

What to do with old flares? Question that's befuddled boaters may soon be answered

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Sonoma County boater Dave Grieve holds up an aerial emergency flare he's held onto since it expired 24 years ago. We all know how easy it is to just drop something old or expired in the trash.

But what happens when you can't get rid of something because even the dump won't take it?

There's one niche piece of equipment that you just can't seem to throw away, not in California at least.

"Well one thing I'll tell you about flares on boats is you don't take it lightly that you're lightning one off," Dave Grieve told me. "One, you know, you don't want to fire off a false signal, but the second thing is, when you light these things off you realize how, how dangerous they are, how easy it is to get burned because you're hand holding this flare."

I've been in Dave Grieve's garage more times than I can count.

His son and I have been close friends since middle school, but when I showed up on a recent sunny September afternoon, it was to look at one thing in particular: old boat flares.



"Now these go to an aerial flare," Grieve said. "These are standalone aerial flares that expired also in 2000...these actually came with my boat."

Grieve frequently sails his 30' Olson sloop on the San Francisco Bay.

He keeps the quarter-century-old neon orange flares, each about the size of a shotgun shell, in an old army green ammunition box in his garage.

Like almost all recreational boat owners in California, Grieve is required to carry a set of up-to-date emergency flares on his boat. But there's just one big problem for Grieve and boaters like Sonoma County's Bob Adams, when it comes to their emergency flares.

"What do you do with them?" Adams questioned. "Because it's mandated that you buy them, but there was never any disposal stream that was set up so that once they expired, you could get rid of them."

Marine flares typically expire after three years, and Adams who has been sailing since the mid 80's, said the question of what to do with old flares hasn't changed in the four decades he's spent on the water.

"Over the years, it has spanned the whole spectrum of people just keeping them in someplace in their garage, or their dock locker, you know, or some people would put 'em in the dumpster," Adams said. "I've even witnessed people throwing 'em into the ocean just because what else are you gonna do?"

Adams isn't alone in searching for a way to properly dispose of old flares. A 2011 [study](#) by a joint federal, state, and local working group estimated 174,000 flares expire each year in California.

The lack of a clear answer on how to get rid of them is something I heard from responsible stewardship advocates like Heidi Sanborn.

"The fact that they were ever allowed to sell an explosive that had no end of life plan is what pun intended, blows my mind," Sanborn said.

As well as local fire safety officials like Cyndi Foreman.

"Nowhere in the state of California now can you reasonably get rid of marine flares that are expired," Foreman said.

Even the coast guard themselves

"We do not offer disposal services," Doug Leavell, recreational boating specialist for the US Coast Guard in California, said. "This has been a source of issue or problem with the boating public for years. We require these things, but we don't offer services."

So why is it so hard to responsibly get rid of expired marine flares in California? That's a question Courtney Scott, the household hazardous waste program manager for Zero Waste Sonoma, does have an answer for.

Marine flares are categorized as an explosive, where regular road flares are just a flammable solid, and most household hazardous waste programs are equipped to accept road flares and regular solids," Scott said. "There's only one county that we know of in California that is able to accept explosive material, and the rest of the coastal counties in California are left without a solution."

Alameda County accepts unwanted marine flares at multiple disposal sites, but the service is limited exclusively to Alameda County residents.

It means people will leave flares at places that make sense, often public safety agencies, said Foreman, the Sonoma County fire marshal.

"We don't say that we take them, we don't advertise that we take them," Foreman said. "We don't want to take them because they're just as hard for us to get rid of. However, a lot of times they just show up on our doorstep."

Courtney Scott said it's no less challenging when it falls to a fire department, sheriff's office, or household hazardous waste handler to get rid of those unwanted flares.

"So in California right now, we are not aware of any final disposal facilities that are allowed to basically incinerate explosives," Scott said. "So these flares would be collected in California and then immediately transported in a specialty explosive proof truck across the country to one of these facilities where it would be incinerated."

So where are the incinerators? Foreman noted, "there's only three facilities in the country that have hazardous waste facilities that these actually get taken to and disposed of properly."

In Dugway, Utah, near the US Army's chemical and bio weapons test facility is one incinerator; Sauget, Illinois, just across the Mississippi River from St. Louis; and Carthage, Missouri, near the border with Oklahoma is the third.

Only the EBV Explosives Environmental Company in Carthage confirmed that they do accept and dispose of expired marine flares.

A representative for Clean Harbors, which operates the Aragonite incinerator facility in Dugway, an hour west of Salt Lake City, says the site is equipped to dispose of explosive materials;

A web listing for the Veolia North America-Trade Waste Incineration site in Sauget, says that facility is able to handle explosives as well.

The special handling and shipping costs combined with the scarcity of permitted incinerator sites makes disposing of flares an exorbitant expense for many agencies in California, Scott said.

"We actually had to ship out two five gallon buckets of marine flares last April, I believe it was," Scott said. "Those two five gallon buckets cost us over \$11,000 to dispose of, and that was in partnering with neighboring jurisdictions to get the transportation cost cut."

Foreman estimates it costs her fire department \$50 a flare for safe disposal. Scott has pegged it closer to \$185 a flare for transportation and incineration.

This whole headache could soon be in for a big shake up though.

Sitting on Governor Gavin Newsom's desk is a bill that would create a pathway for California's boaters to safely and responsibly throw away their flares.

It's called Senate Bill 1066 Scott said.

"What [Senate Bill] 1066 would do is require the manufacturer of these explosive materials to pay for and create a take back program for the marine flares that they produce," Scott said.

Asked to hazard a guess at what implementation of SB 1066 would look like, Scott said, "the manufacturer of the marine flares would probably work with a hazardous waste contractor to set up temporary events along marinas along our California coastlines."

Expired flare collection events have popped up around the state in recent years, organized by various nonprofits, local governments, and waste handlers; and Scott noted, those types of collection events are one way the rollout of SB 1066 could happen if it gets the governor's signature.

The bill wouldn't be California's first go-round with an extended producer responsibility, or EPR, mandate either.

In short, EPR requires manufacturers to take a product's entire life cycle into account when designing and pricing it. The state already has similar mandates for products like pharmaceutical waste, carpeting, and paint.

For waste management experts like Scott, EPR is an important way to make sure manufacturers are accountable to the public.

"It not only requires them to create a plan for the end of life, but hopefully it requires them to think of the design and design their products to be less toxic and more recyclable or reusable or last longer because then they won't have to pay as much in the end for the disposal cost," Scott said.

If SB 1066 is passed and implemented, Scott said, utilizing economies of scale, the cost of disposal is likely to be under \$10 a flare; and with the extended producer responsibility, it's most likely boaters will see that cost reflected in the sales price of marine flares.

"Even some of the Republican senators mentioned if you can afford a coastal boat, you can probably afford an extra \$8 per flare," Scott said. "Right now, they're only \$13 brand new from the store."

SB 1066 hasn't been so warmly received by the manufacturer though...and yes, that's manufacturer singular.

"The way the bill is written right now, as the supplier and being totally responsible for all the costs associated with administrating shipping, collecting, and disposing of these flares is just unreasonable," said Bob Defonte, VP of Sales for Orion Safety Products, the main producer of marine flares in California.

A three pack of Orion's Coast Guard-approved handheld, day-night flares retails for around \$40 at stores like West Marine and Bass Pro Shop.

While the company has been moved in recent years on the design of their flares, removing perchlorate, a particularly hazardous chemical from their formula, Defonte said Orion simply doesn't do enough sales on a yearly basis in California to cover a disposal program.

"We will vacate the state because we cannot afford the cost," Defonte said.

The price tag to get a flare disposal program setup is estimated in the ballpark of half a million dollars. Defonte said Orion would need to triple or even quadruple the cost of their products in California to make the numbers work.

He cited the high cost of specialized shipping due to the flares' explosive designation as a major hurdle.

Economics has added tension to what has otherwise been a shared acknowledgement of a glaring gap in the life cycle of flares, said Heidi Sanborn Director of the National Stewardship Action Council.

"We understand and we totally accept that Orion is very unique in that they are the only manufacturer," Sanborn said. "But what does that mean? You have a mandated product that expires every three years. So you've got this guaranteed market; and they know [expired flares are] a problem."

Both sides have created a bit of a bluffing game over the bill.

Sanborn said it's not at all uncommon for companies to cry foul over the costs of producer responsibility, and Defonte said Orion won't be made to do business at a loss.

Defonte also said Orion isn't universally opposed to running a flare recycling and disposal program, just one closer to Orion's terms.

"We have asked that they postpone this bill, work with us on a pilot program, see what would work, then reintroduce the bill," Defonte said.

In fact that pilot program looks quite similar to how Courtney Scott thinks SB 1066 would be implemented: Orion funding a series of flare collection events at various marinas or sites along the California coast, and sending the old flares back to the company's warehouse in Peru, Indiana.

Defonte said Orion's even entertained repurposing old flares for use by wild land firefighters as portable ignition devices to light backfires.

Company concerns aside though, as goes California, so goes the nation, and SB 1066 has garnered attention in coastal states around the US.

Sanborn said she thinks Orion is probably going to have to adapt.

"I assure you, this is not the only state with the problem," Sanborn said. "Every state's gonna do this."

Boaters themselves have started to confront flare disposal in recent years by turning towards a different kind of emergency signal entirely: LED lights.

Orion and other safety device makers have fielded new LED emergency signals approved for night use, and boaters like Dave Grieve are taking notice.

"So yeah, I'm looking forward to buying a electronic flare," Grieve said. "But until mine come due, I don't...have a great deal of urgency as long as I...meet the requirements."

Alternatives aside, Courtney Scott, the household hazardous waste specialist, said it is well past due that California boaters have a safe and responsible disposal pathway for their old flares, and she said SB 1066 would help create that path in the here and now.

"We have taken a lot of time and a lot of care to reduce these costs in the bill. Originally, the overseeing agency was going to bill upwards of a million dollars a year to manage this program, and we got that down to about 450,000," Scott said. "So we're really trying to work hard to make sure that we're not putting anybody out of business, and that our boaters are still safe."

Governor Newsom has until September 30, the end of the state's legislative session, to sign or veto outstanding bills like SB 1066.

Until then, it remains a game of wait and see for what exactly to do with the old flares.

