List of Subjects in 40 CFR Part 721
Environmental protection, Chemicals, Hazardous substances, Reporting and recordkeeping requirements.

Dated: June 30, 2011.

Wendy C. Hamnett,
Director, Office of Pollution Prevention and Toxics.

Therefore, it is proposed that 40 CFR chapter I be amended as follows:

PART 721—[AMENDED]

1. The authority citation for part 721 continues to read as follows:

**Table 1—Chemicals Subject to Reporting and Designated Significant New Uses**

<table>
<thead>
<tr>
<th>CAS Registry No. (CASRN)</th>
<th>CA index name</th>
<th>Significant new use</th>
</tr>
</thead>
<tbody>
<tr>
<td>110–71–4 .................</td>
<td>Ethane, 1,2-dimethoxy-</td>
<td>Any use in a consumer product except in electrolyte solutions for sealed lithium batteries.</td>
</tr>
<tr>
<td>111–96–6 .................</td>
<td>Ethane, 1,1′-oxybis[2-methoxy-]</td>
<td>Any use in a consumer product except as a solvent in printing inks for consumer products.</td>
</tr>
<tr>
<td>112–36–7 .................</td>
<td>Ethane, 1,1′-oxybis[2-ethoxy-]</td>
<td>Any use in a consumer product except:</td>
</tr>
<tr>
<td>112–49–2 .................</td>
<td>2,5,8,11-Tetraoxadodecane</td>
<td>—As a solvent in consumer adhesives.</td>
</tr>
<tr>
<td>112–73–2 .................</td>
<td>Butane, 1,1′-[oxybis[2-ethanediyl]]bis-</td>
<td>Any use in a consumer product.</td>
</tr>
<tr>
<td>112–98–1 .................</td>
<td>5,8,11,14,17-Pentaoxaheneicosane</td>
<td>Any use in a consumer product except:</td>
</tr>
<tr>
<td>143–24–8 .................</td>
<td>2,5,8,11,14-Pentaoxapentadecane</td>
<td>—As a component of consumer brake fluids.</td>
</tr>
<tr>
<td>629–14–1 .................</td>
<td>Ethane, 1,2-diethoxy-</td>
<td>Any use in a consumer product.</td>
</tr>
<tr>
<td>4353–28–0 ...............</td>
<td>3,6,9,12,15-Pentaoxaheptadecane</td>
<td>Any use in a consumer product.</td>
</tr>
<tr>
<td>23601–39–0 ..............</td>
<td>3,6,9,12,15,18-Hexaoxaecosane</td>
<td>Any use in a consumer product except:</td>
</tr>
<tr>
<td>24991–55–7 ..............</td>
<td>Poly(oxy-1,2-ethanediyl),.alpha.-methyl-.omega.-methoxy-</td>
<td>—As an HFC/CFC lubricant.</td>
</tr>
<tr>
<td>31885–97–9 ..............</td>
<td>Poly(oxy-1,2-ethanediyl),.alpha.-butyl-.omega.-butoxy-</td>
<td>Any use in a consumer product.</td>
</tr>
<tr>
<td>51105–00–1 ..............</td>
<td>5,8,11,14,17,20-Hexaoxatetracosane</td>
<td>Any use in a consumer product except in consumer paint strippers.</td>
</tr>
<tr>
<td>65352–36–7 ..............</td>
<td>5,8,11,14-Tetraoxaoctadecane</td>
<td>Any use.</td>
</tr>
</tbody>
</table>

**Notice of intent; request for scoping comments.**

**SUMMARY:** Pursuant to the National Environmental Policy Act (NEPA), NHTSA plans to analyze the potential environmental impacts of the agency’s rulemaking to implement the Pedestrian Safety Enhancement Act of 2010. The Pedestrian Safety Enhancement Act mandates a rulemaking to establish a standard requiring electric and hybrid vehicles to be equipped with a pedestrian alert sound system that would activate in certain vehicle operating conditions to aid visually-impaired and other pedestrians in detecting the presence, direction, location, and operation of those vehicles.

Under NEPA, once an agency determines the purpose and need of the proposed federal action, it engages in scoping. This is the process by which the scope of the issues and the alternatives to be examined are determined. This notice initiates the scoping process by inviting comments from Federal, State, and local agencies, Indian Tribes, and the public to help identify the environmental issues and reasonable alternatives to be examined under NEPA. This notice also provides guidance for participating in the scoping process and additional information about the alternatives NHTSA expects to consider in its NEPA analysis.

**DATES:** The scoping process will culminate in the preparation and issuance of an Environmental Assessment (EA), which will be made available for public comment. To ensure that NHTSA has an opportunity to consider scoping comments fully and to
facilitate NHTSA’s prompt preparation of the EA, scoping comments should be submitted in time to ensure that they will be received on or before August 11, 2011. NHTSA will try to consider comments received after that date to the extent the rulemaking schedule allows.

**ADDRESSES:** You may submit comments to the docket number identified in the heading of this document by any of the following methods:

- Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the online instructions for submitting comments.
- Mail: Docket Management Facility, M–30, U.S. Department of Transportation, West Building, Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- Hand Delivery or Courier: U.S. Department of Transportation, West Building, Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m. Eastern time, Monday through Friday, except Federal holidays.

Regardless of how you submit your comments, you should mention the docket number of this document. You may call the Docket at 202–366–9324.

Note that all comments received, including any personal information provided, will be posted without change to http://www.regulations.gov.


**SUPPLEMENTARY INFORMATION:** In a forthcoming notice of proposed rulemaking, NHTSA intends to propose a Federal motor vehicle safety standard requiring electric and hybrid vehicles to be equipped with a pedestrian safety (PESDSAFE) sound system that emits a sound in certain operating conditions to aid visually-impaired and other pedestrians in detecting the presence and operation of those vehicles. The issuance of a PESDSAFE standard is mandated by the Pedestrian Safety Enhancement Act of 2010 (“Pedestrian Safety Act”).

In connection with this action, NHTSA intends to prepare an EA analyzing the potential environmental impacts of the proposed safety standard and reasonable alternative standards pursuant to the National Environmental Policy Act (NEPA) and implementing regulations issued by the Council on Environmental Quality (CEQ) and NHTSA. NEPA requires Federal agencies to consider the potential environmental impacts of their proposed actions and reasonable alternatives in their decisionmaking. To inform decisionmakers and the public, the NEPA analysis will compare the potential environmental impacts of the agency’s preferred alternative and reasonable alternatives, including a “no action” alternative. As required by NEPA, the agency will consider direct, indirect, and cumulative impacts and discuss impacts in proportion to their significance.

**I. Background**

**A. 2008 NHTSA Public Meeting**

On May 30, 2008, NHTSA published a notice in the Federal Register announcing the holding of a public meeting on June 23, 2008 to bring together government policymakers, stakeholders from the visually-impaired community, industry representatives and public interest groups to discuss the technical and safety policy issues associated with hybrids, all-electric vehicles and quiet internal combustion engine vehicles, and the resultant risks to visually-impaired pedestrians. The prepared presentations submitted at the meeting and a transcript of the meeting can be found in Docket No. NHTSA–2008–0108 on http://www.regulations.gov.

**B. 2009 and 2010 NHTSA Reports**

In the two years following the public meeting, NHTSA issued two reports, one in October 2009 and the other in April 2010. The earlier report was entitled “Research on Quieter Cars and the Safety of Blind Pedestrians, A Report to Congress.” The report briefly discussed the quieter cars issue, how NHTSA’s research plan addresses the issue, and the status of the agency’s research in following that plan. In an effort to quantify the problem of hybrid crashes with pedestrians, NHTSA examined the incidence rates for crashes involving hybrid electric vehicles and pedestrians under different circumstances, using data from 12 states, and compared the results to those for internal combustion engine (ICE) vehicles. This study, which was based on a small sample size, found an increased rate of pedestrian crashes for hybrid vehicles compared to their peer ICE vehicles.

In the April 2010 report, NHTSA said that it recognized that quieter cars, such as hybrid-electric vehicles in low-speed operation using their electric motors, may introduce a safety issue for pedestrians who are visually-impaired. This study documented the overall sound levels and general spectral content (i.e., the characteristics of the sound such as frequency, phase, and amplitude values of the sound) for a selection of hybrid-electric and internal combustion vehicles in different operating conditions, evaluated vehicle detectability for two surrounding (or ambient) sound levels, and considered countermeasure concepts that are categorized as vehicle-based, infrastructure-based, and systems requiring vehicle-pedestrian communications.

Some of the main findings were that overall sound levels for the hybrid-electric vehicles tested were lower at low speeds than for the internal combustion engine vehicles tested. There were also significant differences in human subjects’ response time depending on whether electric or internal combustion propulsion was used at both the lower and higher levels of ambient sound. Candidate countermeasures were discussed in terms of types of information provided (direction, vehicle speed, and rate of speed change, etc); useful range of detection of vehicles by pedestrians, warning time, user acceptability, and barriers to implementation. This study provided baseline data on the acoustic characteristics and auditory perception of the general public.

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2 NEPA is codified at 42 U.S.C. 4321–4347. CEQ’s NEPA implementing regulations are codified at 40 CFR parts 1500–1508, and NHTSA’s NEPA implementing regulations are codified at 49 CFR part 520.
3 73 FR 31187; May 30, 2008.
4 The presentations are in document # 0012 and the transcript is in document # 0023 (Docket No. NHTSA–2008–0108–0012 and Docket No. NHTSA–2008–0108–0023, respectively).
detectability of a vehicle when a single vehicle is tested at a time.

**C. 2011 Pedestrian Safety Act**

The Pedestrian Safety Act requires NHTSA to conduct a rulemaking to establish a Federal motor vehicle safety standard requiring an alert sound for pedestrians to be emitted by all types of motor vehicles that are electric vehicles or hybrid vehicles (EVs and HVs). This standard is required to be sufficiently detectable by pedestrians without the aid of sight, hearing, or other factors.

The rulemaking must be initiated no later than 18 months after the date of enactment of the Pedestrian Safety Act. Given that the date of enactment was January 4, 2011, rulemaking must be initiated by July 4, 2012.

The PedsSAFE standard must specify performance requirements for an alert sound that enables visually-impaired and other pedestrians to reasonably detect EVs and HVs operating below their cross-over speed. The Pedestrian Safety Act defines “alert sound” as a vehicle-emitted sound that enables pedestrians to discern the presence, direction, location, and operation of the vehicle.

The Pedestrian Safety Act specifies several requirements regarding the performance of the alert sound to enable pedestrians to discern the operation of motor vehicles. First, the alert sound must be sufficient to allow a pedestrian to reasonably detect a nearby EV or HV operating at constant speed, accelerating, decelerating and operating in any other scenarios that NHTSA deems appropriate. Second, it must reflect the agency’s determination of the minimum sound level emitted by a motor vehicle that is necessary to allow visually-impaired and other pedestrians to reasonably detect a nearby EV or HV operating below the cross-over speed. Third, it must reflect the agency’s determination of the performance requirements necessary to ensure that each vehicle’s alert sound is recognizable to pedestrians as that of a motor vehicle in operation.

The Pedestrian Safety Act mandates that the PedsSAFE standard shall not require the alert sound to be dependent on either driver or pedestrian activation. It also requires that the safety standard allow manufacturers to provide each vehicle with one or more alert sounds that comply, at the time of manufacture, with the safety standard. Each vehicle of the same make and model must emit the same alert sound or set of sounds. The standard is required to prohibit manufacturers from providing anyone, other than the manufacturer or dealers, with a device designed to disable, alter, replace or modify the alert sound or set of sounds emitted from the vehicle. A manufacturer or a dealer, however, is allowed to alter, replace, or modify the alert sound or set of sounds in order to remedy a defect or non-compliance with the safety standard.

Because the Pedestrian Safety Act directs NHTSA to establish these requirements as a motor vehicle safety standard under the National Traffic and Motor Vehicle Safety Act (Vehicle Safety Act), the requirements must comply with that Act as well as the Pedestrian Safety Act. The Vehicle Safety Act requires each safety standard to be performance-oriented, practicable, and objective and meet the need for safety. In addition, in developing and issuing a standard, NHTSA must consider whether the standard is reasonable, practicable, and appropriate for each type of motor vehicle covered by the standard.

As a federal motor vehicle safety standard, the pedestrian alert sound system standard would be enforced in the same fashion as any other safety standard issued under the Safety Act. Thus, violators of the standard would be subject to civil penalties. A vehicle manufacturer would be required to conduct a recall and provide remedy without charge if its vehicles were determined to fail to comply with the standard or if the alert sound system were determined to contain a safety related defect. Further, vehicle manufacturers, distributors, dealers, and motor vehicle repair businesses would be prohibited from rendering the sound system inoperative.

The Pedestrian Safety Act requires NHTSA to consider the overall community noise impact of any alert sound required by the safety standard. In addition, NHTSA will consider the environmental analysis prepared under NEPA when setting the standard.

As part of the rulemaking process, NHTSA is expressly required by the Pedestrian Safety Act to consult with:

- The Environmental Protection Agency (EPA) to assure that any alert sound required by the rulemaking is consistent with noise regulations issued by that agency;
- Consumer groups representing visually-impaired individuals;
- Automobile manufacturers and trade associations representing them;
- Technical standardization organizations responsible for measurement methods such as:
  - The Society of Automotive Engineers,
  - The International Organization for Standardization, and

Under the Act, NHTSA must publish a final rule establishing the standard requiring an alert sound for EVs and HVs by January 4, 2014. The Pedestrian

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7 NHTSA is delegated authority by the Secretary of Transportation to carry out Chapter 301 of Title 49 of the United States Code. See 49 CFR § 501.2. This includes the authority to issue Federal motor vehicle safety standards. 49 U.S.C. 30111.
8 Section 2(9) of the Pedestrian Safety Act defines “vehicle” as having the meaning given such term in section 30102(a)(6) of title 49, United States Code, except that such term shall not include two-wheeled motor vehicles or any other factors make an alert sound.
9 Section 2(10) of the Pedestrian Safety Act defines “hybrid vehicle” as a motor vehicle which has more than one means of propulsion.
10 Section 2(11) of the Pedestrian Safety Act defines “hybrid vehicle” as a vehicle with an electric motor as its sole means of propulsion.
11 Section 2(12) of the Pedestrian Safety Act defines “hybrid vehicle” as a motor vehicle which has more than one means of propulsion. As a practical matter, this term is currently essentially synonymous with “hybrid electric vehicle.”
12 Section 2(13) of the Pedestrian Safety Act defines “cross-over speed” as the speed at which tire noise or other factors make an alert sound detectable by pedestrians without the aid of an alert sound. The definition requires NHTSA to determine the speed at which an alert sound is no longer necessary.
13 The Pedestrian Safety Act does not specify whether vehicle “direction” is to be defined with reference to the vehicle itself (thus meaning forward or backward) or the pedestrian.
14 Section 2(14) of the Pedestrian Safety Act.
15 Section 2(15) of the Pedestrian Safety Act.
16 Section 2(16) of the Pedestrian Safety Act.
17 Section 2(17) of the Pedestrian Safety Act.
18 49 U.S.C. Chapter 301.
19 In a case involving passive occupant restraints, the U.S. Circuit Court of Appeals for D.C. said that the agency must consider public reaction in assessing the practicability of required safety equipment like an ignition interlock for seat belts.
21 49 U.S.C. Chapter 301.
22 In a case involving passive occupant restraints, the U.S. Circuit Court of Appeals for the 9th Circuit said that the agency must consider public reaction in assessing the practicability of required safety equipment like an ignition interlock for seat belts.
27 NHTSA officials have been participating in the meetings of the World Forum informal working group charged with addressing the problem of quiet cars. NHTSA is sending copies of this notice to that group and to each of the other organizations with which it is required to consult.
Safety Act requires that the agency provide a phase-in period, as determined by NHTSA. However, full compliance with the standard must be achieved for all vehicles manufactured on or after September 1st of the calendar year beginning three years after the date of publication of the final rule. Thus, if the final rule were promulgated sometime in 2013, the three-year period after the date of publication of the final rule would end sometime in 2016. The first calendar year that would begin after that date in 2016 would be calendar year 2017. Thus, under that time scenario, full compliance would be required not later than September 1, 2017. Finally, the Pedestrian Safety Act requires NHTSA to conduct a study and report to Congress whether the agency believes there is a safety need to require alert sounds for motor vehicles with internal combustion engines. The report must be submitted to Congress by January 4, 2015. If NHTSA determines that there is a safety need to require alert sounds for those motor vehicles the agency must initiate a rulemaking to require alert sounds for them.

D. Related Activities

Other national regulatory bodies, international standards organizations, and automotive manufacturers are considering the possibility of adding alert sounds to EVs and HVs to aid pedestrian detection of these vehicles.

The Japanese Ministry of Land, Infrastructure, Transport and Tourism (MLIT), after studying the feasibility of alert sounds for EVs and HVs, issued guidelines for pedestrian alert sounds in 2010. MLIT concluded that pedestrian alert sounds should be required on HVs that can run exclusively on an electric motor. EVs, and fuel-cell vehicles. MLIT guidelines require that EVs and HVs generate a pedestrian alert sound whenever the vehicle is moving forward at any speed less than 20 km/h and when the vehicle is operating in reverse. MLIT guidelines do not require vehicles to produce an alert sound when the vehicle is operating, but stopped, such as at a traffic light. The manufacturer is allowed to equip the vehicle with a switch to deactivate the alert sound temporarily.

The MLIT includes the following guidelines for the type and volume of sounds emitted by EVs and HVs:

- The sound shall be a continuous sound associated with a motor vehicle in operation.
- The sound is not allowed to sound like sirens, chimes, bells, a melody, or a horn. The sound of animals, insects, and natural phenomena such as waves, wind, and river currents, are also prohibited.
- The sound shall be automatically altered in volume or tone, depending on the vehicle’s speed for easier recognition of the movement of the vehicle.
- The volume of the sound shall not exceed the level of the sound generated by ICE vehicles operating at the speed of 20 km/h.

During its March 2011 session, the World Forum for Harmonization of Vehicle Regulation of the United Nations Economic Commission for Europe (UNECE) adopted guidelines covering alert sounds for EVs and HVs that are closely based on the Japanese guidelines. The guidelines will be published as an annex to the UNECE Consolidated Resolution on the Construction of Vehicles (R.E.3). The guidelines developed by the UNECE recommend that EVs and HVs emit a pedestrian alert sound whenever the vehicle starts moving and continuing until the speed of the vehicle reaches 20 km/h. The guidelines do not specify that a vehicle emit an alert sound when the vehicle is stopped or when a HV’s ICE is engaged and thus emitting sound. As under the Japanese guidelines, manufacturers would be allowed to equip vehicles with an on-off switch that the driver can use to silence the alert sound. The UNECE guidelines also contain the same provisions for the type and volume of alert sounds emitted by EVs and HVs as do the Japanese guidelines.

The Vehicle Sound for Pedestrians (VSP) subcommittee of the Society of Automotive Engineers (SAE) is working to develop a test procedure to measure sound emitted by ICE vehicles and sound systems that procedure alert sounds for use on EVs and HVs.

SAE has developed a draft version of standard J2889–1, Measurement of Minimum Noise Emitted by Road Vehicles. The purpose of J2889–1 is to provide an objective, technology neutral test to measure the sound emitted by a vehicle in a specified ambient noise condition. J2889–1 does not account for psychoacoustic factors such as annoyance, recognizability, or detectability. J2889–1 specifies the test site conditions, meteorological conditions, and ambient noise level under which the sound should be recorded. The test contains procedures for measuring the sound pressure level (loudness) in decibels and frequency content and changes in sound pressure level and frequency content of sounds emitted by a vehicle in order to measure how the sounds relate to vehicle speed.

The International Organization for Standardization (ISO) is cooperating with SAE in its efforts to develop a vehicle minimum noise measurement standard. The ISO document (ISO/IEC 16254 Measurement of minimum noise emitted by road vehicles) and SAE document are reportedly technically identical. The standard will provide procedures for assessing the performance of countermeasure systems, including, for example, a pitch shift measurement procedure.

Automotive manufacturers that produce EVs for the U.S. market have developed various pedestrian alert sounds, recognizing that those vehicles, when operating at low speeds, pose a risk to pedestrians. For example, the pedestrian alert system for the Nissan Leaf produces a sound that could be described as a high-pitched whirring sound that increases in volume as the vehicle accelerates forward. The pedestrian alert sound deactivates once the vehicle reaches 32 km/h (20 mph). The Leaf produces a beeping sound when operating in reverse. The vehicle is equipped with a switch that allows the driver to turn off the alert sound. The Leaf does not produce a sound when the vehicle is operating, but stopped.

25 The MLIT guidelines do not require that an EV or HV emit an alert sound when the vehicle is idling. Idling and stopped refer to the same operating scenario.

26 The late 2010 status report on this work can be found at http://www.sae.org/events/gim/ presentations/2011/VSP.pdf.
27 http://standards.sae.org/wip/j2889/1/

29 Low frequency sounds have a low pitch like the noise on the lower end of a musical scale and high frequency sounds have a high pitch like the notes on the upper end of such a scale.
The Chevrolet Volt, produced by General Motors, is equipped with a driver activated pedestrian alert system. The system, which is activated when the driver pulls back on the turn signal handle, emits a short horn pulse. Automotive equipment manufacturers have begun developing speaker systems designed to produce alert sounds to install on EVs and HVs. Most of the systems have a single speaker that projects sound forward. The same speaker is used to provide an alert sound both when the vehicle is moving forward and when the vehicle is moving backward. Other systems currently under development would allow the pedestrian alert sound to be projected only in the direction of travel of the vehicle. Manufacturers of these systems indicate that the directional projection of warning sounds will reduce the amount of noise that the system must produce to provide acoustic cues to pedestrians of the presence of a nearby vehicle.

II. Purpose and Need for Rulemaking

The purpose of the rulemaking mandated by the Pedestrian Safety Act is to require EVs and HVs, which tend to be quieter than the ICE vehicles, to be equipped with a pedestrian alert sound system that would activate in certain vehicle operating conditions to aid visually-impaired and other pedestrians in detecting the presence, direction, location, and operation of those vehicles. Taking this action is expected to reduce the number of incidents in which EVs and HVs strike pedestrians.

III. The Alternatives

This notice briefly describes a variety of possible alternatives that are currently under consideration by the agency, and seeks input from the public about these alternatives and about whether other alternatives should be considered as we proceed with the rulemaking and the EA. In developing Alternatives 2 through 5, NHTSA considered, as it is required to do so, the Pedestrian Safety Act’s requirements for establishing a PEDSAFE standard. Those requirements are set out above in section I of this notice.

These alternatives are based on agency research seeking to determine, with due concern for environmental considerations, what type or types of sound will be most appropriate and effective for aiding pedestrians in detecting, identifying and localizing the sound of EVs and HVs both in the near future and in the more distant future as the percentage of EVs and HVs in the vehicle fleet increases. The agency notes that its research is ongoing and that outcome of that research could affect the array of alternatives from which a preferred alternative is selected for the notice of proposed rulemaking.

The alternatives currently under consideration are:

A. Alternative 1: “No Action” Alternative

This alternative assumes, strictly for purposes of NEPA analysis, that NHTSA would not issue a rule requiring pedestrian alert sounds for any electric or hybrid motor vehicles. NEPA requires agencies to consider a “no action” alternative in their NEPA analyses and to compare the effects of not taking action with the effects of the reasonable action alternatives to demonstrate the different environmental effects of the action alternatives. In defining this baseline alternative, the agency would consider what actions might be taken by other parties in the absence of action by this agency. In other words, the agency would consider what the world would be like if a Federal rule were not adopted. In this regard, the agency notes that manufacturers of electric vehicles have generally been equipping their vehicles with various types of pedestrian warning sounds, but manufacturers of hybrid vehicles have generally not been doing so. NHTSA notes further that since the Pedestrian Safety Act directs the agency to issue a PEDSAFE standard for electric and hybrid vehicles, the statute does not permit the agency to take no action on this issue.

B. Alternative 2: Recordings of Actual Internal Combustion Engine Sounds

Under this regulatory alternative, recordings of sounds produced by ICE vehicles would be used to create the pedestrian alert sound. The sounds produced by an ICE vehicle would be recorded when the vehicle is operating at constant speeds, forward from 0 to 40 km/h (0 to 25 mph) and in reverse potentially up to 32 km/h (0 to 20 mph) and in reverse potentially up to 10 km/h (6 mph). Other components of a vehicle’s noise output such as tire noise, aerodynamic noise, and air conditioning fan noise would not be included in the recording used for the alert sound because these sounds are also emitted by EVs and HVs. The sound system would be programmed so that the pedestrian alert sound would vary based on the speed and operating mode of the vehicle in which the system was installed. Regulatory compliance with this alternative might be determined by an objective test that measured the overall decibel level and the average one-third octave band level of the sound to ensure that the sound mimics as nearly as possible that of the ICE vehicle from which it was recorded. The results from the sound recordings would be compared to the sound profile of an ICE reference.

The advantage of a pedestrian warning sound consisting of a recording of an ICE vehicle is that the sound would have the same sound characteristics and volume levels of ICE vehicles currently in use. Further, ICE sounds are known and accepted by pedestrians. The agency anticipates that ICE-based and ICE-like synthetic sounds (i.e., sounds that are representative of an ICE vehicle, but are not from a recording of an ICE vehicle) played at current vehicle sound levels would not significantly change the overall sound profile of urban (low-speed) traffic noise, except for some loss of lower frequencies. The overall sound of traffic noise would be similar for ICE sounds if ICEs were replaced one-to-one with HVs/EVs.

An ICE vehicle recording would be reasonably recognizable to pedestrians as the sound of a motor vehicle. However, if the recording were played through low-fidelity speakers, it would tend to sound somewhat higher, thinner, and more metallic than an ICE recording.

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32 See 40 CFR 1502.2(e), 1502.14(d).
33 Until NHTSA completes its rulemaking under the Pedestrian Safety Act, the agency cannot fully determine the extent to which any of those systems might be compliant.
34 CEQ has explained that “[T]he regulations require the analysis of the no action alternative even if the agency is under a court order or legislative command to act. This analysis provides a benchmark, enabling decision makers to compare the magnitude of environmental effects of the action alternatives.” [40 CFR 1502.14(c).] * * * Inclusion of such an analysis in the EIS is necessary to inform Congress, the public, and the President as intended by NEPA. [See 40 CFR 1500.1(a).] “Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations,” 46 FR 18026 (1981)[emphasis added].
vehicle. This is because this type of speaker cannot reproduce the low-frequency components of ICE sounds, but can effectively project non-ICE vehicle sounds that are comprised of components in the higher frequency ranges. On the other hand, a pedestrian alert sound based on an ICE vehicle recording would also limit acoustic variation among alert sounds, thereby reducing the possibility that a multitude of different alert sounds from different vehicle models would annoy or confuse pedestrians.

In view of its similarity to ICE vehicle sounds, an ICE vehicle recording is presumed to be recognizable at the same distance as ICE vehicles are recognizable. The drawback to using an ICE vehicle recording as a pedestrian alert sound is that non-ICE vehicle sounds could possibly be designed so as to provide better detectability for pedestrians, presumably at lower decibel levels.

C. Alternative 3: Synthesized ICE-Equivalent Sounds

In this alternative, simulated ICE vehicle sounds would be synthesized directly by a digital-signal processor programmed to create ICE vehicle-like alert sounds that would vary pitch and loudness in relation to the speed and operating mode of the vehicle. The synthetic sounds would be based on actual ICE vehicle sounds.

The resulting synthesized sounds would resemble those of Alternative 2, and thus have advantages and disadvantages similar to those of that alternative.

The synthesized sounds would have an additional advantage as a result of having fewer components along the frequency spectrum. This could allow for better detectability in ambient noise environments in which those frequency components are not present. To the extent that detectability was aided, the decibel level could be commensurately lowered to reduce the potential for any environmental impact. This adjustment would be intended to ensure that the sound impact of EVs and HVs would be no greater than that of existing ICE vehicles.

The compliance test method for alternative 3 would be the same as the method used in alternative 2.

D. Alternative 4: Combination of Synthesized Non-ICE Sounds and ICE Components to Aid Recognition

This regulatory alternative would consist of a pedestrian alert sound combining some of the acoustic characteristics of sounds produced by ICE vehicles and some characteristics of non-ICE vehicle sounds engineered for enhanced detectability.

These types of sounds share some of the same advantages and disadvantages of the sounds discussed in some of the other alternatives, especially Alternative 5.

One advantage of the combination of a synthesized sound and components of an ICE sound is that there is a greater likelihood that a pedestrian will recognize the sound as one coming from a motor vehicle.

Because this sound would not have a comparable ICE vehicle profile for which a safe detection distance at a given decibel level has been established, detectability of these sounds would likely need to be assessed through human subject testing. These combination ICE and non-ICE sounds would also vary pitch and loudness in relation to the speed and operating mode of the vehicle. Further, in addition to the issue of detectability, the agency must consider the issue of recognizability too. It likely could be assessed only through human-subject testing.

To the extent that the non-ICE elements permitted detection at lower decibel levels than the alternatives based on ICE sounds, the agency could specify such a lower decibel level in an effort to ensure that the potential for environmental impact would not be any greater than that for Alternatives 2 and 3. Because the sound for this alternative would contain acoustic characteristics of an ICE sound, it might prove more acceptable to the public than that for Alternative 5.

E. Alternative 5: Synthesized Non-ICE Sounds Developed To Enhance Detectability

Under this alternative, pedestrian alert sounds would be created based on psychoacoustic principles using a digital-signal processor. Some characteristics common to these non-ICE vehicle sounds would include:

- Pitch shifting denoting vehicle speed change (in order to replicate a vehicle accelerating from 0 to 32 km/h (0 to 20 mph), a linear pitch change of approximately 40% is necessary, based on changes in vehicle speed);
- Pulsating quality, with pulse widths of 100 to 200 msec and about three to ten pulses per second interval;
- Inter-pulse intervals of no more than 150 msec;
- A fundamental tonal component in the 150 to 1000 Hz frequency range;
- At least three prominent harmonics in the 1 to 4 kHz frequency range;
- Four or more frequencies with average sound pressure exceeding 50 dB(A).

Sounds having the characteristics listed above might not resemble the sound of an ICE vehicle, although recordings of ICE vehicle noise can be processed through a digital signal processor to conform to the characteristics above while retaining a quality that would allow pedestrians to identify the sound as coming from a motor vehicle. Although the alert sound would not sound like an ICE vehicle, it would still vary pitch and loudness in relation to the speed and operating mode of the vehicle, which would enable pedestrians to identify the sound as that of a motor vehicle in operation.

An advantage to some synthetically developed alert sounds with no ICE vehicle references is that the sounds appear to offer a detection distance comparable to that of an ICE vehicle sound at a lower decibel level. If this alternative were selected, the agency would specify such a lower decibel level in an effort to ensure that the potential for environmental impact would not be any greater than that for Alternatives 2 and 3.

The detectability of a specific non-ICE sound, however, likely could be assessed only through human-subject testing because these non-ICE vehicle sounds do not have an ICE vehicle reference for which a decibel level corresponding to a safe detection distance has been measured. Further, in addition to the issue of detectability, the agency must consider the issue of recognizability. It too likely could be assessed only through human-subject testing.

Using non-ICE vehicle sounds as pedestrian alert sounds, however, could entail some disadvantages. If the open-endedness of this approach resulted in a wide variety of different alert sounds for different vehicle models, it could complicate the learning and recognizing of alert sounds and thereby confuse pedestrians. Further, there are questions as to whether all non-ICE vehicle sounds would be recognizable as those of a motor vehicle. Multiple different alert sounds with no common acoustic characteristics might have a negative impact on community noise levels.

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37 This problem would also affect all of the other action alternatives.

38 The same step would be taken for Alternatives 4 and 5.

39 Psychoacoustics is the field of science that studies how humans perceive and react to sounds.
F. The Alternatives in General

Each of the alternatives set forth above by NHTSA represents a different way in which NHTSA conceivably could balance the potentially competing considerations of recognizability, detectability, effectiveness, environmental noise impact and cost. For example, Alternative 2 places more weight on the recognizability of the alert sound as that of an ICE motor vehicle and minimization of any risk of an adverse noise impact on the community than Alternative 5 does. Conversely, the latter alternative places more weight on detectability than the former alternative does.

The agency may select one of the above-identified alternatives as its preferred alternative. Under NEPA, the purpose of and need for an agency’s action inform the range of reasonable alternatives to be considered in its NEPA analysis. The above alternatives represent a broad range of approaches under consideration for setting the proposed PEDSAFE standard and whose environmental impacts we plan to evaluate under NEPA.

As detailed below, NHTSA invites comments to ensure that the agency considers a range of reasonable alternatives in setting a PEDSAFE standard and that the agency identifies the environmental impacts associated with each alternative. Comments may go beyond the approaches and information that NHTSA used in developing the above. The agency may modify the alternatives and environmental effects that will be analyzed in depth based upon the comments received during the scoping process and upon further agency analysis.

IV. Scoping and Public Participation

The scoping process initiated by this notice seeks public comment on the range of alternatives and impacts to be considered in the EA and to identify the most important issues for in-depth analysis involving the potential environmental impacts of NHTSA’s PEDSAFE standard.40 NHTSA’s NEPA analysis for the PEDSAFE standard will consider the direct, indirect and cumulative environmental impacts of the proposed standards and those of reasonable alternatives.

In preparing this notice of public scoping, NHTSA has consulted with agencies, including CEQ, Department of Energy, EPA, and the Department of Interior. Through this notice, NHTSA invites participation by the public and all Federal agencies, and by Indian Tribes, State and local agencies with jurisdiction by law or special expertise with respect to potential environmental impacts of the proposed PEDSAFE standard, and the public to participate in the scoping process.41

Specifically, NHTSA invites all stakeholders to participate in the scoping process by submitting written comments concerning the appropriate scope of NHTSA’s NEPA analysis for the proposed PEDSAFE standard to the docket number identified in the heading of this notice, using any of the methods described in the ADDRESSES section of this notice. NHTSA does not plan to hold a public scoping meeting, because written comments will be effective in identifying and narrowing the issues for analysis.

NHTSA is especially interested in comments concerning the evaluation of community noise impacts. Information on some of the basic elements of evaluating those impacts can be found in “Technology for a Quieter America,” a 2010 report by the National Academy of Engineering (NEA) of the National Academies.42 For example, chapter 2 of the report addresses community noise and chapter 3 addresses metrics for assessing environmental noise.

Specifically, NHTSA requests:

- Peer-reviewed scientific studies relevant to any environmental issues associated with this rulemaking.
- Reports analyzing the potential impacts within the United States, in particular geographic areas of the United States or in special habitats and environments like those in the National Park System.43
- Suggestions on how to assess the potential for this rulemaking to result in the emission of sound which, either because of its volume or nature, causes annoyance, as well as suggestions for how to limit that potential while achieving the safety purposes of the Pedestrian Safety Act. While the issue of volume could be addressed by placing a limit on the maximum volume of the alert noise, what steps could be taken to address the nature of the sound emitted?

To aid commenters in understanding the differing sound levels in different environments, we have set out below two tables from the introduction to NEA’s report “Technology for a Quieter America.”44 a 2010 report by the National Academy of Engineering (NEA):

### COMPARISON OF A-WEIGHTED SOUND LEVELS IN COMMON OUTDOOR ENVIRONMENTS

<table>
<thead>
<tr>
<th>A-weighted sound level (decibels)</th>
<th>Typical outdoor setting</th>
<th>Non-Park</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>Noisy Urban Area (daytime)</td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>Commercial Retail Area</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>Suburban Area (daytime)</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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40 See 40 CFR 1505.5(d), 1501.7, 1508.25.
41 Consistent with NEPA and implementing regulations, NHTSA is sending this notice directly to: (1) Federal agencies having jurisdiction by law or special expertise with respect to the environmental impacts involved or authorized to develop and enforce environmental standards; (2) the Governors of every State, to share with the appropriate agencies and offices within their administrations and with the local jurisdictions within their States; (3) organizations representing state and local governments and Indian Tribes; and (4) other stakeholders that NHTSA reasonably expects to be interested in the NEPA analysis for the proposed pedestrian alert sound standards. See 42 U.S.C. 4332(2)(C); 49 CFR 520.21(g); 40 CFR 1501.7, 1506.6.
43 In these areas, there may be a special need to use quiet vehicles for purposes such as wildlife tours. See, for example, the brochure of the National Park Service on its program, the Natural Sounds Program, for protecting the acoustic environment of the areas in the National Park System. The brochure can be found at [http://www.nature.nps.gov/naturalsounds/PDF_docs/NSP_standard_brochure_final_10_1_08.pdf](http://www.nature.nps.gov/naturalsounds/PDF_docs/NSP_standard_brochure_final_10_1_08.pdf).
44 See page 6 of the report.
NHTSA understands that there are a variety of potential alternatives that could be considered that fit within the purpose and need for the proposed rulemaking, as set forth in the Pedestrian Safety Act. Therefore, NHTSA seeks comments on how best to structure a reasonable alternative for purposes of evaluating it under NEPA. Specifically, NHTSA seeks comments on what criteria should be used to structure such alternative. When suggesting a possible alternative, please explain how it would satisfy the Pedestrian Safety Act’s requirements and other provisions.

Two important purposes of scoping are identifying the issues that merit in-depth analysis and identifying and eliminating from detailed analysis minor issues that need only a brief discussion. In light of these purposes, written comments should include an Internet citation (with a date last visited) to each study or report you cite in your comments if one is available. If a document you cite is not available to the public on-line, you should attach a copy to your comments. Your comments should indicate how each document you cite or attach to your comments is relevant to the NEPA analysis and indicate the specific pages and passages in the attachment that are most informative.

The more specific your comments are, and the more support you can provide by directing the agency to peer-reviewed scientific studies and reports as requested above, the more useful your comments will be to the agency. For example, if you identify an additional area of impact or environmental concern you believe NHTSA should analyze, or an analytical tool or model that you believe NHTSA should use to evaluate these environmental impacts, you should clearly describe it and support your comments with a reference to a specific peer-reviewed scientific study, report, tool or model. Specific, well-supported comments will help the agency prepare a NEPA analysis that is focused and relevant, and that will serve NEPA’s overarching aims of making high quality information available to decisionmakers and the public by concentrating on important issues, “rather than amassing needless detail.” By contrast, mere assertions that the agency should evaluate broad lists or categories of concerns, without support, will not assist the scoping process for the proposed standard.

Please be sure to reference the docket number identified in the heading of this notice in your comments. In addition to meeting the notice requirements in the implementing regulations issued by CEQ, NHTSA intends to provide notice to interested parties by e-mail. Thus, please also provide an e-mail address (or a mailing address if you decline e-mail communications). These steps will help NHTSA to manage a large volume of material during the NEPA process. All comments and materials received, including the names and addresses of the commenters who submit them, will become part of the administrative record and will be posted on the Web at http://www.nhtsa.dot.gov.

Based on comments received during scoping, NHTSA expects to prepare an EA for public comment in conjunction with the proposal, which is to be issued by July 4, 2012, and a final EA to accompany the final rule, which is to be issued by January 4, 2014.

Separate Federal Register notices will announce the availability of the EA, which will be available for public comment, and the final NEPA document, which will be available for public inspection. NHTSA also plans to continue to post information about the pedestrian safety rulemaking, including information relating to the NEPA

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45 CFR 1500.4(g), 1501.7(a).

46 40 CFR 1500.1(b).

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**COMPARISON OF A-WEIGHTED SOUND LEVELS IN COMMON OUTDOOR ENVIRONMENTS—Continued**

<table>
<thead>
<tr>
<th>A-weighted sound level (decibels)</th>
<th>Typical outdoor setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>Suburban Area (nighttime)</td>
</tr>
<tr>
<td>30</td>
<td>Hawaiian volcanoes (crater overlook)</td>
</tr>
<tr>
<td>20</td>
<td>Haleakala (in crater, no wind)</td>
</tr>
<tr>
<td>10</td>
<td>Park</td>
</tr>
<tr>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

**SOUND PRESSURE LEVELS GENERATED BY VARIOUS NOISE SOURCES**

<table>
<thead>
<tr>
<th>Sound pressure level</th>
<th>dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiet library, soft whispers</td>
<td>30</td>
</tr>
<tr>
<td>Living room, refrigerator</td>
<td>40</td>
</tr>
<tr>
<td>Light traffic, normal conversation, quiet office</td>
<td>50</td>
</tr>
<tr>
<td>Air conditioner at 20 feet, sewing machine</td>
<td>60</td>
</tr>
<tr>
<td>Vacuum cleaner, hair dryer, noisy restaurant</td>
<td>70</td>
</tr>
<tr>
<td>Average city traffic, garbage disposals, alarm clock at 2 feet</td>
<td>80</td>
</tr>
<tr>
<td>Subway, motorcycle, truck traffic, lawn mower</td>
<td>90</td>
</tr>
<tr>
<td>Garbage truck, chain saw, pneumatic drill</td>
<td>100</td>
</tr>
<tr>
<td>Rock band concert in front of speakers, thunderclap</td>
<td>120</td>
</tr>
<tr>
<td>Gunshot blast, jet plane</td>
<td>140</td>
</tr>
<tr>
<td>Rocket launching pad</td>
<td>180</td>
</tr>
</tbody>
</table>
Threatened or Endangered Petition To List the Bay Skipper as
Endangered and Threatened Wildlife

50 CFR Part 17

DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service

Endangered and Threatened Wildlife and Plants; 90-Day Finding on a
Petition To List the Bay Skipper as Threatened or Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of petition finding and
initiation of status review.

SUMMARY: We, the U.S. Fish and
Wildlife Service, announce a 90-day
finding on a petition to list the Bay
skipper (Euphyes bayensis) as threatened or endangered under the
Endangered Species Act of 1973, as amended (Act), and to designate critical
habitat. Based on our review, we find
that the petition presents substantial
scientific or commercial information
indicating that listing this species may
be warranted. Therefore, with the
publication of this notice, we are
initiating a review of the status of the
species to determine if listing the
species is warranted. To ensure that this
status review is comprehensive, we are
requesting scientific and commercial
data and other information regarding
this species. Based on the status review,
we will issue a 12-month finding on the
petition, which will address whether
the petitioned action is warranted, as
provided in section 4(b)(3)(B) of the Act.

DATES: To allow us adequate time to
conduct this review, we request that we
receive information on or before
September 12, 2011. Please note that if
you are using the Federal eRulemaking
Portal (see ADDRESSES section, below),
the deadline for submitting an
electronic comment is 11:59 p.m.
Eastern Daylight Time on this date.

ADDRESSES: You may submit
information by one of the following
methods:

(1) Federal eRulemaking Portal:
http://www.regulations.gov. In the box
that reads “Enter Keyword or ID,” enter
the docket number for this finding,
which is FWS–R4–ES–2011–0012. Check
the box that reads “Open for
Comment/Submission,” and then click
the Search button. You should then see
an icon that reads “Submit a Comment.”
Please ensure that you have found the
correct rulemaking before submitting
your comment.

(2) U.S. Mail or Hand-Delivery: Public
Comments Processing, Attn: FWS–R4–
ES–2011–0012; Division of Policy and
Directives Management; U.S. Fish and
Wildlife Service; 4401 N. Fairfax Drive,
Suite 222; Arlington, VA 22203.

We will not accept e-mail or faxes. We
will post all information we receive on
http://www.regulations.gov. This
generally means that we will post any
personal information you provide us
(see the Request for Information section
below for more details).

FOR FURTHER INFORMATION CONTACT:
Stephen Ricks, Field Supervisor,
Mississippi Ecological Services Field
Office, 6578 Dogwood View Parkway,
Jackson, MS, or by telephone 601–321–
1122, or facsimile 601–965–4340. If you use a telecommunications device for the
deaf (TDD), please call the Federal
Information Relay Service (FIRS) at
800–877–8339.

SUPPLEMENTARY INFORMATION:
Request for Information

When we make a finding that a
petition presents substantial
information indicating that listing a
species may be warranted, we are
required to promptly review the status
of the species (status review). For the
status review to be complete and based
on the best available scientific and
commercial information, we request
information on the Bay skipper from
governmental agencies, Native
American Tribes, the scientific
community, industry, and any other
interested parties. We seek information
on:

(1) The species’ biology, range, and
population trends, including:
(a) Habitat requirements for feeding,
breeding, and sheltering;
(b) Genetics and taxonomy;
(c) Historical and current range,
including distribution patterns;
(d) Historical and current population
levels, and current and projected trends;
and
(e) Past and ongoing conservation
measures for the species, its habitat, or
both.

(2) The factors that are the basis for
making a listing determination for a
species under section 4(a) of the Act,
which are:
(a) The present or threatened
destruction, modification, or
curtailment of its habitat or range;
(b) Overutilization for commercial,
recreational, scientific, or educational
purposes;
(c) Disease or predation;
(d) The inadequacy of existing
regulatory mechanisms; or
(e) Other natural or manmade factors
affecting its continued existence.

If, after the status review, we
determine that listing the Bay skipper is
warranted, we will propose critical
habitat (see definition in section 3(5)(A)
of the Act), as per section 4 of the Act,
to the maximum extent prudent and
determinable at the time. Therefore,
within the geographical range currently
occupied by the Bay skipper, we request
data and information on:

(1) What may constitute “physical or
biological features essential to the
conservation of the species,”
(2) Where these features are currently
found, and
(3) Whether any of these features may
require special management
considerations or protection.

In addition, we request data and
information on “specific areas outside
the geographical area occupied by the
species” that are “essential to the
conservation of the species.” Please
provide specific comments and
information as to what, if any, critical
habitat you think we should propose for
designation if the species is proposed
for listing, and why such habitat meets
the requirements of section 4 of the Act.

Please include sufficient information
with your submission (such as scientific
journal articles or other publications) to
allow us to verify any scientific or
commercial information you include.

Submissions merely stating support
for or opposition to the action under
consideration without providing
supporting information, although noted,
will not be considered in making a
determination. Section 4(b)(1)(A) of the
Act directs that determinations as to
whether any species is an endangered
or threatened species must be made
“solely on the basis of the best scientific
and commercial data available.”

You may submit your information
concerning this status review by one of
the methods listed in the ADDRESSES
section. If you submit information via
http://www.regulations.gov, your entire
submission—including any personal
identifying information—will be posted
on the Web site. If you submit a
hardcopy that includes personal