Interagency Grizzly Bear Committee

Bear-Resistant Products

Testing Program

![Photo courtesy of the Living with Wildlife Foundation and the Grizzly & Wolf Discovery Center](image)

Testing Protocol

For the 2020 Testing Season
# TABLE OF CONTENTS

Introduction........................................................................................................3

Program Purpose.................................................................................................4

Testing Procedures .............................................................................................5

Visual Inspection..................................................................................................6

Live Grizzly Bear Test..........................................................................................6

Special Procedure for Metal Products..............................................................8

Technical Evaluation..........................................................................................9

Garbage Dumpsters.............................................................................................10

Metal Garbage Can and Bag Holders and Garbage Can Enclosures........................10

Recreational Food Storage Lockers.................................................................11

Technical Evaluation Approval Criteria.........................................................12

Container Bodies and Main Service Lids.........................................................12

User Hatches/Doors...........................................................................................13

Latches.................................................................................................................14

Hoods and Guards.............................................................................................15

Product Approval and Reporting of Testing Results.......................................17

Program Disclaimers.........................................................................................18

Contacts for Additional Information..............................................................19

Reference Cited..................................................................................................19
Introduction

Increasing numbers of humans are encountering grizzly and black bears while living in or visiting areas inhabited by bears. In some cases, these encounters lead to conflicts between humans and bears, which can end poorly for both species. One way to significantly reduce the likelihood of human-bear encounters is to ensure that bears do not become conditioned to anthropogenic food sources.

The Interagency Grizzly Bear Committee (IGBC) was formed in 1983 to help ensure recovery of viable grizzly bear populations and their habitat in the lower 48 states through interagency coordination of policy, planning, management and research. The IGBC consists of representatives from the USDA Forest Service (USFS), the National Park Service, the U.S. Fish and Wildlife Service, the Bureau of Land Management, the U.S. Geological Survey and representatives of the state wildlife agencies of Idaho, Montana, Washington and Wyoming. In the interest of international coordination and cooperation, the Canadian Wildlife Service is also represented. IGBC’s goal of grizzly bear recovery is enhanced by addressing issues that can result in bears being removed from the population. Toward this end, decreasing the availability of attractants such as human food and garbage is an important means of achieving IGBC’s goal of reducing bear/human conflicts and recovering grizzly bear populations.

In 1989 the IGBC developed the first consistent protocol for defining, testing and recommending minimum design standards for bear-resistant containers (USFS 1989). Over the past two decades, much progress has been made relative to products used for securing bear attractants. Manufacturers and agency personnel have taken the lead in developing better products for securing food, garbage and other bear attractants and there is now a wide variety of bear-resistant product options available to consumers. The USFS administers the bear-resistant products testing and approval program on behalf of the IGBC.
**Program Purpose**

The purposes of the IGBC Bear-Resistant Products Testing Program are to:

1) Evaluate products for use in grizzly bear habitat on public lands in the lower 48 states that have applicable food storage regulations. Such regulations may vary, so the public is encouraged to check with the specific public land management unit in which they are interested.

2) Encourage the use of bear-resistant equipment on private lands where there are no regulations mandating bear-resistant storage.

3) Provide information to the public and to agency personnel to facilitate informed decisions when purchasing bear-resistant products.

This program provides a means of evaluating the relative effectiveness of a wide range of products used to secure potential bear attractants. The intent of this bear-resistant products testing program is to approve products that minimize easy and direct access to attractants by grizzly bears. The testing program helps prevent ineffective products from being placed into use. It also accommodates the development of new and improved bear-resistant products and options for deterring bears. Information gained from this program through product testing and evaluation is used to provide consistent and professional guidance to the public and to agency personnel.

If a product appears on the list of IGBC-approved bear-resistant products, it means that the commercially-available product has met minimum standards related to the effort that must be expended by grizzly bears to access the container's contents. Under this IGBC program, no live-bear testing has been conducted utilizing other species of captive bears (e.g., no black bears or polar bears). It is important to note that the IGBC testing standards were established through consultation with human-bear conflict experts and bear biologists throughout North America and that our testing protocol was subjected to a thorough peer review process. Because of this, the IGBC program is the only bear-resistant product testing and certification program in the United States that is recognized and endorsed by bear experts. Please note that IGBC approval does not assert that these products are bear-proof and does not guarantee that the containers will never be
accessed by bears. IGBC approval also does not guarantee that small amounts of the contents of the containers won’t be able to leak or spill out. In conjunction with properly utilizing certified bear-resistant products, the IGBC strongly encourages people living or recreating in grizzly bear habitat to take personal responsibility for maintaining a high level of diligence in their sanitation and attractant storage to further minimize the chance of a human/bear conflict.

Testing Procedures

This bear-resistant product testing protocol pertains to food storage and garbage containment products that are commercially available. Some products not manufactured and sold commercially that are made only for personal use to comply with food storage orders on public lands may be able to be evaluated through the IGBC’s courtesy inspection program. This document does not address that separate process. Please contact the IGBC at scott.jackson@usda.gov or the USFS at 406-329-3664 for more information about the courtesy inspection program.

Manufacturers submitting commercial products for testing must follow the directions and provide the information as described in the “How to Submit a Product for Testing” document available on the IGBC website (www.igbconline.org). Only one of each product model will be tested. If multiples of a product model are submitted, they MUST differ in their specifications.

If a product fails testing, it can be modified and re-tested. If it passes, the product will be considered for approval and if approved, will be added to the IGBC list of approved products.

Please note that approval applies ONLY to the product as it was submitted for testing. Products submitted for testing or evaluation must be working prototypes. Any changes to the product will likely require re-testing and could result in removal from the IGBC list of approved products.

To comply with this protocol, commercially available products require completion of a visual inspection and/or a live-bear test (depending on product type). Testing fees are charged for the
evaluation of commercially available products. A schedule of testing fees is available on the IGBC website (www.igbconline.org).

**Visual Inspection**

Product components (i.e., latches, hinges, lids, coverings, openings, etc.) that might allow a bear to gain entry by breaking, bending, tearing, biting, or pulling with its claws or teeth will be visually inspected. **Products will be inspected to ensure that they are clean and free of loose parts and debris, or sharp edges, corners or points that may be harmful to humans or the captive test bears.** Testing personnel reserve the right to charge a product safety modification fee (see fee schedule) or refuse testing of products which may be dangerous for the captive test bears (e.g., containers that have sharp edges, protrusions, loose parts, extremely heavy lids, etc.). Photographs of products will be taken during the visual inspection prior to the live-bear test. Products that pass the visual inspection will then undergo either a live-bear test or a technical evaluation.

Products that are made of plastic composites, and lighter weight aluminum will undergo a live bear test. Heavy-weight metal products such as garbage dumpsters, food storage lockers and trash can enclosures will undergo a technical evaluation which involves a combination of bear contact time and visual inspection by testing personnel and is described below.

**Live Grizzly Bear Test**

The live-bear test will utilize captive grizzly bears at an IGBC-approved facility and applies to plastic products such as coolers, plastic panniers, backpacking canisters, most residential garbage cans, other types of plastic storage containers, and small, lightweight, aluminum dry boxes, panniers and other aluminum storage boxes and cases. The Grizzly & Wolf Discovery Center in West Yellowstone, Montana is the only facility approved for this purpose by the IGBC at this time.
Live grizzly bear testing will be conducted as follows:

- Testing personnel will prepare containers by placing an appropriate attractant (i.e., food item) inside the container. Containers which do not rely on an odor-proof barrier or liner may also have an attractant (i.e., honey, peanut butter, fish oil, etc.) applied to the outside of the product.

- Testing personnel will ensure that containers are closed and securely latched, knotted or padlocked, as appropriate.

- Products will be placed inside the bear enclosure and bears will be allowed to interact with the containers. Products may undergo contact by a number of bears of various sizes and with varying levels of experience with containers.

- Testing personnel will monitor and video all product testing. Photos and video footage will be archived by the IGBC for a period of five years after testing.

- Products will remain in the bear enclosure and accessible to bears until breached or until a total of 60 minutes of “bear contact time” has been reached (or until bears lose interest – see “Special Testing Procedure for Metal Products” at the bottom of this section). “Bear contact time” is defined as biting, clawing, pounding, rolling, compressing, chewing or scratching by the captive test bear(s). Please note that licking does not count toward bear contact time.

- A container will be considered to have been breached if it is rendered non-functional, or if the hinges, seams, lids or doors are torn, bent or broken and the bear gains access at any of these points at any time during the test. For garbage containment products, gaps, tears or holes of 1 inch or less are allowable. For food storage products, gaps, tears or holes of ¼ inch or less are allowable.

- Bear contact time stops if product is taken into the water feature/pond (applies to coolers only).

- If the product is not breached (see definition above) within the required 60 minutes of bear contact time, it will be considered to have "passed" the live-bear test.

- A testing session can be terminated at the discretion of the testing personnel.

- A determination of whether or not a product passes the live-bear test will be made by the testing coordinator after testing results have been reviewed. This determination is final.

Products that pass the live bear test and/or evaluation by testing personnel will be
considered for IGBC approval. This determination will be made by the Program leader and manufacturers will be notified in writing if their product is approved. All IGBC-approved products will receive a unique certification number at that time.

- Testing personnel will photograph products after testing has been completed.
- Descriptions of areas where a product fails, if any, will be made on the product testing form and this information will be made available to the manufacturer/vendor upon request.
- Live-bear testing of products will be conducted between April 1st and September 30th. The testing facility will decline products prior to March 15th due to a lack of available storage on site. The Center also reserves the right to decline products prior to September 30th due to inclement weather or a high volume of late season product submissions.
- Bear-resistant products submitted for testing become the property of the designated testing facility if appropriate arrangements for disposition haven’t been made within 60 days after product testing.
- Manufacturers/vendors wishing to obtain an SD card of testing video must notify the testing facility at the time products are submitted for testing. Requests for testing footage must be indicated on the product submission form. There will be an additional and separate fee charged for copies of video footage. Video footage is not edited. Requests for testing videos made after the testing process has been completed will not be honored. Please see the Product Submission Form and Testing Fee Schedule for more information about mail delivery services available and indicate your preference on page one of the Product Submission Form.

Special Testing Procedure for Metal Products:

Captive bears used for product testing occasionally experience “testing fatigue” and may begin to lose interest in trying to access more robust metal products. This is especially true for large, heavy, steel products and may become common later in the testing season. Therefore a tiered approach utilizing a combination of bear contact time and testing personnel expertise will be applied to certify certain types of metal products. A metal product may be certified based upon one of the following:
1. A live bear test consisting of a full 60 minutes of bear contact time;
2. A combination of a live bear test with up to 60 minutes of bear contact time and a technical evaluation (explained later in this protocol);
3. A technical evaluation only (no bear contact time) if testing personnel are unable to get the bears interested in testing the product.

**Technical Evaluation**

Metal products and products that are bolted to a concrete pad or other stationary surface or other metal products in which the bears aren’t interested will undergo just a technical evaluation.

For products undergoing a technical evaluation, manufacturers will be required to submit a set of mechanical drawings, including specifications and a materials list, in addition to the actual product and a product submission form. Testing personnel will visually inspect the product to ensure that the product meets certain physical standards defined later in this document by product category.

Technical criteria have been developed based on the results of past tests performed by captive grizzly bears on similar product types over a period of more than ten years. Areas where products were breached by the captive bears were noted and those weaknesses were incorporated into the criteria that are now being used to evaluate similar products.

Commonalities between metal products provide a means for applying standardized specifications or criteria to various product categories such as garbage dumpsters, recreational food storage lockers used at front country campgrounds, residential garbage can enclosures and other large, metal attractant enclosures. Each of these product categories is described briefly below followed by a description of the criteria that will be applied to each of those product categories during the technical evaluation process.
Garbage Dumpsters

Garbage dumpsters commonly include 2, 3, 4, 6 and 8 cubic yard commercial garbage dumpsters and can come in front, rear and side-load configurations. These containers are typically placed at commercial enterprises and multiple-unit dwellings such as condos and apartment buildings. Evaluation criteria for dumpsters will focus on gaps between lids and dumpster bodies and any latches used to secure lids.

Figure 1. Bear-resistant garbage dumpster.

Metal Garbage Can and Bag Holders and Garbage Can Enclosures

Products in this category typically include metal units that are mounted along sidewalks or in residential areas where homeowners are required by Homeowners’ Associations to store garbage cans along the street in a bear-resistant manner. While these units can come in many variations, they tend to have several things in common.

Metal garbage bag holders and garbage can enclosures are bolted to hard, immovable surface like a sidewalk or concrete pad. These units also tend to be smaller and lighter than most garbage dumpsters. They are serviced by hand as opposed to being emptied by a garbage truck. The photos below show an example of a metal garbage bag holder at a U.S. Forest Service facility (Figure 2) and a garbage can enclosure (Figure 3).
Recreational Food Storage Lockers

Recreational food storage lockers are often placed on public lands in developed campgrounds to provide a means for campers to properly store coolers and other foods in a bear-resistant manner while they are away from their campsite. These lockers are usually similar in construction although the door latching systems can vary by manufacturer.

Evaluation criteria for food storage lockers focus on overall construction (strength) of the units and the size of the gaps between the doors and the body of the units. Latches are also a key component of these products and all latches must be bear-resistant although the actual type of latch can vary from unit to unit. These evaluation criteria are described in more detail below.
Technical Evaluation Approval Criteria

- **Container Bodies and Main Service Lids**

  1. Dumpsters, food storage lockers, garbage can enclosures and garbage bag enclosures must be fabricated of a minimum of 14 gauge sheet steel. Products fabricated from aluminum sheet metal (i.e., rafting dry boxes, truck boxes, and panniers) must be fabricated from a minimum of 12 gauge 5052 aluminum sheet metal.

  2. Seams/welds must be tight and free of sharp edges.

  3. Gaps between main service lid and dumpster body must be \( \frac{1}{2} \)” or less. (See Figure 5 for illustration of service lid, dumpster body and gap size).

  ![Figure 5. Dumpster showing various components subject to technical criteria.](image)

  4. Edges of service lids must be cold rolled or reinforced with angle iron.

  5. Service lids must secure to the body via a latch, chain, lock bar or some other mechanism. In other words, there must be a locking or latching mechanism to ensure that the service lid is not able to open or lift off of the dumpster body (See Figure 6) such that it creates a gap of more than \( \frac{1}{2} \)”.

• **User Hatches/Doors**

1. Gaps between user hatches and doors, and the main body of the unit must be ¼” or less for non-mechanically emptied products (i.e., panniers, dry boxes, food storage boxes and garbage can enclosures) and ½” or less for products that are emptied by a garbage truck (see Figure 7 for an example of gaps subject to this measurement criterion).

2. User hatch doors must secure to the service lid in some way (i.e., chain or metal cable and carabiner clip, paddle latch, “lock and key” system or other type of latch). Carabiner clips must be a minimum of 3 inches and must be zinc plated or galvanized zinc to prevent them from rusting and must be securely attached to the unit. See Figures 8 and 9 below for examples.
Figure 8. Carabiner clip closure.  

Figure 9. Key lock closure. 

3. Rods on latches (Figure 10) must be long enough such that any flex in the body of the unit does not result in the rod disengaging from the keeper.

Figure 10. Latch rods on the inside of a garbage can enclosure door.

Latches

1. Latches on user hatches/lids or doors must be designed such that bears are unable to activate them with paws, claws, tongues or teeth. Figures 11 – 14 provide examples of various latch hoods and latch guards that are effective.

- An example of an acceptable design includes a metal “hood” or cover over the latch with a metal guard or riser in front of latch and hood (see Figure 11). This design has been used effectively for over a decade with a paddle type latch to prevent bears from
activating latches on various bear-resistant dumpsters and other food and garbage-related receptacles.

If this design is used, the following guidelines must be followed. It should be noted that these guidelines were developed after years of testing these latching systems with captive grizzly bears at the Grizzly & Wolf Discovery Center in West Yellowstone, Montana.

**Hoods and Guards**

1. Latch guards must be a minimum of 1 1/2” high and latch guards must be wider than latch hood openings by at least ½” (must overlap guard by ½” on each side) as shown in Figures 11 through 14.
2. The distance between the hood opening and the guard must be between 1 ½” and 2” and the latch must also be set a minimum of 2” inside the opening of the hood (see Figure 14) to prevent the bears from easily activating the latch.
3. The latch hood must be between 1” and 1 1/4” high and 3 ¾” and 4” wide to prevent a bear’s paw from reaching under the latch hood (Figure 15) but allow a human hand to access the latch under the hood.

![Figure 11. Garbage bag enclosure showing latch hood and guard.](image-url)
Figure 12. Bear-resistant dumpster showing latch hood and guard.

Figure 13. Latch guard overlapping latch hood opening by at least ½”.

Figure 14. Example of distance needed between guard and latch hood opening.

Figure 15. Photo demonstrates that latch hood over paddle latch is smaller than bear paw so bear cannot reach in under the hood to activate the latch.
Product Approval and Reporting of Testing Results

A final review of product documentation and test results by the authorized USFS bear-resistant product approver or designated official will determine if the product will be IGBC-approved as bear-resistant.

IGBC approval applies only to the specific products as evaluated. PRODUCTS MUST BE SUBMITTED IN THEIR FINAL FORM FOR TESTING. If ANY changes are made to a product AFTER successfully passing testing (this includes any changes to a product’s design and/or specifications such as by altering materials, dimensions, hinges, latches, molds, reinforcements or any other features of the container) the product will likely require re-testing and re-approval. Contact the USFS bear-resistant product approver for testing of modified products (please see end of this document for contact information).

Upon completion of testing:

- Testing personnel will notify manufacturers/vendors when testing is complete and will advise whether the product(s) has/have passed or failed testing (i.e., met or did not meet IGBC requirements for bear-resistant products). This determination is final.
- Manufacturers/vendors that submitted products that pass the live-bear test or the technical evaluation and are approved as IGBC bear-resistant will receive an approval letter and a unique IGBC certification number. This certification number is applicable only to the specific product model(s) approved. The approval letter will provide instructions for proper display of the certification number(s) on the approved product(s). The IGBC certification number must be displayed on the approved product in a visible manner and may be etched, molded, stamped, or otherwise embossed, stickered or labeled onto the approved product.

The official list of IGBC-approved bear-resistant products appears on the IGBC web site: http://www.igbconline.org/. If a specific product does not appear on this list, it is not considered to be an IGBC-approved bear-resistant product.
Program Disclaimers

- The IGBC and associated partners are not responsible for damage to products that are submitted for testing and are not responsible for negative testing outcomes.
- The IGBC reserves the right to rescind the “certified bear-resistant” status of any or all products listed on their website due to failure in the field, changes to product specifications or product modifications not approved by IGBC, or other issues.
- Program administrators reserve the right to request that manufacturers submit products for re-testing due to field failures or possible changes to product specifications of approved products.
- Manufacturers/vendors agree to let testing personnel determine which bears will be used for product testing and if and when an adequate test has occurred.
- IGBC approval of a bear-resistant product means these products meet IGBC bear-resistant design and structural standards, but it is not a guarantee that a grizzly bear cannot gain entry into these products.
- IGBC approval of a bear-resistant product is not a guarantee that a grizzly bear can’t cause small amounts of the contents in the approved products to leak or spill.
- The use of bear-resistant products is meant to complement, but not be a substitute for, following proper sanitation and attractant storage techniques for safety when in bear habitat. More information related to this topic can be found on the IGBC website (www.igbconline.org) under the “Safety in Grizzly Country” tab.
- Manufacturers/vendors concerned about confidentiality of new product designs should alert testing personnel. Testing personnel will make every effort to ensure confidentiality of product information. Neither the testing facility nor the IGBC are responsible for breach of such information.
- Manufacturers/vendors should be aware that the IGBC is required to release information related to product testing and results of product tests to the public when requested under the Freedom of Information Act. This does not apply to proprietary information related to product designs or patents.
- Program administrators reserve the right to review and modify this protocol as needed or to refuse to test certain products.
Contacts for Additional Information

To arrange for product testing, to check on the status of a product that is being tested or to arrange for fee payment:

Randy Gravatt  
Grizzly & Wolf Discovery Center  
406-646-7001 x112  
800-257-2570  
randyg@grizzlydiscoveryctr.com

Approval and status of IGBC-Approved Products, or for general program inquiries:

Scott Jackson  
U.S. Forest Service  
406-329-3664  
scott.jackson@usda.gov

Additional information relevant to this program that may be useful can be found on the IGBC website (www.igbconline.org), including under the “Product Testing FAQs” tab.

Reference cited: