IGBC Bear Spray Guidelines and Implied Product Endorsement

IGBC Summer Meeting June 23, 2016 – Bonners Ferry, Idaho

A presentation by UDAP Industries, Inc. and Crowley Fleck PLLP



CROWLEY FLECK

UDAP Requests Two Motions

Motion 1:

That the IGBC withdraw the 6-second spray duration recommendation and reconsider the Committee's role in issuing public position statements on bear spray product performance and efficacy.

Motion 2:

That the IGBC fulfill its promise not to promote or endorse – or give the appearance of promoting or endorsing – one commercial bear spray product over any other.

Spray Duration: Key Points

- Not supported by science or empirical data
- 6 seconds is an arbitrary number
- No meaningful relationship to bear spray performance or efficacy
- Fails to account for variability in bear spray performance characteristics
- Confuses and misleads the public
- Duplicates EPA's oversight role
- Improperly benefits one bear spray manufacturer to the exclusion of all others
- Meaningful alternatives exist

Interagency Grizzly Bear Committee
Bear Spray Report
June 2008

IGBC Bear Spray Recommendations

 Suggested spray duration of 6 seconds to compensate for multiple bears, wind, bears that may zigzag, circle, or charge repeatedly, and for the hike out.

QUESTION #7: What is the basis for the IGBC bear spray recommendations of 25 feet minimum spray distance and 6 second duration and should IGBC continue with these recommendations?

The IGBC recommendations are based upon the scientific development of bear spray and the publications summarized in Appendix A. A panel of experts was also convened to review the science and make recommendations regarding bear spray. IGBC adopted these recommendations.

In Appendix D, we present letters from several bear managers, biologists and researchers that support bear spray and the IGBC recommendations.

Science Does Not Support 6 Seconds

- Carrie Hunt (University of Montana) No conclusion regarding duration
 - 1983 Report to NPS: Literature review of repellents, deterrents and aversive conditioning.
 - 1984 Thesis: Capsaicin is an effective bear deterrent.
 - 1985 Report to FWS: Suggests that capsaicin spray should "allow for repeated application and have an accurate spray range." The spray should be "wide ... and powerful, to increase the changes of hitting a bear in the eyes and to mitigate the effects of external factors such as wind." Spray with "another visual, auditory, or olfactory deterrent stimulus ... may increase the product's effectiveness."
- Lynn Rogers (USFS) No conclusion regarding duration
 - 1984 Research: Capsaicin works to deter free-ranging black bears, but spray needs a better delivery system with "greater range." 80% of bears were deterred with one spray.

Science Does Not Support 6 Seconds

Stephen Herrero (University of Calgary) - No conclusion regarding duration

1998 Report: Capsaicin appears useful in deterring bears in a variety of field situations. Bears are <u>behaviorally complex</u> and individual response to being sprayed is expected. Some bears will not be deterred even after receiving a substantial does of spray at close range.

Tom Smith (Brigham Young University) - No conclusion regarding duration

- 2008 Report: Bear spray is an effective alternative to lethal force and should be considered an option for personal safety for those recreating and working in bear country.
- "Differences in bear deterrent spray brand formulation ..., spray duration, and distance exist, but our data were too few for rigorous performance comparisons or analysis."
- "High exit velocities of spray from cans likely compensates for cross-wind effects and may account for low incidence of wind-related effects reported in Alaska."

Science Does Not Support 6 Seconds

"Based on data we collected, <u>there is no indication that any of</u> the commercially available products bests another by durations that vary by a few seconds, at least as I see it."

"[W]hen asked which bear spray product I recommend I state that I am comfortable using any of the EPA-approved products on the market because while they do vary somewhat in duration and distance, <u>all fall within an acceptable range of</u> <u>effectiveness</u> in light of the results of the study I conducted on the efficacy of bear spray in Alaska."

- Dr. Tom S. Smith, PhD (BYU)

Variability in Bear Spray Products: Terminology

- Duration: How long it takes all of the spray to come out of the can.
- Volume: Weight or amount of active, bear-stopping mixture in the can.
- Delivery-rate: The weight or amount of product discharged per unit time (usually per second).
- Deployment:
- t: How the spray is released. Manufacturers make specific recommendations on how this should occur given the volume and delivery-rate of the particular can.

Equal Volume / Capsaicinoid Content by Weight Percentage

BRAND X

Bear Spray

To Deter Bears from Attacking Humans

- 230 grams
- 4 Seconds
- Delivery-Rate Per Second:
 - 57.5 g/sec
 - ✓ Faster discharge rate
 - Higher velocity spray
 - ✓ Greater distance
 - ✓ Higher delivery-rate

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BRAND Y

- 230 grams
- 7 Seconds
- Delivery-Rate Per Second:
 33 g/sec

- ✓ Slower discharge rate
- ✓ Lower velocity spray
 - ✓ Less distance
- ✓ Lower delivery-rate

Bear-stopping dose can be delivered faster and further

Bear Spray Test – MTDC – 9/23/2008

- Counter Assault 8.1 oz/230 gram can
- Counter Assault-Exp 10.2 oz/ 290 gram can
- UDAP 7.9 oz / 225 gram can
- Frontiersman ???
- Guard Alaska 9 oz / 255 gram can



IGBC/MTDC Test Data



IGBC/MTDC Test Data



IGBC/MTDC Test Data



A Closer Look at UDAP

- Using the IGBC's own test data: A 0.836 second burst of UDAP spray will travel approx. 18 feet in under 1 second. After the initial burst is released, the spray continues to propel forward and will billow out to create a protective cone of bear spray fog.
- There are multiple of these bear-stopping bursts in each can of UDAP, despite the fact the cans empty completely in less than 6 seconds.

UDAP Canister Size	Can empties in approximately	Number of 0.836 second bursts per can	Grams of Product Per 0.836 second burst
7.9 oz / 225 gr	4 seconds	4.8 bursts / can	47 grams
9.2 oz / 260 gr	5.4 seconds	6.5 bursts / can	40 grams

Bear Spray Statistics



Research Findings:

- 96% of the time bears were sprayed at 7 m (23 feet), or less.
- In nearly 75% of all cases, bears were 16 feet or less from the person spraying.
- Sprays were 98%

Source: Letter from Dr. Tom Smith, PhD (BYU)

Bear Spray Statistics

Research Findings:

- In 80% of encounters, a single spray is sufficient to deal with a menacingly curious, or aggressive, bear.
- ~13.5% of encounters required two sprays.
- ~6.5% of encounters required three sprays.
- <u>NOTE</u>: Lynn Rogers' (USFS) research similarly found 80% of bears required one spray for deterrence.



Source: Letter from Dr. Tom Smith, PhD (BYU)

Rationale for 6 Seconds is Misguided

Appendix D Statements:

- Build a "barrier cloud of spray"
- "more spray in a can ... the better"
- "accommodate wide variety of situations"
- "use against multiple animals"
- Repeated use against single animal
- Compensate for "wind, heat, and cold"
- Multiple spray blasts
- Reserve for hike out

<u>What they Really Want:</u> Adequate Volume & Ability to Apply Multiple Doses

NOT a Function of Duration

"I do not know of any scientific data that could be used to determine the most adequate spray duration" – Kelly Gunther (YNP).

So Why Is "6" the Magic Number?

- No supporting science.
- No logical rationale.
- No meaningful difference between 4-second and 6-second can of equal volume/weight – except a bear-stopping dose comes out faster, stronger, and, likely, further.
- No problem with multiple sprays, if deployed correctly.
- No problem with reserve for hike out, again, if deployed correctly.
- 6 is a arbitrary number.



The Moment of Truth

Though you should put the spray in your hand when you first see a bear, be ready to use it only if the bear approaches closer than 50 ft (15 m). Remember the canister may contain as little as six seconds' worth of spray, and you may need to spray the bear twice or more. Follow these guidelines:

- Stand your ground, Running away may trigger the bear's instinct to chase.
- Remove the safety cap or clip, Hold the can up and ready. Many bears will move away at this point, and you will not have to use it.
- At 20-30 ft (6-10 m), spray for 2-3 seconds. Use both hands. Aim directly in front of the bear's head and a little downward. A cloud of ingredients will billow up from the ground, creating a wall of spray. When the bear reaches the cloud, it will feel it.
- . If the bear continues to approach you, spray it again.
- Stay out of the spray! If possible, try to shoot downwind.
- Monitor the bear's activities, and do not turn your back on the bear for any reason.
- When the bear retreats, continue to watch it and move away slowly.

For more information about bear encounters and bear safety, visit the IGBC website at www.igbconline.org Though you should put the spray in your hand when you first see a bear, be ready to use it only if the bear approaches closer than 50 ft (15 m). Remember the canister may contain as little as six seconds' worth of spray, and you may need to spray the bear twice or more. Follow these guidelines:

At 20-30 ft (6-10 m), spray for 2-3 seconds. Use both hands. Aim directly in front of the bear's head and a little downward. A cloud of ingredients will billow up from the ground, creating a wall of spray.

When the bear reaches the cloud, it will feel it.

In making the above highlighted statements, the IGBC wrongly assumes that all bear sprays have the same delivery-rate. This is not the case. There are EPA-approved bear sprays on the market that can create a protective "wall of spray" in less than 2-3 seconds. The above "general" advice to the public does not apply to all bear spray and could lead to improper use of high-delivery rate bear spray.

Further Problems

- The recommendation implies that cans discharging in less than 6 seconds are ineffective or unsafe, which is untrue.
 - No evidence that any EPA-registered can on the market is unsafe
 - UDAP 4-second spray has safely and effectively deterred bear attacks.
- IGBC's duplication of EPA's role in certifying/recommending bear spray confuses the public and its own constituent agencies
 - Public is unsure what is safe or effective when multiple government bodies do not have standards that coincide.
 - Even the NPS isn't quite sure whose standards are whose.

"EPA registered bear sprays have a minimum duration of at least 6 seconds ..."

> "EPA registered bear sprays shoot a minimum distance of 25 feet..."



Carry Bear Spray - Know How to Use It

Bear spray has proven to be an effective, non-lethal, bear deterrent capable of stopping aggressive behavior in bears. The proper use of bear spray will reduce human injuries caused by bears as well as the number of grizzly bears killed in self defense. When carrying bear spray, it is important that you select an EPA approved product that is specifically designed to stop aggressive behavior from bears. Personal defense, jogger defense, and law enforcement or military defense spray's may not contain the correct active ingredients or have the proper delivery system to divert or stop a charging or attacking bear.

Selecting A Proper Bear Spray

- All bear sprays must be registered with the Environmental Protection Agency (EPA). Only use bear spray products that clearly state "for deterring attacks by bears." The EPA registration number is displayed on the front label.
- EPA registered bear sprays, have an active ingredient, clearly shown on the label, of 1% to 2% Capsaicin and related Capsaicinoids. This active ingredient is what affects the bear's eyes, nose, mouth, throat, and lungs.
- EPA registered bear sprays have a minimum duration of at least 6 seconds or more to compensate for multiple bears; wind; bears that may zigzag, circle, or charge multiple times; and for the hike out after you have stopped a charging bear.
- EPA registered bear sprays shoot a minimum distance of 25 feet or more to reach the bear at a distance sufficient for the bear to react to effects of the active ingredients in time to divert or stop the bear's charge and give the bear time to retreat.
- EPA registered bear sprays have a minimum content of 7.6 oz or 215 grams.
- Visitors in bear country should carry a can of bear spray in a quickly accessible fashion. Bear spray should also be readily available in the sleeping, cooking, and toilet areas of backcountry camps.
- . Be sure the expiration date on your bear spray is current

Safety Tips

Make sure you are carrying EPA approved Bear Spray as your bear deterrent, don't depend on personal defense products to stop a



WITH BEARS BUT MAY NOT BE EFFECTIVE IN ALL SITUATIONS OR

PREVENT ALL INIURIES

Further Problems (cont.)

- The recommendation unnecessarily creates a standard that one company can use against another to claim its product is superior, and that has in fact occurred.
 - 6-second recommendation historically excluded all but one bear spray manufacturer from compliance with the standard.
 - A comparative chart has been circulated in the channels of commerce that uses this standard to claim superiority over all others
- The recommendation coupled with clever marketing tactics confuse and mislead the public and cause economic and reputational harm to reliable manufacturers of safe, effective bear spray.
 - Vendors and consumers have in fact expressed confusion about whether UDAP's product is safe and effective. Sales have in fact been lost. Harm to reputation has in fact occurred.

Alternatives?

- General Recommendation Rather than Specific Numeric Criteria
 - Defer to EPA for product specifications;
 - Recommend use of any EPA-registered bear spray;
 - Encourage users to become familiar with the specific characteristics of the particular bear spray product they purchase;
 - Encourage users to know how to use their chosen bear spray product.
- Alternatively, Invest Resources in Developing a Defensible, Science-based, Empirically-driven Recommendation Adopting a Range of Appropriate Spray Durations Determined to Fall Within an Acceptable Range of Effectiveness.
 - Transparent process \rightarrow Product Testing \rightarrow Careful Analysis



NPS.gov / Park Home / Plan Your Visit / Safety / Bear Safety / A Bear Doesn't Care Campaign

"A Bear Doesn't Care" Campaign



Four posters from the "A Bear Doesn't Care" campaign

Yellowstone National Park wants to increase the number of people carrying bear spray through a new engaging, celebrity-filled campaign called "A Bear Doesn't Care." Whether you are a hiker, backpacker, angler, photographer, wolf watcher or geyser gazer, the campaign encourages you to carry bear spray – no excuses!

"A bear doesn't care how far you're hiking, if you're just fishing, or even if you work here," says Superintendent Dan Wenk. "No matter who you are or what you are doing, you should always carry bear spray and know how to use it."

Recent data collected by park scientists revealed that only 28 percent of visitors who enter the park's backcountry carry bear spray. Studies security that bear spray is more than 90 percent effective in stopping an aggressive bear, in fact, it is the most effective deterrent when used in combination that bear spray is more than 90 percent effective in stopping an aggressive bear, in fact, it is the most effective deterrent when used in combination that bear spray is more than 90 percent effective in stopping an aggressive bear, in fact, it is the most effective deterrent when used in combination aggressive bear spray is more than 90 percent effective in stopping an aggressive bear.

"Yellowstone visitors care deeply about preserving bears and observing them in the wild," says Kerry Gunther, the park's Bear Management Specialist. "Carrying bear spray is the best way for visitors to participate in bear conservation because reducing potential conflicts protects both people and bears."

Recent data collected by park scientists revealed that only 28 percent of visitors who enter the park's backcountry carry <u>bear spray</u>. Studies show that bear spray is more than 90 percent effective in stopping an aggressive bear, in fact, it is the most effective deterrent when used in combination with our <u>regular</u> <u>safety recommendations</u>—be alert, make noise, hike in groups of three or more, and do not run if you encounter a bear.

Implied Product Endorsement

Motion Request No. 2:

That the IGBC fulfill its promise not to promote or endorse or give the appearance of promoting or endorsing – one commercial bear spray product over any other.



Interagency Grizzly Bear Committee Winter Meeting Minutes December 11, 2007 Holiday Inn, Downtown at the Park Missoula, MT



 The IGBC I&E Subcommittee (Doug Zimmer et al) will make sure that IGBC publications do not imply an endorsement for any specific brand of bear spray. This will include review of current materials on hand and any actions necessary to resolve the concerns raised by UDAP (Pepper Power) regarding the current materials

Action Item: The IGBC appointed a task group of member agency bear specialists to review the need for IGBC guidelines for bear spray in view of EPA's entry into regulation of this product, and that the I&E subcommittee take the lead for ensuring that all IGBC information materials produced or distributed by or for the IGBC, including the IGBC website, from this day forward do not convey any message or image that could be construed as an endorsement of any single brand of EPA-approved bear spray.

U.S. DOI Ethics Opinion

"[M]aterials which are produced for the IGBC should limit the logos and names of organizations listed in the materials to the members of the IGBC and organization which has done the production."

"[I]f the IGBC continues to use CWI [Center for Wildlife Information] for its publications and other materials, that CWI only include the organizations within the IGBC and the CWI logo and do not include organizations which are aligned with CWI but not necessarily with the IGBC."

- Matthew Costello, Ethics Specialist, U.S. DOI (2008)

Unfinished Business

- IGBC's numeric spray recommendations continue to promote one bear spray company to the exclusion of all others
- IGBC's website prominently displays Counter Assault bear spray
- IGBC's 2008 Bear Spray Report prominently displays red cans on the last page.
- IGBC's website links to CWI which contains publications prepared for the IGBC with public funding which depict a red can and, sometimes, the Counter Assault name, logo, and/or web address
- IGBC's website links to YNP's "A Bear Doesn't Care" campaign materials which depict celebrities carrying a red can



Bear Aware Safety Education Trailer on the Road in Southwestern Montana



Consider using a different camera angle that does not prominently feature a commercial bear spray product on IGBC's website.

A new bear aware trailer hit the road recently in the southwestern region of Montana. The educational trailer promotes how to properly manage potential food attractants and how to recreate safely in bear country.

"This is a rewarding project for Montana Fish, Wildlife & Parks," said Laurie Evarts, the education program manager at FWP's Montana WILD education center in Helena. "It's great to see so many different organizations partnering to make this happen."





Bear Aware Education Trailer, Yellowstone Ecosystem

IGBC Information & Education Subcommittee

Yellowstone Ecosystem

• Gregg Losinski (Chair) Idaho Department of Fish and Game

Selkirk/Cabinet-Yaak Ecosystem

Transferring data from igbconline.org...

Q. Search the site

IGBC MEMBERS

Executive Committee	
Bitterroot Subcommittee	
North Cascades Subcommittee	
North Continental Divide Subcommittee	
Selkirk/Cabinet-Yaak Subcommittee	
Yellowstone Subcommittee	
Information & Education Subcommittee	
Meeting Calendar	
News	
Archives	

RECOVERY ECOSYSTEMS

Bitterroot Ecosystem	
North Cascades Ecosystem	
North Continental Divide	
Selkirk & Cabinet-Yaak Ecosystems	
ellowstone Ecosystem	

GRIZZLY POPULATIONS

Current Status	
inkage Zones	
Population Monitoring	

BEAR SAFETY IN GRIZZLY HABITAT	
Bear Spray	
Food Storage Regulations	

Center for Wildlife Information Bear Spray Educational Products











Educational Poster 11x17

Read the Label Poster 11x17

This is the conclusion IGBC's Bear Spra

This is the concluding page of the IGBC's Bear Spray Report (June 2008), as provided on its website.

Final Page of the IGBC Bear

Spray Report (June 2008)

8 "red cans"

- Abandon or reprint these materials
- Operate through WMI to generate updated, companyneutral publications

Bear spray educational materials are available for youth groups, hunter ED classes, staff training, workshops and community bear avoidance events. For more information you can go to IGBConline.org or BeBearAware.org.

IGBC Links to CWI

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Gr	ABOUT - BEAR-RE	SISTANT PRODUCTS -	BEAR SAFETY ~	ALL ABOUT GRIZZI	ies ~	CALENDA	R
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binoculars to scan the areas ahe	ad. Bears often use the sar	me trails hikers do, an	d are attracted to	o sources			
of food like berries patches or c	arcasses.						
	Read More						
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COPYRIGHT

TESTING PROGRAM

CONTACT IGBC



Upon investigation IDFG personnel confirmed that the bear was indeed a grizzly bear. The juvenile was

Ψ.

Yellowstone Subcommittee

IGBC Website Links to YNP's "A Bear Doesn't Care" Campaign

Yellowstone National Park wants you to carry bear spray - IGBC Online

GRIZZIN BEAR

Posters from the campaign are available for download at https://flic.kr/s/aHskx93BCw and go.nps.gov/abeardoesntcare. Visit go.nps.gov/bearspray for information about bear encounters and how to use bear spray.

Source: http://igbconline.org/yellowstone-national-park-wants-visitors-carry-bear-spray/

Conrad Anker



Jennifer Low Anker



Jennifer Jerret



Erik Oberg



YNP Ranger



Jeff Brown

Red Can

Yellowstone National Park

go.nps.gov/bearspray

A bear doesn't care if you've been attacked before.

> Jeff Brown Bear attack survivor

Carry bear spray. Know how to use it. Be alert. Make noise. Hike in groups. Do not run.

Ronan Donovan

Red can



Carry bear spray. Know how to use it. Be alert. Make noise. Hike in groups. Do not run.

Steve Fuller

The <u>only</u> black can

Yellowstone National Park go.nps.gov/bearspray A bear doesn't care how long you've worked here. Steve Fuller Winter Keeper since 1973 Carry bear spray. Know how to use it. Be alert. Make noise. Hike in groups. Do not run.

RECAP – Requested Motions

MOTION 1

That the IGBC withdraw the 6-second spray duration recommendation and reconsider the Committee's role in issuing public position statements on bear spray product performance and efficacy.

MOTION 2

That the IGBC fulfill its promise not to promote or endorse – or give the appearance of promoting or endorsing – one commercial bear spray product over any other.

Thank You

