystem

Selkirk-Cabinet-Yaak Ecosystem

Is there an active I&E subcommittee or working group for your ecosystem:

a. Yes X (please answer questions 2 -7) (It's almost a "No" since I wouldn't call it "active" and we have no working group).

b. No (please skip to question 8)

2. Which IGBC agencies have members assigned to your I&E subcommittee or working group? Tecnically there are just 2 of us, Linda McFadden and myself...so the FS Panhandle NF and MTFWP.

3. Do all the agency members participate actively on your I&E subcommittee or working group? We have only met to review funding requests once a year.

4. Which, if any, NGOs are active members of your I&E subcommittee or working group? No.

5. How often do you meet

a. Face-to-face:

b. By teleconference: X

6. What other tools (e.g. email, webinars, social media) do you use to communicate within your I&E subcommittee or working group? None.

7. What actions has your I&E subcommittee or working group taken following the I&E workshop held last fall? Review for funding requests only.

8. How do you decide on funding requests to submit to the overall IGBC I&E Committee in response to the call for requests issued each year? We had so few this past funding round that all were accepted. Other than that we teleconference to discuss.

9. Do you have any recommendations to improve coordination of I&E within your ecosystem? Since we are the only subcommittee with 2 ecosystems together I answer both this and the question below here...no, could use advice on putting together a working group of other interested parties from both ecosystems and coordination on the FS's I&E efforts with my I&E efforts within the CYE.

10. Do you have any recommendations to improve coordination of I&E between your ecosystem and other ecosystems, the overall IGBC I&E Subcommittee or IGBC Executive Committee?

Northern Continental Divide Ecosystem

1. Is there an active I&E subcommittee or working group for your ecosystem:
 - a. Yes X (please answer questions 2 -7)
 - b. No (please skip to question 8)
2. Which IGBC agencies have members assigned to your I&E subcommittee or working group? *USFS & FWP*
3. Do all the agency members participate actively on your I&E subcommittee or working group? *Yes*
4. Which, if any, NGOs are active members of your I&E subcommittee or working group? *none*
5. How often do you meet
 - a. Face-to-face: *Rarely. Maybe once a year, if in conjunction with a larger NCDE meeting*
 - b. By teleconference: *2-3 times/year*
6. What other tools (e.g. email, webinars, social media) do you use to communicate within your I&E subcommittee or working group? *Email*
7. What actions has your I&E subcommittee or working group taken following the I&E workshop held last fall? *Selecting I&E projects to be funded and setting a few outreach priorities*
8. How do you decide on funding requests to submit to the overall IGBC I&E Committee in response to the call for requests issued each year? *I compile and send out all the proposals that we receive and then we all review and have a conference call to discuss and select.*
9. Do you have any recommendations to improve coordination of I&E within your ecosystem? *More direction from the larger IGBC and the larger NCDE committee on what outreach they'd like to see us implement in the NCDE.*
10. Do you have any recommendations to improve coordination of I&E between your ecosystem and other ecosystems, the overall IGBC I&E Subcommittee or IGBC Executive Committee? *Not sure but would be open to a new way of doing business and more coordinated efforts.*

Yellowstone Ecosystem

1. Is there an active I&E subcommittee or working group for your ecosystem:
 - a. Yes X (please answer questions 2 -7)
 - b. No (please skip to question 8)
2. Which IGBC agencies have members assigned to your I&E subcommittee or working group? *I & E Subcommittee includes: Idaho Fish & Game, Montana Fish Wildlife & Parks, Wyoming Game & Fish, Grand Teton National Park, Yellowstone National Park, United States Geological Survey, United States Forest Service: Caribou-Targhee, Bridger-Teton, Deerlodge-Beaverhead, Gallatin, & Shoshone. I & E Working Group includes all the above, plus various NGOs. Including, Center for Wildlife Information, Sierra Club, Defenders of Wildlife, and National*

Resource Defense Council. I also keep the regional media involved by including them as members of the I & E Working Group.

3. Do all the agency members participate actively on your I&E subcommittee or working group? *Yes, but in extremely limited fashion. YNP uses Kerry Gunter to interface (And he is great), but the I & E folks and Interp people never get involved. BLM is a member of YES, but has never been involved from an I & E perspective.*
4. Which, if any, NGOs are active members of your I&E subcommittee or working group? *Center for Wildlife Information, Sierra Club, Defenders of Wildlife, and National Resource Defense Council.*
5. How often do you meet
 - a. Face-to-face: *Generally at each ecosystem meeting.*
 - b. By teleconference: *Annually*
6. What other tools (e.g. email, webinars, social media) do you use to communicate within your I&E subcommittee or working group? *None- except that I distribute grizzly near/ecosystem media trinkets to help them feel as part of a team.*
7. What actions has your I&E subcommittee or working group taken following the I&E workshop held last fall?
 - a. *Worked on sign project and some small media related projects. Working to bring together I & E component of WHART (Wildlife Human Attack Response Teams) together to be able to not only address incident, but larger recovery & management topics .*
8. How do you decide on funding requests to submit to the overall IGBC I&E Committee in response to the call for requests issued each year? *Basically send out the requests and then submit them all back, no real internal priority setting process.*
9. Do you have any recommendations to improve coordination of I&E within your ecosystem? *Same old song. Get YES managers to commit people and resources on par with biological and enforcement commitment to grizzly recovery and management.*
10. Do you have any recommendations to improve coordination of I&E between your ecosystem and other ecosystems, the overall IGBC I&E Subcommittee or IGBC Executive Committee? *Strengthen ecosystem committees so that they can be more involved at IGBC level.*

Overall IGBC I&E Subcommittee Questions

1. Are all the ecosystem I&E Chairs actively engaged with the overall I&E Subcommittee? *No*
2. How often does the IGBC I&E Subcommittee meet
 - a. Face-to-face: *Never*

b. By teleconference *Annually*

3. What other tools do you use to conduct subcommittee business? [E-mails](#)
4. What topics have the IGBC I&E Subcommittee addressed, other than the requests for IGBC I&E funding, over the past year? *We have shared comment on the human conflict guidelines and discussions about basic I & E products needed.*
5. Do you have any recommendations to improve coordination of the IGBC I&E Subcommittee? *I would elevate I & E to a full-time position, serving all the ecosystems. Position could be based wherever possible, USFWS, USFS, USGS or even a state agency.*
6. Do you have any recommendations to improve coordination between the I&E Subcommittee and the ecosystem-level subcommittees/working groups or with the IGBC Executive Committee? *Same as above. The reason the recovery and study team function so well is because a full-time professional is able to lead and coordinate efforts. I & E needs the same attention, possibly even more, given both the political and practical demands of grizzly recovery.*

APPENDIX B – WORKSHOP RESULTS

NORTH CASCADES WORKSHOP

The NC ecosystem workshop was held at the Snoqualmie Ranger District Office in North Bend, WA on November 2, 2011, the day following the NC Subcommittee meeting. Participants were: Wayne Kasworm, USFWS; Bob Naney, USFS; Rose Oliver, GBOP; Sharon Negri, GBOP; Jesse Plumage, USFS; David Graves, NPCA; Sean Smith, NPCA; Jim McGraw, Woodland Park Zoo; Bob Everitt, WDFW; Doug Zimmer, USFWS; Greg Losinski, IDF&G; Ellen Davis, IGBC.

Notes from the workshop

Vision:

- Explicitly address human and bear safety and reducing conflict
- Need for the word “true?”
- Need for public and political support

Guiding Principles

- Safety issue/mortality, conflicts, encounters
- Objectives?...hard to quantify

Strengths

- GBOP: focused, non-advocacy, non-agency, hires locals (e.g. Rose Oliver)
- Focus on sanitation
- Use of black bears as surrogates
- Community-based/one-on-one contact
- Direct interactions
- Good public support
- Involved NGO's
- 2-pronged approach: agency and NGO
- Good working relationship between agency and GBOP/other NGO's
- Ability to reach large numbers through mainstream media
- Good media relationships
- Good relationships with Woodland Park Zoo and NW Trek
- High interest in grizzly bears
- Willingness to report accurately
- NC residents are largely supportive and can act as “ambassadors” through travel
- Diverse strategies (multiple media, repeated messages)
- Star power of Chris Morgan

Weaknesses

- Not clear how to turn latent/passive public support into action
- Focus of public attention on agencies rather than politicians and media
- Constraint of “non-advocacy” on GBOP
- Inadequate funding for IE&O and recovery
- “Catch 22” between FWS and Congress (who has to go first to move funding)
- Dependence on NGO's for products in time of uncertain and declining funding for NGO's

- Inability to reach politicians/policy makers for planning next steps
- Lack of consistent priority messages or “elevator speech”
- Some inconsistency in messages re: food storage, what do to during an encounter, reporting bear sightings, etc.
- Turnover in agency staff leading to misinformation and mixed messages
- Difficulty reaching hunters and ranching community
- Wolves as a complicating factor
- Dealing with ideological opposition
- East/West differences
- Lack of strong visuals and sound bites and hands on materials (mounts, hides, etc.)
- Keeping materials current and updated
- Having good information on support at the legislative district level available
- Lack of ability to respond quickly to incidents
- Lack of ability to connect information government has with NGO’s that can use it for outreach
- Need for more positive messaging about recreating in bear country
- “News” is often reactive/negative
- Need more focus on “keystone species” and the “big picture”
- Addressing fear of grizzly bears
- Need to identify and deal with the “vocal minority”
- Lack of political support...recovery only creates problems, it doesn’t solve any
- Difficulty locating and accessing the right audience
- Need more attention on hunters and sporting goods stores
- Misconceptions about threats to/from grizzly bears
- Conflict between conservation vs resource exploitation
- Haven’t tapped the Puget Sound audience
- Lack of state agency support/legislative barrier to participation in recovery (i.e. cannot relocate bears into WA); no active I&E
- Challenges working across the U.S./Canada border and cultural differences
- Efforts targeting the wrong people
- Mistrust of government by some segments
- Need to address diverse cultural audiences
- Other species (e.g. spotted owls and bull trout) demand agency resources and are higher priority
- Failure to inform/educate elected officials with accurate information about grizzly bears
- Lack of agency will
- Over-reliance on GBOP
- Have not focused on potential philanthropists...eg. Paul Allen

Other Barriers

- Lack of sightings, lack of bears...relates to lack of knowledge
- “Fear” based on implied malicious intent of bears (as opposed to other species, e.g. bison that can be as dangerous)
- Opposition based on economic/access impacts

Major Barrier: Public perceptions about grizzly bears

- Fear/safety and sanitation issues
- Economic impacts and conflicts
- Biology/status of bears

Perceptions related to economic impacts

- GB's will reduce recreational access and hunting
- GB's will reduce access for logging
- GB's will reduce access for grazing and/or increase operating costs for ranchers
- Disproportionate sense of the importance of ranching and logging to the economy

Discussion of key audiences, messages techniques and resources:

Audiences	Messages	Techniques	Resources
<p>Logging industry:</p> <ul style="list-style-type: none"> • WA Contract loggers and other "umbrella" groups • Plum creek • Sierra pacific • Longview Fiber • Colville tribe 	<ul style="list-style-type: none"> • What is the real potential impact – need data • How would GB's really impact industry and access • Relative impact of storms and maintenance costs vs GB's 	<ul style="list-style-type: none"> • One-on-one • Credible peers • Use HCP examples 	<ul style="list-style-type: none"> • Need facts on impacts from other areas
<p>Ranching/Ag Industry</p> <ul style="list-style-type: none"> • Stock growers and Wool growers associations • Farm Bureau • Individual producers, including orchardists, chicken farmers, apiarists, vineculture, etc. (primary audience) 	<ul style="list-style-type: none"> • Ranching/ag and grizzlies are compatible • Magnitude of actual impacts and losses • Availability of compensation programs 	<ul style="list-style-type: none"> • One-on-one • Credible peers • GBOP's "On Nature's Terms" 	<ul style="list-style-type: none"> • Need facts on impacts in other areas • Examples and spokesmen from other areas
<p>Elected Officials</p> <ul style="list-style-type: none"> • County 	<ul style="list-style-type: none"> • Broad public support 	<ul style="list-style-type: none"> • Add county commissioner to 	<ul style="list-style-type: none"> • Need facts on impacts in other

commissioners primary audience	<ul style="list-style-type: none"> • Real level/degree of impacts • Effect on taxes and sanitation costs 	subcommittee	areas
Recreation Industry <ul style="list-style-type: none"> • WA Trails Assn • Backcountry Horsemen • OHV/Snowmobile riders • Mountaineers and climbing groups • REI/Cabelas/Sporting goods stores • Guides and outfitters • High Lakers Assn • Rod and Gun Clubs • RMEF 	<ul style="list-style-type: none"> • How to recreate safely in bear country • Real impacts on recreational opportunity • Level of support and appreciation of value of bears • Role of bears in the ecosystem • Basic life history and predator-prey relationships of bears 	<ul style="list-style-type: none"> • Fact sheets • Informational trailer • Bear hikes • Presentations at group meetings 	<ul style="list-style-type: none"> • Need to identify main arguments against recovery and develop good counter arguments
Media <ul style="list-style-type: none"> • Sports and outdoor editors • Social media • Business reporters • General media (radio, 	<ul style="list-style-type: none"> • All of the above 	<ul style="list-style-type: none"> • Fact-based website • Fact sheets • News releases • Podcasts • YouTube 	<ul style="list-style-type: none"> •

TV)		videos <ul style="list-style-type: none"> • “Show me” hikes 	
Energy Industry <ul style="list-style-type: none"> • Seattle City and Light • Wind/geothermal companies • Puget Sound Energy (small hydro) • BPA 	<ul style="list-style-type: none"> • How they can get good PR from past mitigation and future support 	<ul style="list-style-type: none"> • One-on-one contacts 	<ul style="list-style-type: none"> • Contacts by agency and NGO leaders
Tourism Industry <ul style="list-style-type: none"> • Chambers of Commerce • WA Tourism Assn. • Visitors’ Bureaus • N. Cascades Institute • Individual lodge owners • Ski resorts 	<ul style="list-style-type: none"> • Value of grizzly bear viewing • Level of support for recovery • How to mitigate fear of impacts • Basic bear safety 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •
NGO’s <ul style="list-style-type: none"> • NCCC • Ecosystems NW • Defenders of Wildlife • Wilderness Soc. • Conservation NW • Environment WA • Cascades Land 	<ul style="list-style-type: none"> • How government works (to get them focused on politicians and media, not agencies) • Their role in the political process • Positive roles 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •

<p>Conservancy</p> <ul style="list-style-type: none"> • Mountain to Sound Greenway • NRA • Boy and Girl Scouts • WA shooting and gun rights groups 	<p>they can play</p>		
<p>Academia</p> <ul style="list-style-type: none"> • WWU • UW • WSU 	<ul style="list-style-type: none"> • How they can help advance recovery 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Messaging specialists
<p>Foundations</p> <ul style="list-style-type: none"> • Paul Allen • Bullitt 	<ul style="list-style-type: none"> • Financial need • How recovery aligns with foundation goals • Value with politicians 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •
<p>Tribes</p> <ul style="list-style-type: none"> • Yakima • Colville • Pt. Elliot • NW Indian Fish Comm. 	<ul style="list-style-type: none"> • Sovereignty and treaty rights are not affected • Cultural ties with bears • Potential for co-management • Basic safety and sanitation 	<ul style="list-style-type: none"> • Email outreach to tribal natural resource programs • One-on-one contacts • Tie into cultural activities 	<ul style="list-style-type: none"> • Personal relationship • Cross-cultural training

	messages		
Land Developers	<ul style="list-style-type: none"> • Hidden costs of development • Impacts to growth policies • Sanitation • Be bear smart upfront to reduce costs • How to use bears as a selling point 	<ul style="list-style-type: none"> • Engage with growth management revision processes • Go to trade group communication outlets 	<ul style="list-style-type: none"> • Develop a “Bear Smart certification that adds value
Schools and Education Offices	<ul style="list-style-type: none"> • How to use grizzly bear ecology to meet environment education requirements 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •

Other resource needs:

- Someone to gather/compile data, develop fact-sheets, “top 25 arguments”, elevator speech, etc. (Possibly fund professor/grad students)
- Some form of oversight and leadership for IE&O efforts – revived committee
- Consolidated list of ongoing grizzly bear research and projects from other areas that NC users can tap

SELKIRK-CABINET-YAAK WORKSHOP

The SCY workshop was held at the Idaho Panhandle Forest Supervisor’s Office in Coeur d’Alene Idaho on November 10, 2011, the day following the SCY Subcommittee meeting. Participants included: Ron Downey, Lincoln County; Dan Dimming, Boundary County; Greg Losinski, IDF&G; Linda McFadden, USFS; Brad Smith, ID Cons. League; Gretchen Lech, ID Dept. of Lands; Madonna Luers, WDFW; Wayne Kasworm, USFWS; Kevin Robinette, WDFW; Lynn & Mike Noel, Spokane Audubon; Cindy Weston, BLM; Tim Laiser; GBOP, Paul Bradford, USFS; Ellen Davis, IGBC.

SCY Workshop Notes

IE&O Issues from the SCY subcommittee meeting

- Need more involvement and a “bottom-up” approach
- Concern about the amount of \$ going to the DNA project rather than IE&O
- Importance of accurate information

Vision

- Human needs should be added/ recognize impacts on people
- Emphasize coexistence of people and bears
- Strive for consent/tolerance rather than support
- “...and leads to human attitudes, beliefs and behaviors that allows coexistence with a recovered grizzly bear population.”

Guiding Principles

- Regarding objectives:
 - balance cost of monitoring/evaluation with delivery
 - use proper time scale
 - not all important things are easily quantifiable
 - may need to use “outputs” (e.g. number of people contacted” rather than outcomes
 - lower priority than other guiding principles
 - need to assess changes in behavior
 - hard to measure outcome of important one-on-one contacts
 - keep it in perspective

Strengths

- Local/county engagement
- Mounted bear
- No unmanned waste sites
- Be Bear Aware pamphlet circulated by realtors
- “Transparency” with the community
- Improved public-agency relationships
- Local, tenured and trusted staff in agencies
- Collaborative spirit in Boundary and Lincoln counties
- Lots of on-the-ground contact
- Improving public attitudes
- Historic survey of public opinion (baseline data) – get from Wayne K
- Bear management specialists
- GBOP getting involved in the Selkirk
- KVRI active in the CY and Bonners side of the Selkirks
- Some help from B.C. (though more is needed)

Weaknesses

- Lots to do with too little money and staff
- Challenge of reaching a broad recreational audience (people come from all over) that is self-selected
- Hard to connect actions with consequences (e.g. bird feeders with problem bears)
- Lack of emphasis on IE&O by agencies
- Some staff reluctant to get involved with IE&O
- Public vs. private land require different approaches
- ID does not have an effective statute prohibiting feeding of bears/ attractants

- Uncertainty about and failure to address the right target audiences
- Over-reliance on “easy” outlets (e.g. news releases) as opposed to one-on-one’s
- Need to prioritize IE&O
- Need to take a multi-species/programmatic approach (but be careful about bringing up wolves)
- Not sure how to best use the web and other new media
- Inconsistent level of effort and messages
- Conflicting messages about the status of bears – are they “almost gone” or “increasing?”
- Disagreement about the health of the population
- Uncertainty about what “recovery” means and the sense that it keeps changing
- How to bridge the gap between folks with different economic realities
- Not capitalizing on “volunteer” opportunities
- Losing ground on positions like Brian Johnson’s that do on-the-ground contacts
- Need better interagency communication and to think outside the range of bears to reach the broader audience
- Need to make messages easier to understand (e.g. food storage order)
- Cross-border attractant issues are not consistently managed.

Issue: Bear-Human Conflicts Related to Attractants

Audiences	Messages	Techniques	Resources
<ul style="list-style-type: none"> • Addressed <ul style="list-style-type: none"> ○ Landowners with conflicts ○ Developed campgrounds ○ Some hunters/anglers ○ Some school children ○ Some recreationists • Not addressed <ul style="list-style-type: none"> ○ Potential problem landowners ○ Dispersed camping ○ Areas outside the RZ ○ School children ○ Wildlife feeding enthusiasts ○ Canadians ○ Non-residents ○ Seasonal workforce, many of whom do not use 	<ul style="list-style-type: none"> • Use bear ID materials developed for hunters for a broader audience • Safe game salvage and retrieval for hunters • Information on the nutritional needs of bears and their keen ability to find attractants (e.g. GBOP’s new materials) • “jazzier/sexier” messages...be more creative • Need to develop messages for both long-term residents and new residents who have different perceptions • GPS information to show where bears are 	<ul style="list-style-type: none"> • Create an X-box game • Send “Be Bear Aware” or other messages with building permits (Boundary County does this) • One-on-ones work best • Need to figure out how to reach dispersed landowner and those that have potential problems • Mere canvassing of areas by mgmt. specialists • Peer-to-peer 	<ul style="list-style-type: none"> • Need market research on good messages • CWI brochures • Coloring books! Very popular! • CWI DVD’s • Need distribution plans for bear-resistant waste storage • DVD or online video re: sanitation around bears • Get Mike Rowe (Dirty

<p>English as 1st language</p> <ul style="list-style-type: none"> ○ Special ethnic/immigrant groups ○ “Silent Sams” (i.e. people who are aware of potential problems but don’t speak up) ○ New rural residents ○ Seasonal residents ○ People living just ahead of the dispersal front ○ Agency staff ○ Hikers ○ Dispersed residents ○ Resort visitors and managers 		<p>sharing (e.g. get MT and ID County Comm. to WA)</p> <ul style="list-style-type: none"> • Online ed classes as Environ. Ed electives • YouTube videos and social media • Bill boards or things like the invasive species campaign is using 	<p>Jobs) or other celebrity</p> <ul style="list-style-type: none"> • More and better trained volunteers • \$ to support continued bear specialist positions and work
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Issue: Accidental hunter kills

Audiences	Messages	Techniques	Resources
<ul style="list-style-type: none"> • Black bear hunters • Archery elk hunters 	<ul style="list-style-type: none"> • Bear ID course <ul style="list-style-type: none"> ○ MT: online, mandatory, one-time ○ ID: online soon, voluntary ○ WA: online, voluntary • Carry bear spray and know how to use it • Be bear aware • Effectiveness of bear spray • Timing of seasons and shooting hours in relation to risk 	<ul style="list-style-type: none"> • Hunter Ed courses • Field Contact • Send bear info to non-resident hunters with license info • Outreach through outfitters and guides • Post signs • Tap commercial websites and venues (e.g. Cabelas in Spokane) • Trailhead kiosks 	<ul style="list-style-type: none"> • Online bear ID courses • Brochures • Need more people in the field for one-on-ones • \$ for bear spray • Look for sponsors for bear spray

		<ul style="list-style-type: none"> • Backcountry rangers • Create a loaner program for bear spray • Go to sport shows, use airport displays • Timely media blitzes • Follow-up with bear hunters when they “trophy” their hides • Distribute information on bear ID at season-setting or other public meetings • Go to sportsmen’s groups to see what ideas they have. 	
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Issue: Fear and loathing

Audiences	Messages	Techniques	Resources
<ul style="list-style-type: none"> • Deputy sheriffs • First responders • Scout groups • General public • Dog owners 	<ul style="list-style-type: none"> • Put risk into proper context • Make age-appropriate • Develop respect rather than fear • Appropriate response in various situations • Hiking safely with pets (applies for multiple species) 	<ul style="list-style-type: none"> • One-on-one’s work best • Need to address individual perceptions and backgrounds • Use credible, experienced people • Peer-to-peer sharing • Be innovative • Create a “one-stop-shop” or clearinghouse for information 	<ul style="list-style-type: none"> • Data to put risk in context • Refillable training bear spray containers • Herrero’s book • Russell’s book • Bear behavior video • Bottle cap messages • Tobacco can lid ads

			• “QR” tags
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Parking Lot Items

- Status of ID’s online bear identification program/test (Wayne W. reported it will be online in a few weeks and remain voluntary for now)
- Public perception of impacts of listing on the economy – look at public opinion survey Wayne K has

NORTHERN CONTINENTAL DIVIDE ECOSYSTEM WORKSHOP

The NCDE workshop was held at the Montana FWP office in Missoula, Montana on November 30, 2011, the day following the NCDE Subcommittee meeting. A number of people also participated in the workshop by video conference link with the Montana FWP office in Kalispell, Montana. Participants included: Teresa Wenum, USFS; Germaine White, CSKT; Bill Lavelle, LWWF; Jamie Jonkel, MFWP; Laurie Evarts, MFWP; Lori Roberts, MFWP; Steve Anderson, USFS; Rebecca Lloyd, Y2Y; Erin Edge, DOW; Tim Manley, MFWP; Vivaca Crowser, MFWP; Gary Bertellotti, MFWP; Sue Reel, USFS; John Fraley, MFWP; Mike Madel, MFWP; Jim Satterfield, MFWP; Mack Long, MFWP; Denise Germann, NPS; Lynn Johnson, USFS; Seth Wilson, Blackfoot Challenge; Eric Graham, Montana FWP; Melissa Sladek, Glacier NP; Kelly O’Brien, Vital Ground; Gregg Losinski, IDF&G; Chuck Bartelbaugh, CWI; Jim Williams, MFWP.

NCDE Workshop Notes

Vision Statement

- Should mention need for monitoring of food storage order
- Need for funding should be explicit
- Is the word “true” needed?...concept, OK, maybe a better word
- Emphasize coexistence/living with bears
- Need in-reach as well as outreach
- Unifying message

Guiding Principles

- Recognize real world
- Be proactive
- Transparency is important
- Add “partnership” to last bullet
- Consider:
 - Self-sufficiency
 - Rancher predator “burnout”
 - Sportsmen’s concerns
 - The changing political landscape
 - Need to be dynamic

Issues:

- Need for consistent messages
- Need for audience appropriate messages for “experienced” versus “novice” audiences

Current Efforts

- Defenders of Wildlife
 - Expanding the “fencing” assistance program to all attractants

- Expanding intern program to help with monitoring/maintenance of fencing and to maintain relationship with landowners
- Want to provide each bear manager with intern
- Missoula Bears website is good for both outreach and as a reporting tool
- FWP
 - Developing “bear trail” training:
 - Interactive
 - Time and staff intensive
 - Showed need for more hands-on training for bear spray
 - Working with OPI on curriculum
 - Working with schools in the Bitterroot to develop an “Enviroscape” version of bear trail
 - Montana Wild display will use Wii technology
 - Efforts need to address expanding range at the community level and 1-on-1 to build awareness and tolerance
 - Use response to conflicts and contact with residents as “teaching moments”
 - Developing “props” messages, etc. appropriate to experienced “local” audience, low income population
 - Proactive efforts with waste management companies
 - Trend monitoring = best science
 - Lots of 1-on-1
 - Developed E-Fence brochure
 - Displays at bear fairs are popular
 - Lots of media involvement
 - School and local group programs, including use of webcams in the field to “take kids” outside while in the classroom
- Vital Ground Foundation
 - Focused on support for fundraising for habitat conservation
 - Rely on agencies for best science
 - SCY is main area
 - Using web/social media more
 - Interested in partnerships
- Y2Y
 - Mainly a funding source for on-the-ground efforts by others
- Blackfoot Challenge
 - Fencing calving areas and lots of sanitation work
 - Linking with landowners and engaging them
 - Focus at home range level...place-based
 - “Meet people where they are”
 - Use lots of peer exchanges with folks in WY, Alberta
 - Carcass removal in cooperation with MDT composting program
- Confederated Salish & Kootenai Tribe
 - Balance traditional knowledge with science
 - Good partnership with FWP and others
 - Did fencing clinic and provide materials in cooperation with FWP
 - Put mailer in power bills to all utility customers
- USFS
 - Food storage order effective on Kootenay NF as of 2011...little controversy

- Bear Rangers (funded partially with IGBC I&E\$) are crucial
- Use Recreational Techs and campground hosts
- Deal with hundreds of “walk-in” visitors
- Partnerships are key
- Website is valuable, but needs lots of work, time and attention
- Put up food storage signs along roads and installed food lockers
- Reviewed and prioritized areas for action (e.g. 9-mile)
- Provide annual training on use of bear spray for staff
- Active “Forest in the Classroom” program on the Lolo and Helena NF
 - Covers a broad area
 - Uses teacher training to spread messages
 - Focus on living with predators
- Living With Wildlife Foundation
 - Test containers for public and private land use
 - Need to get buy-in from waste haulers
 - Produced Living With Predator Resource Guides
 - Working with Whitefish, MT police department and city to address issues
 - Active at bear fairs
- Glacier NP
 - Engaging with local communities
 - Use standard NPS outreach tools
 - Providing training for staff and others
 - Backcountry users must watch video to get permit
 - Harder to reach front-country users

Strengths

- Bear managers/bear rangers...1-on-1 contacts
- Beginning to develop relationships with waste haulers
- Broad based, good science
- Positive public attitudes
- Good, clear goal (delisting) and a charismatic species
- Strong partnerships
- FWP & IDFG website id programs
- Involvement of CSKT and Blackfeet tribes
- Good visual resources (photos, videos, mounts, etc.)
- Most NGO’s focused on problem-solving (e.g. bear-human conflicts), not fighting delisting
- Non-advocacy role for some NGO’s
- Effective messages re: identification

Weaknesses

- Need better targeted messaging for certain audiences
- Lack a way to measure success
- Need better communication and coordination across ecosystems on similar issues
- Funding:
 - Too little
 - Fundraising takes time away from on-the-ground work
 - Process is too competitive
 - Need to look for more matching funds
 - Need more leadership to pursue big \$ targets

- Hard to translate science into lay terms
- Need better internal communication (via listserve, e.g.?)
- Not strategic about audiences and context
- Need more big picture thinking
- No use of social media
- Website needs lots of work...could be portal for other sites
- Need to update FWP bear id site with emphasis on sex/age
- Need more collaboration with Tribes
- Interagency and agency-NGO communication and coordination at the policy level, and litigation affects on-the-ground work
- Divergent national vs local perspectives and policies
- Missing a way to reach new residents
- People don't take responsibility for their actions or their neighbors
- Need links to other interests outlets (e.g. backyardchickens.com)
- Lack of diverse curriculum
- Internal communication
- No accurate information on distribution on the web...IGBC website maps are out of date

Potential Focus Areas/Topics

- Grizzly range expansion
- Attractant security/chickens..."the gateway drug"
- Human-bear conflicts and the need to use bear spray
- Realistic expectations related to delisting process and timeline

Problem: Expansion of grizzly bears into areas the public is not prepared for

- Audiences:
 - Diverse audience requires diverse techniques and resources
 - Ag/ranch/farm community – traditional and non-traditional
 - Individual families – rural and urban
 - Recreational users – local MT residents and national/international visitors
 - Government – local and state
 - Local businesses – developers, chambers of commerce, sporting goods stores
 - Agencies – federal (BLM, FWS, USFS) and state (DNRC, FWP)
- Messages:
 - General: bears may/will be found in your area because:
 - Habitat is there
 - It is traditional bear range
 - Trends in bear movement...recent and future
 - Resources are available to help you...bear management specialists

Audience	Messages	Techniques	Resources
Hunters	Grizzlies may be anywhere in western MT	<ul style="list-style-type: none"> • License vendors • Public meetings • Hunter safety classes • Block management program materials • Signs at FAS's, access points, 	<ul style="list-style-type: none"> • FWP website • Media – TV, radio • Sporting goods stores • USFS offices

		WMAs	
	Grizzlies can be dangerous	<ul style="list-style-type: none"> Videos, e.g. Bear Aware; elk archery Bear id website 	FWP video crew and webstaff
Ag/Ranch/Farm Community	<ul style="list-style-type: none"> Grizzlies are here or coming You are not alone! Can avoid conflicts There are tools and people to help FWP is responsive Grizzlies are wildlife...just like deer, elk, etc. We don't move bears if there's no conflict What you can do to avoid conflicts What to do if bears are present 	<ul style="list-style-type: none"> Peer-to-peer Proactive contact 	<ul style="list-style-type: none"> Wildlife Services NRCS FWP staff Conservation Districts County Ext. Specialists DOL Livestock assns. Individual producers with positive experiences County weed groups Up-to-date GPS data showing locations
Private Residence owners – rural and urban	<ul style="list-style-type: none"> Your home is in an area where grizzlies (and cats, etc.) live Be pro-active to avoid conflict How to live successfully Basic bear conservation The value of wildlife to the urban lifestyle in MT 	<ul style="list-style-type: none"> Be bear aware materials Use realtors Contact county planning boards Lots of 1-on-1 	<ul style="list-style-type: none"> Realtors Chambers of commerce FWP staff Experienced local citizens

General Problem: Unsecured residential attractants (e.g. chickens, garbage, bird feeders, compost, fruit trees, pet food, hobby farms, gardens, deer (feeding wildlife)) that bring bears near people and related bear and human safety and bear survival concerns

Audience	Messages	Techniques	Resources
<ul style="list-style-type: none"> W. MT residents Urban-wildland interface homeowners New residents Long time 	<ul style="list-style-type: none"> Unsecured attractants harm bears and people (safety, liability & property damage) Stewardship 	<ul style="list-style-type: none"> Peer contacts and pressure Longtime residents helping newcomers Need to be flexible 	

landowners • Seasonal residents • University students • Hobby farmers • Wildlife feeders • Developers and realtors • Garbage collectors • Law enforcement • Adults and youth	• Grizzlies are expanding (address areas where bears are now and where they are most likely to go)		
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Specific Problem: Chickens as an attractant for bears that leads to bringing bears into close contact with humans and the associated human and bear safety concerns

Audiences	Messages	Techniques	Resources
• People raising chickens • Wildlife Services • Supply Stores	• Backyard chickens and bears can be compatible IF... • Bears that get into chickens are more likely to break into structures • To protect yourself, your family, your property and your chickens from bears and other wildlife you need to... • Electric fencing is relatively inexpensive and very effective	• 1-on-1 by bear managers, cooperators (e.g. WS) • Chicken rangers • Broad proactive media message • Involve egg producers • Articles in magazines that reach hobby farmers...Mother Earth News, etc. • Web outreach...get involved in blogs, Facebook, etc.	• Interns to help bear managers • Funding • Cost-share program with coop extension • 4-H program • Feed stores • Electric fence companies • MSU ag program

Problem: Some people are resistant/reluctant/unable to carry or use bear spray

- Audiences:
 - Hunters (especially rifle and bird)
 - Day hikers/tourists/resorts
 - "Traditionalists"
 - Field workers
 - Private landowners
 - Hunter education classes
 - Outfitters/guides
- Need to have clear, concise, consistent message

Audiences	Messages	Techniques	Resources
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Hunters (especially rifle and bird	<ul style="list-style-type: none"> • Proper time and distance to deploy spray • No need to “aim” spray like a gun...you deploy a barrier “wall” • This could save your life...or your hunting partner • Spray works • This is an adjunct, not a replacement for your gun • Avoids needless mortality of bears • Where and how to carry for quick access • Can use with 1 hand • You have to practice! 	<ul style="list-style-type: none"> • Use the IBA as a resource for videos and other information • Add messaged to black bear ID test online • Add a link to on-line license sales to a training video (mandatory or voluntary?) • Make a short, clear video • Use peer testimonials • Show video in hunter ed classes • Get outfitters/guides to promote message • Get sponsors to support coupons • Hold training workshops • Make training a “game” so it’s fun 	<ul style="list-style-type: none"> • Leadership and direction among IGBC agencies • Get consulting help from marketers and psychologists • Identify the “hot spots” that need the most work • Develop a different trigger system that’s more like a gun • Develop a can that mounts on a gun • Find a sponsor for coupons • Get more inert cans and use dead cans for practice • Trainers! • Statistics on effectiveness • People to tell personal success stories
Field workers	<ul style="list-style-type: none"> • Same messages as hunters, plus... • You don’t want to be in the headlines • Management takes this seriously • Anyone working in the field could need this, not just wildlifers • Get to know your spray 	<ul style="list-style-type: none"> • Professional trainers • Peer testimonials • Get university pros to include this in preparing students • Supervisors • HR Departments • Create a “macho” image • “Working in Bear Country” literature from LWFF 	<ul style="list-style-type: none"> • Management support and direction • Clear expiration date on the can
Day users/tourists/resorts	<ul style="list-style-type: none"> • You are in grizzly country • Bears may be active 	<ul style="list-style-type: none"> • Social media and the web • “Safety in Bear 	<ul style="list-style-type: none"> • Attractive, catchy media (YouTube) • A rent-a-can system

	day or night <ul style="list-style-type: none"> • Bear behavior in general and in relation to spray • Appropriate human behavior during encounters 	Country” video <ul style="list-style-type: none"> • GPS photos that show bears can be in unexpected places • Evening programs • Resort owners 	<ul style="list-style-type: none"> • Tourism and travel bureaus
Private landowners	<ul style="list-style-type: none"> • Carry bear spray when you are working • Spray is a multi-purpose tool...e.g. use to fend off aggressive cattle 	<ul style="list-style-type: none"> • 1-on-1 contacts • Peer testimonials • Practice sessions • A calendar with photos of uses 	<ul style="list-style-type: none"> • A separate belt for ease of use (don't have to put on/take off your belt) • Free cans to give to landowners

= INFO. Need \rightarrow timing - general
needed pieces in places

ISSUE: DELISTING PROCESS

①

Key Audiences

Local community residents
recognizing each community different
in regards to a more conservative
vs less conservative attitudes

Local county/city elected officials - mgros.
Recreationists (hunters, campers, berry
pickers - anglers etc.)
Landowners in bear habitat
State elected officials
Congressman - Senator & Representatives
Natl. representatives

* Important to have
consistent message across
Key messages Agencies - how explain expanding T&E
pop. meet where they are coming from

Residents: recognize pop. status is recovered
recognize grow pop. trend study
with w/ grow, hunting pop. There is
potential for increased encounters/conflicts
provide bear AWARE info. to avoid
conflicts

= provide steps of delisting process &
where we are at now, where headed
(draft con. strategy)

= once delisted - monitoring continues
& what that means to local residents
state mgmt. potential

(2)

hunting season,

why strive to delist.

Elected officials

NATL message for ESA to be successful -
met recovery goals
& can continue pop. levels
w/ state mgmt.

- Techniques
resources needed
- media
 - local CIVIC groups presentations
 - web
 - handout - face to face contacts w/ residents at comm. events
 - people to deliver
 - current infrastructure in place
 - Fact Sheet Q+A (Web/handout)
 - on process
 - using current Bear Aware material tools
 - briefing sessions w/ elected officials
 - Agency open houses
- rod + gun clubs
outdoor clubs
org. RMIF
Anchorage
ecosystem wide
some tailoring to specific gov. areas

predator fatigue

MISC. NOTES

- social acceptance tolerance
= too many bears

state control
proactive mgmt

= recognize recovered

= " There is a chance for
encounter (risk)

= don't want to go w/ it was w/ the wolf

= not pushing a bear season

idea of actual control - a hunt
provides for people

= focus on local audiences

ownership gain local support
- voice towards

The YE workshop was held at the Montana FWP office in Bozeman, MT on January 10, 2012, the day before a meeting of the Yellowstone I&E Subcommittee. Participants included: Sterling Miller, NWF; Gregg Losinski, IDF&G; Mark Bruscino, WYG&F; Tara Teaschner, WYG&F; Bev Dixon, USFS; Chuck Bartelbaugh, CWI; Sam Sheppard, MFWP; Shawn Stewart, MFWP; Justin Paugh, MFWP; Kevin Frey, MFWP; Bonnie Rice, Sierra Club; Andrea Jones, MFWP; Bryan Aber, IDF&G; Zack Waterman, Sierra Club; Jay Frederick, USFS; Kate Wilmot, GTNP; Janet Barwick, NRDC; Derek Goldman, End. Spp. Coalition; Lynn Ballard, USFS; Hannah Stauts, GYC; Kerry Gunther, YNP; Dan Tyers, USFS; Steve Prim, People and Carnivores; Leslie Allen USGS; Mark Gocke, WYG&F.

YE Workshop Notes

WHO IS HERE?:

- Idaho F&G
- People and Carnivores
- Wyoming G&F
- Gallatin NF
- National Wildlife Federation
- National Be Bear Aware/CWI
- Montana FWP
- Sierra Club
- Caribou-Targhee NF
- Beaverhead-Deerlodge NF
- Grand Teton NP
- National Resources Defense Council
- Endangered Species Coalition
- Greater Yellowstone Coalition
- Yellowstone NP
- U.S. Forest Service
- U.S.G.S.

CURRENT PROGRAMS:

- Idaho F&G:
 - Pre-emptive efforts; few bears, but numbers are increasing in ID
 - New Bear ID program online
 - Bear Education Trailer; CW materials and help with bear spray
 - Boy Scouts are a target audience
 - Hunter Ed
 - Outreach day at Barnes and Nobel
 - County Ordinances and work with waste haulers
 - School and County Fair programs reach 10's of thousands annually
 - Island Park Seasonal Tech (shared funding)
 - Does at least one weekly story
 - Community with 300 "locals" and 15,000 per week tourists
 - Need more help during school year
 - Project wild unit for teachers: Wild About Bears
 - Focus on schools in April/May

- Wildlife-Human Attack Response Team (WHART) protocol
- Bear spray raffle at sportsmen's show
- Wyoming G&F:
 - Focus on bear-human conflicts
 - Audience: local rural community with utilitarian values and interest in bears; park visitors; seasonal residents and workers
 - Turnover is an issue
 - How: Tara; PSA's; use CWI materials; schools and hunting group presentations
 - Use hunters and outfitters for "peer" presentations/credibility
 - Purchase bear-resistant dumpsters
 - "Welcome" packages for realtors
 - Bear Wise Community Program
 - Lots of 1 on 1
 - Bear spray "give away" program
 - Teton County ordinance in place, but hard to enforce
 - Workshops with Bear Ed. Trailer
- Montana FWP:
 - Focus on bear-human conflicts and human safety
 - Ordinances and statutes:
 - In place, but with enforcement issues
 - Sheriffs don't prioritize
 - Work with waste haulers to affect change
 - Hunter Ed
 - Mandatory bear ID test for bear hunters
 - Provide bear spray to outfitters
 - PSA's and media
 - Agency and CWI materials
 - Localize effort seasonally in communities
 - Red Lodge requires all residents to use bear-resistant bins; approach businesses with statute; enforcement is important
 - 1 on1 contact is most important
- Grand Teton NP
 - Focus is attractant management and human/bear safety
 - Use Bear Education trailer in GTNP
 - ¼ of visitors go to Visitor Center
 - Evening talks and 1 on 1
 - Using social media
 - Model GTNP bear spray demo
 - Installed bear boxes with \$ from their foundation
- Yellowstone NP:
 - Covering all campgrounds and sites each night with patrols
 - Designated sites in front and back country
 - All back country use is by permit; orientation required
- USFS
 - Audience: forest visitors...often dispersed and hard to reach
 - Audience: permittees...more contact, but diverse uses and client base
 - Focus: Food storage and human safety
 - Target 6th graders and some user groups (e.g. hunters with patrols)

- County fairs in cooperation with IDF&G
- Internal training of USFS staff
- Most GYA NF's have complete Food Storage Orders
 - B-D only 25% and overlap with NCDE creates inconsistency
 - Signs are up at all portals to NF's
 - Increasing infrastructure (bear boxes and hanging poles)
- Be Bear Aware program for last 5 years
- Outreach to sportsmen's groups
- Booth at Folk Festival in Butte
- Education packages for teachers
- Living With Wildlife workshops
- Loaner program for bear-resistant panniers
- USGS:
 - IGBST website with "hotline" for reporting issues (hotline rarely used)
 - Signing of all trapping areas
 - Yearly outreach effort through MSU and schools
- People and Carnivores
 - Multi-day education program for school kids in Madison Valley and West Yellowstone
 - 3 -4 community meetings in region each year; "listening" sessions with agencies and NGO
 - Booth at pre-season chili feed and raffle Yeti cooler
 - Help with USFS bear infrastructure efforts
- NWF
 - Bear-human conference in Missoula in March
 - Allotment program to reduce livestock conflicts
- CWI/Be Bear Aware:
 - Purpose = help agencies
 - Look ahead to identify trends
 - Can help assess effectiveness and/or look for inconsistencies
- Sierra Club
 - Hunter Ed and bear spray can programs with states
 - School outreach
 - Re-starting efforts with states, USFS
 - Need to know how they can add value
- NRDC:
 - Use social media (8K Fans) and Youtube
 - Community events
 - Partnering with livestock groups on "sustainability" and "predator friendly" marketing
- Endangered Species Coalition:
 - Recruit speakers to talk about listed species
 - Event in support of ESA at national level
 - Earned media
- GYC:
 - Help with LWW workshops and bear signs
 - Help with Bear Brigade in GTNP and IDF&G in Island Park
 - Bear science emphasizes bear spray
 - Conflict reduction is increasing focus

- PSA's target hikers and hunters

STRENGTHS AND WEAKNESSES

STRENGTHS	WEAKNESSES
IDF&G <ul style="list-style-type: none"> ▪ Support from administration ▪ Access to schools ▪ CWI materials ▪ Partnerships ▪ WHART 	<ul style="list-style-type: none"> ▪ Few dedicated staff ▪ Limited funding
Wyoming G&F <ul style="list-style-type: none"> ▪ Support from administration ▪ Dedicated staff (8) ▪ I&E staff also involved ▪ Teton County Commission support ▪ Consistent messages ▪ Partnerships, esp. with GTNP and Jackson community 	<ul style="list-style-type: none"> ▪ Reaching dispersed rural residents ▪ Limited use of electronic/social media ▪ "too much success" ...high bear numbers reduce local residents' attitudes toward bears ▪ Enforcement issues with ordinances ▪ Not reaching hunters effectively
Montana FWP <ul style="list-style-type: none"> ▪ Local and FWP enforcement in Red Lodge ▪ Use black bears as "surrogate" for education ▪ Inter- and intra-agency coordination ▪ Mandatory bear ID test for hunters 	<ul style="list-style-type: none"> ▪ Funding declined with re-listing ▪ Wide variation in audience (long-term residents vs tourists) ▪ Dealing with changing landscape (subdivision) ▪ Smaller dedicated staff and increasing conflicts as bear numbers increase
Grand Teton NP <ul style="list-style-type: none"> ▪ Enforceable rules ▪ Use of social media ▪ Dedicated staff (15) and volunteers (Bear Brigade) ▪ Good interagency coordination on outreach ▪ Require hunters to carry bear spray in GTNP 	<ul style="list-style-type: none"> ▪ Too many people to reach ▪ Need better use of social media ▪ Volunteers require lots of management
Yellowstone NP <ul style="list-style-type: none"> ▪ Supervisor is "King" and can mandate ▪ Food storage signs on all tables and in toilets ▪ 	<ul style="list-style-type: none"> ▪ 30,000 new visitors every day and growing ▪ Hard to reach day users ▪ Can't enforce safety regulations with everyone ▪ Don't use new/social media
USFS <ul style="list-style-type: none"> ▪ Food storage orders ▪ Good relations with Grand Targhee Resort ▪ Diverse food storage messaging and facilities capability 	<ul style="list-style-type: none"> ▪ Inconsistency in food storage orders ▪ "local" attitudes ▪ Budget and downsizing ▪ Loss of "institutional knowledge"

<ul style="list-style-type: none"> Partnerships; states and lots of NGO's to help Presence on the ground...field staff Flexibility to address various audiences Bear spray re-cycling program 	<ul style="list-style-type: none"> Keeping up with expanding bear distribution Reaching the right people with the right messages Casual day users are hard to reach Inherent conflict between hunting behavior and bear safety Capacity and declining \$
USGS	
<ul style="list-style-type: none"> Website with lots of hits Technical capability to support Scientific credibility and spokesmen 	<ul style="list-style-type: none"> "Nobody" calls; low profile Difficulty translating science to lay language
People and Carnivores	
<ul style="list-style-type: none"> Hit schools in spring with diverse program Reach parents 	
NWF	
<ul style="list-style-type: none"> Collaboration and partnerships Efforts based on conservation strategy Voluntary 	<ul style="list-style-type: none"> Inconsistent policy within USDA –Forest Service retiring allotments; Sheep Research Stn renewing grazing Need more tools to find alternatives
Be Bear Aware/CWI	
<ul style="list-style-type: none"> Trend marketing Can help with message consistency 	<ul style="list-style-type: none"> Need stronger agency leadership Inability to follow-through due to cash-flow issues (reimbursable vs up-front funding)
Sierra Club	
<ul style="list-style-type: none"> Grassroots organization Outreach capacity and ability to reach some audiences agencies can't/don't 	<ul style="list-style-type: none"> Limited funding and staff
NRDC	
<ul style="list-style-type: none"> Non-traditional allies 	
Endangered Species Coalition	
<ul style="list-style-type: none"> Broad base of groups 	<ul style="list-style-type: none"> Small organization with few staff Myths and misrepresentations of ESA
GYC	
<ul style="list-style-type: none"> Offices throughout the ecosystem with local staff Budget for inert cans Large membership base 	<ul style="list-style-type: none"> Labeled as "Environmental Group"

VISION STATEMENT:

- Make public safety an explicit element
- Reverse order...put "lead to human behavior" first
- What is "true status"..."accurate" better word

GUIDING PRINCIPLES:

- Be realistic

- Add “experience” to “science” ...not all useful knowledge is “science”
- Address private lands

BREAKOUT GROUP WORK ON PROBLEM STATEMENTS

Problem statement: How can we reduce bear-human conflicts on private lands in both gateway communities and rural areas through better management of attractants and public safety?

Audiences	Messages	Techniques	Resources
<ul style="list-style-type: none"> ▪ Land owners <ul style="list-style-type: none"> ○ Rural ○ Subdivisions ○ Urban ▪ Local elected officials who control land use decisions and ordinances ▪ Businesses 	<ul style="list-style-type: none"> ▪ Promote positive coexistence through minimizing conflict ▪ This could save you money: <ul style="list-style-type: none"> ○ Fewer lost manhours ○ Repair costs ○ Livestock loss ▪ This could save your child's life ▪ Benefits from intrinsic value of wildlife ▪ It's just the right thing to do! 	<ul style="list-style-type: none"> ▪ Get community leaders to promote messages (peer testimony) ▪ Master naturalists ▪ Knowledgeable neighbors ▪ Create social norm that leads to conflict reductions ▪ Demonstrate commitment with hands-on support ▪ Long term commitment to all above with consistent responses ▪ Assist local officials develop effective regulations ▪ Work with homeowners assns. 	<ul style="list-style-type: none"> ▪ Financial support from NGOS's ▪ On-site and in-kind support from NGO's ▪ Data on conflicts and resolutions to support and compliment messages ▪ Adequate, trained professional staff for agencies and NGO's

		to develop covenants	
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Problem statement: How to increase “habitat” for bears in human hearts and minds?

Audiences	Messages	Techniques	Resources
Politicians and community leaders (High priority)	<ul style="list-style-type: none"> ▪ Economic benefits ▪ Votes come with support ▪ Recovery criteria are obtainable ▪ Delisting increases local control ▪ Public polling shows support for bear conservation 	<ul style="list-style-type: none"> ▪ Use studies and statistics that show economic benefits ▪ Public recognition e.g. LTE supporting bear conservation ▪ Agency reporting of positive aspects of conservation successes 	<ul style="list-style-type: none"> ▪ Examples of regulations/policies that local policy makers can implement, e.g. sanitation ▪
Private land owners(Medium priority)	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
Media (High priority)	<ul style="list-style-type: none"> ▪ Provide perspective/balance for sensational events ▪ Positive/heart-warming stories sell, e.g. mother-daughter bears 	<ul style="list-style-type: none"> ▪ Agency/NGO cooperate to get positive message to media ▪ Follow up negative articles and/or misinformation ▪ Develop good working 	<ul style="list-style-type: none"> ▪

	swapping cubs in GTNP <ul style="list-style-type: none"> ▪ Publicize conservation success ▪ Economic benefits of bear conservation ▪ Agencies can provide material for stories ▪ Agency staff are credible 	relationships with media <ul style="list-style-type: none"> ▪ Have resources available to meet requests ▪ Control flow of information by rewarding positive stories 	
Hunters (High priority)	<ul style="list-style-type: none"> ▪ Habitat conservation for bears is good for other hunted species ▪ Everywhere you can hunt is potential bear habitat ▪ Recovered/delisted bear population would allow hunting ▪ Hunters have an obligation to take reasonable precautions to avoid conflicts with bears ▪ Bear hunters need to know how to identify 	<ul style="list-style-type: none"> ▪ Field contacts (including check stations) ▪ Enforcement ▪ Make info known to hunters via printed materials and websites ▪ PSA's, articles in magazines, trade shows, fairs, etc. ▪ Use hunting organizations to distribute information (e.g. RMEF) ▪ Educate re: products available, e.g. bear spray; food storage devices 	<ul style="list-style-type: none"> ▪

	species		
Resource extraction industry, e.g. loggers, miners, energy devel.(Low priority)	▪	▪	▪
Livestock/Ag communities (Medium priority)	▪	▪	▪
Recreation industry with perceived negative impact of bears, e.g. motorized users(Medium priority)	▪	▪	▪
Recreation industry with positive perception of bears, e.g. sight-seeing tours, amenities (Low priority)	▪	▪	▪

Problem statement: How can we increase public awareness of the expanding number and distribution of grizzly bears to reduce conflicts, especially with day-users?

Audiences	Messages	Techniques	Resources
<ul style="list-style-type: none"> ▪ Local residents ▪ Seasonal residents and employees ▪ School kids ▪ Backcountry users (horsemen, hikers, etc.) 	<ul style="list-style-type: none"> ▪ Grizzly bears are expanding their range outside of YNP and National Forests ▪ Grizzly bears are here! ▪ Grizzly bears are being seen in places they haven't been for decades ▪ We have the messages, we need to expand them 	<ul style="list-style-type: none"> ▪ In restroom – toilet marketing ▪ Gas pump messages ▪ Newspapers ▪ Movie trailer ads ▪ Visitor centers ▪ Expanded trailhead signs, placed 100 yds up the trail ▪ Market “Bear Wise Community” like “Tree City, USA” ▪ Floats in local parades ▪ Promote grizzly bear distribution maps soon to be released to media and on agency websites 	<ul style="list-style-type: none"> ▪
<ul style="list-style-type: none"> ▪ Hunters/outfitters 		<ul style="list-style-type: none"> ▪ Reach through permitting process 	<ul style="list-style-type: none"> ▪

		<ul style="list-style-type: none"> ▪ Outfitter/guide newsletters ▪ Outfitter/guide annual meetings ▪ Field contacts ▪ Bear safety/bear spray poster for license sale agents, outdoor retailers, airports, hotels, chambers of commerce 	
<ul style="list-style-type: none"> ▪ Ranchers/permittees 		<ul style="list-style-type: none"> ▪ Permitting process/operating plans ▪ 1 on 1 contacts ▪ Grazing associations ▪ Direct mailing via stockgrowers assn. ▪ “Livestock roundup” type publications 	<ul style="list-style-type: none"> ▪
<ul style="list-style-type: none"> ▪ Tourists 		<ul style="list-style-type: none"> ▪ Toilet marketing ▪ Gas pumps ▪ Handouts at park entrances ▪ Branding of signage with consistent message (e.g. Be 	<ul style="list-style-type: none"> ▪ Hire social media researchers and marketers ▪ interns

		<p>Bear Aware) across parks, NF's and other lands (need agency buy-in)</p> <ul style="list-style-type: none"> ▪ Outreach to chambers of commerce...business goes down after an attack ▪ Improve websites; use podcasts, QR codes, interns ▪ Restaurant placemats 	
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Problem statement: How can we reduce conflicts between hunters and grizzly bears?

Audiences	Messages	Techniques	Resources
<ul style="list-style-type: none"> ▪ For all 	<ul style="list-style-type: none"> ▪ Some other simple, explicit message ▪ “EXPECT IT! “ ▪ “Your safety is in your hands” ▪ “Minimize your risk, be bear prepared!” 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪

<ul style="list-style-type: none"> ▪ Hunters ▪ Hunter Ed instructors ▪ Hunter Ed students 	<ul style="list-style-type: none"> ▪ We care about your safety ▪ Hunter safety is a priority ▪ Know your surroundings and expect bears...plan for all possibilities ▪ Understand bear sign ▪ Proper use of bear spray and carcass handling techniques ▪ Points to remember: <ul style="list-style-type: none"> ○ Don't talk down to people ○ Show that we as agencies value human life, as well as bears ○ Be honest and candid re: efficacy of bear spray ▪ Go with an experienced 	<ul style="list-style-type: none"> ▪ In classes ▪ Regional, local and national publications ▪ Using hunters to deliver message – peer testimony ▪ Field presence with constant message ▪ Use attack survivors as message bearers ▪ Duplicate in video and other formats ▪ Viral messaging 	<ul style="list-style-type: none"> ▪ We need to train the trainers (Hunter Ed Inst., FWP, etc) ▪ Use the media (traditional and social media); websites ▪ On the ground contact (staff!) <ul style="list-style-type: none"> ○ Use suitable volunteers ○ Engage at events ▪ Mailings/brochures, e.g. hunting safely in bear country ▪ Consider information at vital contact points (i.e. USFS stations, map sales; chambers of commerce; visitor centers; license sale agents; hotel/airport kiosks)
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	<p>partner</p> <ul style="list-style-type: none"> ▪ Report bear encounters beyond simple sightings ▪ How to deal with an encounter properly ▪ It takes special people to hunt in grizzly country 		
<ul style="list-style-type: none"> ▪ Retail (sporting goods stores) ▪ Sportsmen/women's groups ▪ Outfitters and guides ▪ Hunting publications 	<ul style="list-style-type: none"> ▪ Same messages 	<ul style="list-style-type: none"> ▪ Bear ID cards ▪ Staff training re: encounters, spray, bear distribution, food storage ▪ DVD's ▪ Booths at shows (e.g. Ennis Sportsmen's Rendezvous) ▪ In store presentations ▪ Busy trailhead bear spray demos and giveaways 	<ul style="list-style-type: none"> ▪