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
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
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*
  - 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 *behaviorally complex* 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, **there is no indication that any of 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, all fall within an acceptable range of effectiveness** 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:** 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**
- 230 grams
- 4 Seconds
- Delivery-Rate Per Second: 57.5 g/sec
  - Faster discharge rate
  - Higher velocity spray
  - Greater distance
  - Higher delivery-rate

**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

26 grams
26 grams
47 grams
37/43 grams
26 grams
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.

<table>
<thead>
<tr>
<th>UDAP Canister Size</th>
<th>Can empties in approximately</th>
<th>Number of 0.836 second bursts per can</th>
<th>Grams of Product Per 0.836 second burst</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.9 oz / 225 gr</td>
<td>4 seconds</td>
<td>4.8 bursts / can</td>
<td>47 grams</td>
</tr>
<tr>
<td>9.2 oz / 260 gr</td>
<td>5.4 seconds</td>
<td>6.5 bursts / can</td>
<td>40 grams</td>
</tr>
</tbody>
</table>
**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% effective.

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

- **NOTE:** 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

What they Really Want:
- 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 an arbitrary number.
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…”
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 → Product Testing → Careful Analysis
Recent data collected by park scientists revealed that only 28 percent of visitors who enter the park’s backcountry carry bear spray. 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 regular safety recommendations—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.
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.
“[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.”

“If 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.”

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
Consider using a different camera angle that does not prominently feature a commercial bear spray product on IGBC’s website.
IGBC Information & Education Subcommittee

Yellowstone Ecosystem

- Gregg Losinski (Chair), Idaho Department of Fish and Game

Selkirk/Cabinet-Yaak Ecosystem

BEAR SAFETY IN GRIZZLY HABITAT
- Bear Spray
- Food Storage Regulations
This is the concluding page of the IGBC’s Bear Spray Report (June 2008), as provided on its website.

- 8 “red cans”
- Abandon or reprint these materials
- Operate through WMI to generate updated, company-neutral publications
IGBC Links to CWI

Websites with Grizzly Bear Safety Tips

There is a lot of valuable information on the internet about how to live peacefully with bears and be safe in bear country. While we do not officially maintain or endorse any of these websites, we have noted the addresses below for your information on ways of living safely with bears.

- Be Bear Aware, Center for Wildlife Information
- Bear Safety, Glacier National Park
- Bear Safety in the North Cascades, North Cascades National Park
- Safety in Bear Country, Grand Teton National Park
- Videos & Podcasts: Safety in Bear Country, Grand Teton National Park

The websites listed above are only a sampling of available information on the internet. We urge you to further explore and educate yourself about grizzly bears and bear encounters.
ISLAND PARK – On the evening of May 5th, a father and son from California were hunting for black bear in Idaho near the Continental Divide above Henrys Lake. The fifteen-year-old son mistakenly shot and killed a nine-year-old male grizzly bear.

Upon returning to their family cabin, the hunters realized that they had mistakenly killed a grizzly bear and called to report the incident to the Idaho Department of Fish & Game (IDFG) the first thing in the morning.

Upon investigation IDFG personnel confirmed that the bear was indeed a grizzly bear. The juvenile was
IGBC Website Links to YNP’s “A Bear Doesn’t Care” Campaign

Conrad Anker

Red Can
Jennifer Low Anker

Red Can

A bear doesn't care if you painted its picture.

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

Red Can
Erik Oberg

Red Can
YNP Ranger

Red Can
Jeff Brown

Red Can
Ronan Donovan

Red can
Steve Fuller

The only black can
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.

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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

**UDAP:** Protect your family when she’s protecting hers.