



What is EPA up to?

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Overview



- Clean Boating Act
- Ethanol in gasoline
- New boat and engine technology required to reduce emissions

Clean Boating Act



- EPA is busy developing the Clean Boating Act Management Practices.
- For “commercial” vessels less than 79 feet & fishing vessels EPA published a Draft Report on Vessel Discharges on March 8, 2010.
- EPA is conducting “focus groups” discussions on some targeted issues – main topic is invasive species.

Step 1

- EPA Reviews Discharges and Makes Determination (consultation required)

Step 2

- EPA Develops Management Practices (consultation required)
- Must consider factors

Step 3

- EPA Develops Management Practices Performance Standards (consultation required)
- Must consider factors
- Can distinguish among sizes, types and classes of vessels, new and used

Step 4

- Coast Guard Issues Regulations on the Design, Construction, Installation and Use of Management Practice
- States can also enforce



Clean Boating Act Management Practices

- Cleaning and maintenance – use of biodegradable soaps.
- Corrosion control – restrictions on scrubbing zincs; clean boat on land
- Gray Water– minimize impact of discharges by use of soaps, and not pouring grease down drain.
- Fishing Waste – no tossing of fish waste overboard.
- Bilge Water – use a bilge sock to soak up oily waste.
- Fire Fighting Equipment – not an issue for small boats, restrictions on certain testing.
- Engine maintenance and fueling practices – stop the drops.
- Antifouling paint – potential to restrict in-water cleaning.
- Combating Aquatic Invasive Species – EPA is looking to reference current state guidance on boat cleaning and drying out times in order to switch bodies of water.

EPA Actions on Ethanol

- EPA will allow the sale of gasoline with up to 15% ethanol (E15) for model year 2007 and newer cars and trucks **only**
- EPA is continuing to test the 2001 – 2006 fleet and will likely expand the waiver to include them
- EPA has issued a Notice of Proposed Rulemaking (NPRM) entitled: *Proposed Rule: Regulation to Mitigate the Misfueling of Vehicles and Engines with Gasoline Containing Greater than Ten Volume Percent Ethanol and Modifications to the Reformulated and Conventional Gasoline Programs*
 - EPA's 60 day comment period ends January 3, 2011
 - EPA will hold a public hearing on the label rulemaking only in Chicago on November 16 (NMMA will be testifying)

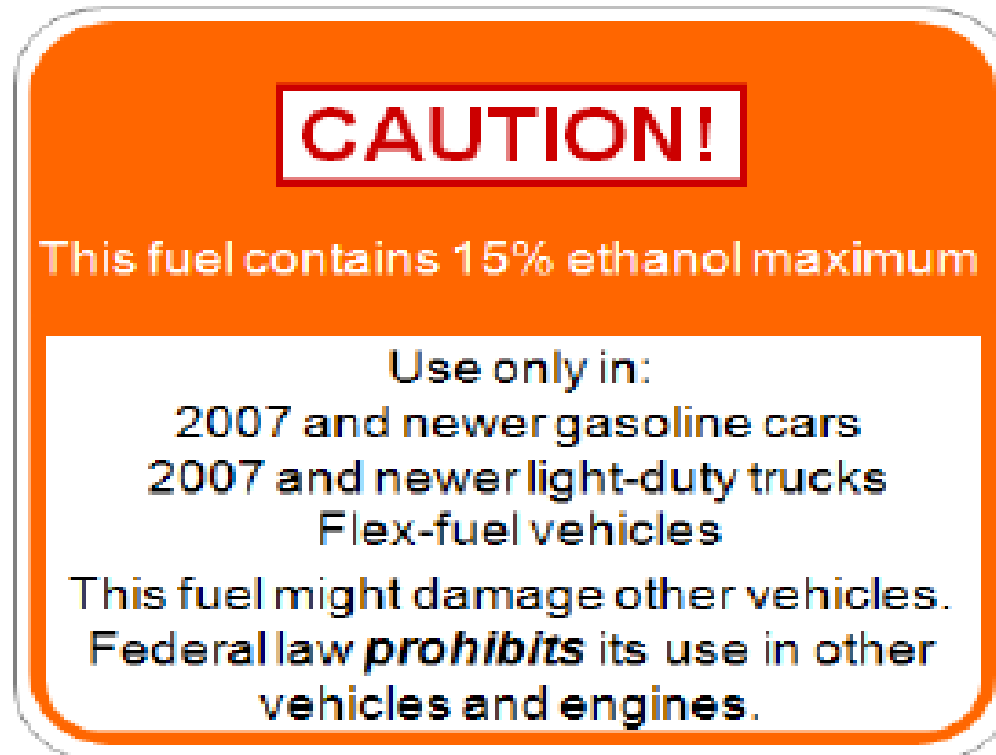
What Is/Is Not In the NPRM

- All non-road engines, including marine, and all vehicles MY 2000 and older are excluded and anything over E10 is not allowed to be sold or used in them
- EPA is not approving the 1 psi vapor pressure waiver that E10 has for summertime – will increase the cost of base gasoline by \$0.30 per gallon
- EPA is holding everyone in the distribution chain, from the station through the ethanol provider, responsible for misfueling with the maximum fines of \$27,500 *per day*
- EPA is holding everyone in the distribution chain, from the station through the ethanol provider, liable for damage from misfueling
- No provisions to ensure that appropriate fuels for non-road and older cars remain available
- What is in the NPRM is **NOT** final

What Is/Is Not In the Waiver

- The Waiver allows sale of up to 15% Ethanol for the listed vehicles, it does not mandate it
- The Waiver does not address any of the state laws and standards that prohibit anything over E10

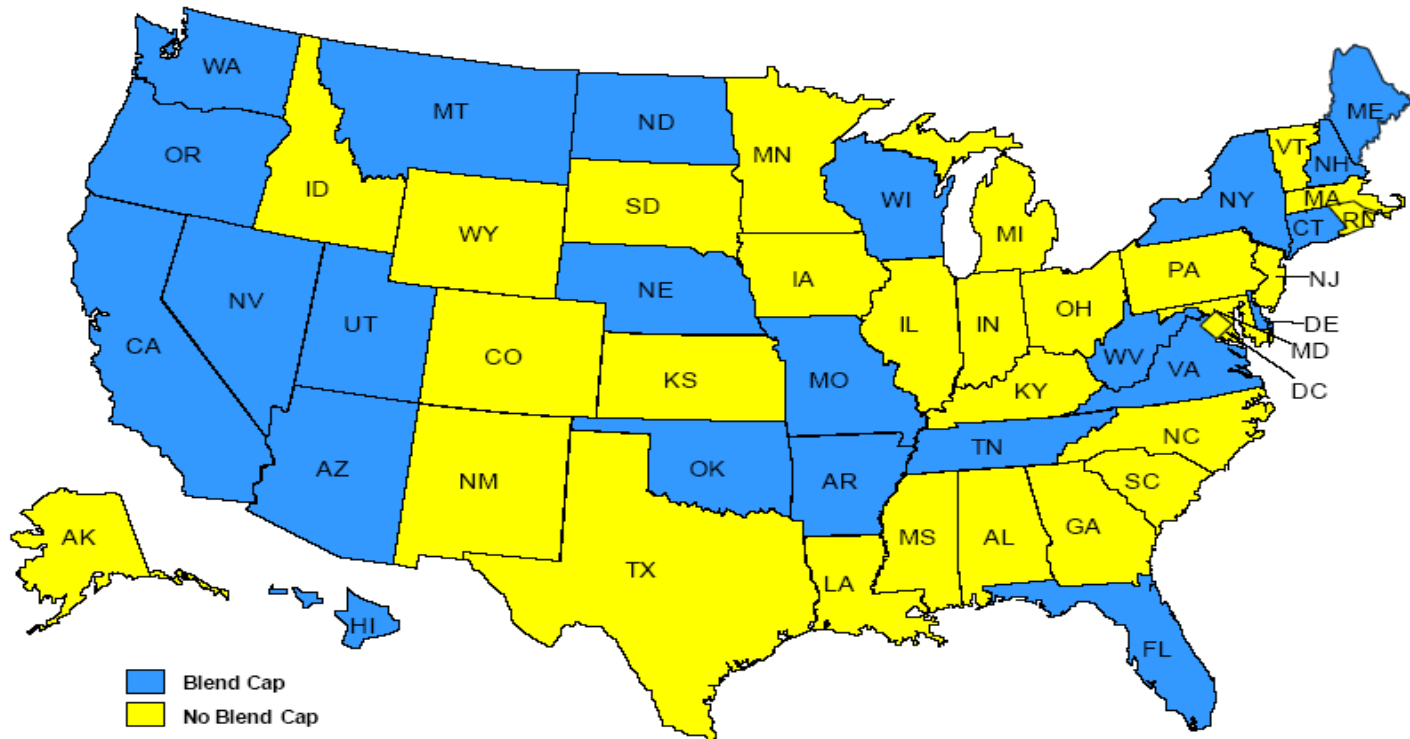
EPA Proposed Labeling



Size 3.625" wide by 3.125" high

State Laws

Gasoline-Ethanol Blend Caps (10% by volume)



Examples of Blender Pump Labeling



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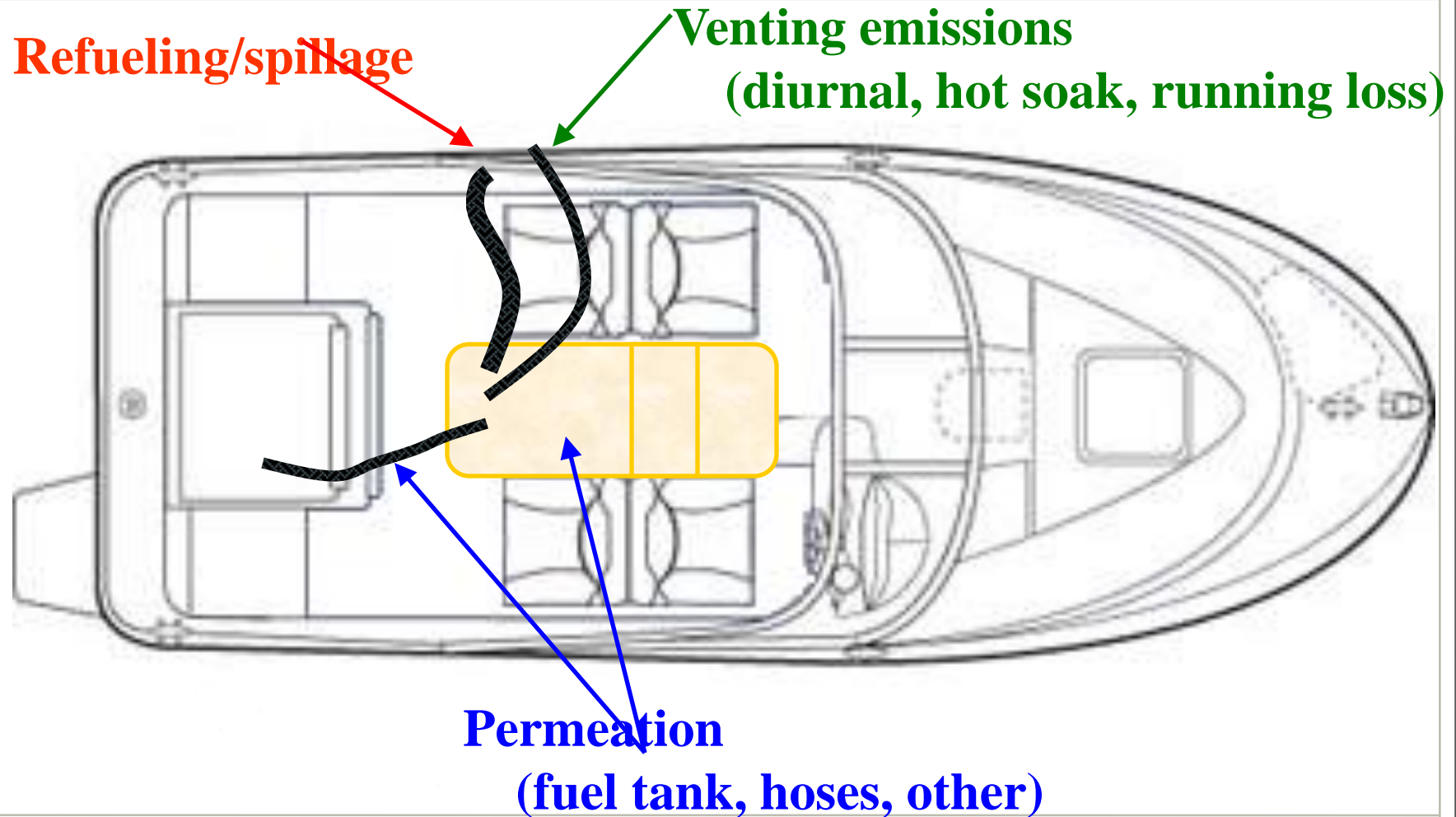
Examples of Blender Pump Labeling



Where Do We Go From Here?

- Near Term - Work through the NPRM Process to make sure our concerns are well known and request addition protections against misfueling
- Near Term – Look at labeling of our products and educating our customers
- Near Term – It is unlikely that significant availability of E15 will occur in less than 18 – 24 months (could be some localized availability earlier)
- Long Term – There will likely be lawsuits to stop higher ethanol blends.
- Consider looking at alternatives, i.e. Biobutanol

Evaporative Emission Types



Technical Approaches

- Design-based certification
 - Seal tank (up to 1.0 psi)
 - Can use pressure mitigation (e.g. bladder)
 - Passive-purge carbon canister
 - Prevent fuel from entering canister
 - Carbon and canister specifications



Refueling

- Fuel nozzle standards
 - Marinas must use standard nozzles whenever they replace existing nozzles or install new ones
 - Same to those already used for motor vehicle pumps
 - Standardized dimensions
 - Automatic shut-off
- System integration
 - Fuel systems should be designed to allow flow to nozzle for automatic shut-off
 - Will help with carbon canister installation designs and reduce spillage



System Integration

- Industry consensus standards
 - SAE J1527 addresses hose permeation
 - ABYC H24 potential vehicle for specifying best practices for fuel system designs
 - NMMA certification
- Canister installation standards
 - Industry is developing canister installation practices in context of EPA & USCG standards
 - ABYC is assessing fuel/air separators and fuel system designs for spillage control



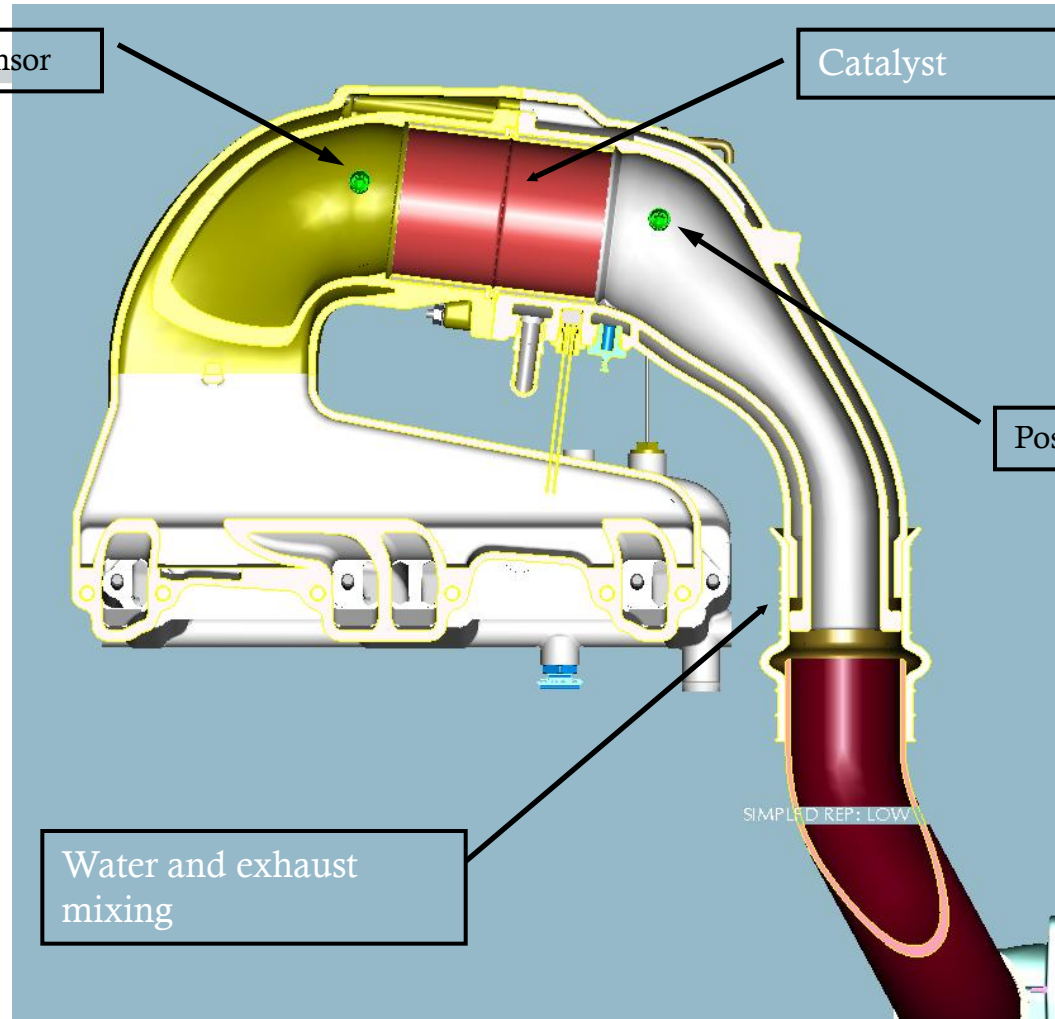
Manifold and catalyst section

Pre-cat oxygen sensor

Catalyst

Post-cat oxygen sensor

Water and exhaust
mixing





THANK YOU