



# CLEAN WATER ACTION

645 Farmington Ave, 3<sup>rd</sup> Floor, Hartford, CT 06105 (860)232-6232

Clean Water Action offers the following comments on behalf of our 11,000 members in Connecticut and over 1,000,000 members throughout the United States. We are pleased that Department of Environmental Protection has spent significant time and worked with outside partners to create strategies to reduce fine particulate matter emitted from diesel vehicles. Clean Water Action supports the recommendations to retrofit all transit buses with DPFs, retrofit waste haulers, retrofit all school buses with closed-crankcase ventilation systems and DOCs and to upgrade the state construction contract specifications, and supports Environment Northeast's comments on the draft DEP sector plans.

We would like to offer our own suggestions regarding the presentation and content of the recommendations to ensure they meet the goals of SA 05-7 and facilitate implementation by the Connecticut General Assembly. EPA's recent announcement that it is revising the Federal PM 2.5 standards make it all the more compelling for Connecticut to act now to significantly reduce PM pollution, and with that shared goal in mind we offer the following recommendations.

## **1. Improve the clarity of the overview to increase its usefulness to the CGA**

The overview section of the report will likely be the most read section of the diesel plan, so it is important that it be as clear as possible and here are three suggestions to improve the overview.

- A. Clearly recommend actions to meet the goals of SA 05-7
- B. Clearly present the costs of diesel pollution- health and financial
- C. Clarify diesel's role within broader Particulate Matter problem

### **A. Clearly recommend actions to meet the goals of SA 05-7**

The division of recommended actions into short, medium, and long-term is confusing as the designations are less related to time than they are to the ease and cost of implementation. We also recommend changing the structure of this section because recommendations such as "Continue to evaluate PM emission contribution from the wood burning sector" are clearly not related to diesel pollution and do not fall under the table's heading: "Short-Term Actions for Implementation to Reduce Diesel Emissions in Connecticut." Most of the recommendations labeled as "all" sectors neither apply to wood burning nor to home heating oil, confirming that these sectors do not belong in the diesel strategy.

**Recommendation:** As the goal of the plan is to recommend policies for immediate implementation and outline further strategies to pursue, we suggest reordering the recommended actions. We suggest starting with the costs and benefits of cleaning up the priority fleets, continuing with additional strategies to help legislature meet 75% by 2015 PM 2.5 reduction goal, and then having a separate section or appendix for non-diesel complementary policies to address PM 2.5.

As table 3, 4, and 5 are currently written it is not clear which policies are the most important for reducing diesel health impacts. Consider adding a health impact column for effects of each policy (even as simple as: Health benefits: low, medium, high, unquantifiable)

and a mention of avoided exposures to sensitive populations (e.g. elderly, children, environmental justice, etc.)

Additionally, we urge you to remove costs and benefits from existing Federal regulations from this document as it is simply confusing. If the impacts of Federal regulations must be included in this document, please create a separate section labeled emissions reductions and costs from existing Federal regulations.

### **B. Clearly present the costs of diesel pollution- health and financial**

In the introduction, costs are mentioned both under “Strategies for Funding” and also compared in benefits in the tables. We suggest that in the health section the DEP outline the estimated health costs of diesel pollution, including estimates of hospitalizations, lost work days and premature mortality, the burden this places on our families, employers, and state government, and the limitations of quantifying health costs. If DEP has no estimates for these impacts, we suggest referencing the Clean Air Task Force’s estimates:

<http://catf.us/projects/diesel/dieselhealth/>

Health is the compelling rationale for action, and will balance the plan’s current emphasis on the cost of pollution control equipment. The current costs estimates also do not make it clear which policy options are the most effective in reducing pollution and protecting public health. Some of the more costly approaches may in fact deliver health benefits that are greater than the increased costs, and this is not reflected in the charts or the narrative. Even rough estimates of the amount of pollution reduced via these strategies and the corresponding health impacts (low, medium, high) and sensitive populations (elderly, children, environmental justice, etc) would make the tables much more useful to policy-makers and thus move us closer to our shared goal of implementation.

### **C. Clarify diesel’s role within broader Particulate Matter problem**

The introduction to the draft diesel plan helpfully outlines Connecticut’s broader particulate matter pollution problem and references the MANE-VU inventory to estimate the contribution from diesel sources. However, the report then proceeds to use pages 5-9 to detail the problem of non-diesel PM sources. This is inconsistent with the purpose of the report, stated on page 1 as “In 2005 the Connecticut General Assembly enacted Special Act 05-07 (the Act) which directed the Department of Environmental Protection (DEP) to develop a diesel emission reduction strategy to reduce the health risks from diesel air pollution consistent with the reduction targets in the Climate Change Action Plan of 2005.”

Holistic planning is laudable, but it is not clear why the DEP diesel plan, rather than another vehicle, is being used to communicate with the legislature about the broader PM 2.5 problem. DEP also does not demonstrate that there are synergies between the diesel pollution recommendations and the problem of pollution from home heating oil and wood-burning to support the assertion that “These are not isolated issues with separate and disparate constituencies but rather interrelated problems that can benefit from the implementation of multi-pollutant strategies designed to address all of Connecticut’s complex air quality challenges” (page 5). In fact, the strategies appear to be quite distinct.

Additionally, it is not at all apparent that the health risks are comparable from these different sources, and this must be clarified if the non-diesel sources are to be included. As health risk is a function of pollution levels and exposure, we would be interested in evidence to support the statement on page 8 that “particle pollution from wood burning poses similar

public health concerns to DPM.” Are the most densely populated urban areas of the state significantly affected by PM 2.5 from wood burning?

**Recommendation:** Because of the risk of obscuring the clear and compelling rationale for addressing diesel particulate matter by over-emphasizing non-diesel PM sources, we respectfully request that the DEP delete these sections, or at the very least de-emphasize them by moving the wood burning and home heating oil sections to an appendix entry or their own explanatory section at the end of the report, and clearly mark them as options to reduce PM 2.5 *from non-diesel sources*. This diesel plan will be most useful to the legislature (and most likely to be implemented) if it restricts itself to the problem of diesel pollution from mobile sources and the DEP’s recommendations for solving this problem.

## 2. Comments Specific to the Overview Report

- A. Consider including an overview of biodiesel
- B. Consider making funding recommendations
- C. Miscellaneous comments

### A. Consider including an overview of biodiesel

We suggest that the DEP consider providing a brief background section on biodiesel to give the legislature a more accurate assessment of its strengths and limitations. The section beginning on page 5 regarding the benefits of blends of biodiesel and home heating oil will likely lead biodiesel’s legislative backers to ask why not mandate it for on-road diesel fuel as well. This is not addressed in the report at all, and its omission could undermine the political support for the DEP’s retrofit and replacement options.

On page 16 under the heading of “Biodiesel” the report states that “Currently, the biodiesel cost differential with ULSD is not significant. In addition, DOE’s EPAC program could defray any incremental costs.” Under costs, we suggest mentioning the available supply relative to Connecticut’s diesel pollution consumption. Otherwise it will be read as if DEP is recommending to the legislature that biodiesel can be substituted for ULSD with no additional cost. Under benefits, we suggest replacing “ Biodiesel is a clean, domestically produced fuel” with a description of the PM benefits (if any) relative to ULSD.

**Recommendation:** The best result this report can have is give the legislature a reasonable understanding of the promise and limitations of biodiesel. Which pollutants does it reduce and by how much? How does biodiesel compare to 500ppm heating oil versus ULSD? What is the cost differential? What are the supply constraints? Can we separate out the air pollution benefits from switching to straight 500ppm heating oil compared to 20% or 5% biodiesel blends? Table 2 (page 6) describes considerable emission reductions that can be achieved through a biodiesel blend. Given the quantities of heating oil needed, is a 20% blend reasonable? If it is not feasible, that should be noted, as should the pollution differential between 5% and 20% biodiesel.

### B. Consider making funding recommendations

On page 24 under “Strategies for Funding” the report states:

If the executive and legislative branches of government concur that such an approach is the appropriate course of action, a separate account could be created under the Environmental Quality fund to be administered by DEP. Alternatively, a fund could be established as an account within the General Fund and set up as a dedicated fund.

**Recommendation:** Since the topic of funding is integral to implementation of many recommendations in the diesel plan we ask that DEP recommend one or more models based on TERP or the Carl Moyer Program that will fulfill Connecticut’s funding needs. Otherwise there is the risk that the legislature will either create a funding stream different from how the DEP envisions or lose another year asking the DEP for recommendations for creating such a funding source.

We strongly ask that the DEP include a description of one of more funding models with revenue streams and estimated amounts. We encourage you to incorporate the “polluter pays” principle and include revenue sources paid for by diesel users, including but not limited to vehicle registration fees and diesel fuel taxes. The public will not support a funding model that simply transfers money from taxpayers to private diesel vehicle owners- in the name of fairness everyone must do their share.

Additionally, we are cautious about the use of tax incentives to voluntarily change behavior as is suggested on page 11, page 22’s “construction sales tax waiver” and in other sections. We urge careful analysis to ensure that changes in taxation will change behavior rather than simply reward private vehicle owners for conducting business as usual. We suggest combining tax breaks with support from a CT diesel mitigation fund to owners who prove that the money will be used to retire an older vehicle, and consider targeting the funds to priority environmental justice areas.

### **C. Miscellaneous Comments**

#### **Statewide voluntary diesel collaborative**

On page 13 the DEP recommends establishing a statewide voluntary diesel collaborative “committed to the development of viable diesel reduction project proposals and aggressively pursue available funding opportunities on the federal level.” What is the collaborative? Who will run it? Will it oversee a CT diesel mitigation fund? If so, it is not mentioned in the funding section.

#### **Voluntary and Education initiatives**

We urge caution in recommending voluntary and education initiatives such as “Outreach on fleet turnover” (page 13) as it is not clear if it even possible to assess the effectiveness of a voluntary education program like this. As stated in 1C above we suggest making these initiatives much less prominent relative to the main pollution reduction measures for the sake of clarity.

#### **Recommend In-State Funding of Worthy Initiatives**

Page 14 recommends pursuing Federal funding for truck stop electrification along I-95. If this is a technologically feasible, cost-effective pollution reduction measure, why not recommend in-state funding for this as well- either from the CGA or to be prioritized by a future diesel mitigation fund?

### **3. On-road fleets report**

- A. Biodiesel
- B. Locomotives
- C. Strategies for long-term implementation

## **A. Biodiesel**

The report gives the following general description of biodiesel on page 9:

**Biodiesel** is a cleaner-burning version of diesel fuel made from natural, renewable sources such as vegetable oils rather than petroleum. Biodiesel may be used as a blend fuel (as low as 5% to 20% biodiesel) or as a single neat fuel (100% biodiesel). Studies indicate that B100 and biodiesel blends generate less PM than conventional diesel (55% less PM from B100 and 18% less PM from B20), but more nitrogen oxides (6% more NO<sub>x</sub> with B100) than 100% petroleum diesel and 2-3% more NO<sub>x</sub> with B20 (when engine tested by a dynamometer) than 100% petroleum diesel. Recent tests by the National Renewable Energy Laboratory have shown a reduction in NO<sub>x</sub> when the entire vehicle was tested under a load. Because biodiesel contains no sulfur, however, vehicles powered by this fuel can use advanced aftermarket emission control devices to further reduce harmful emissions.

Up until recently B100 biodiesel was as much as a dollar more than regular diesel fuel per gallon. In the last few months, due to federal legislation, the price of biodiesel has dropped to the same as regular diesel regardless of the blend percentage. Biodiesel blend fuels are increasingly popular because they can be used in conventional engines with few or no modifications.

Please clarify if these studies compare pollution levels to ULSD that will be standard for on-road fuel next year. If not, biodiesel should not be listed among emissions reduction measures. If this description is simply an overview of the fuel and not specific to on-road fleets, we suggest that it be in the introductory section and not the on-road fleets section to reduce redundancy and confusion about why it is being included if it is not recommended as a reduction measure.

Additionally, please cite supporting evidence for the statement: “Because biodiesel contains no sulfur, however, vehicles powered by this fuel can use advanced aftermarket emission control devices to further reduce harmful emissions.” Is there evidence that biodiesel in the 5% or 20% blends that could be used under warranty in on-road vehicles (such as waste-haulers) would deliver additional (“further”) emissions reductions above and beyond DOCs or DPFs? Please cite the relevant literature, especially if some of the studies are contradictory. One source we have been referred to which compiles the results of biodiesel studies (but not with aftermarket controls) is *A Comprehensive Analysis of Biodiesel Impacts on Exhaust Emissions Draft Technical Report*, U.S. Environmental Protection Agency, EPA 420-P-02-001, October 2002.

## **B. Locomotives (page 13)**

Does DEP have a recommend to the CGA regarding locomotives? Anti-idling and APUs? If there is no recommendation but DEP plans to continue to study these options, is there a timeframe to complete the study and report to the CGA?

## **C. Strategies for long-term implementation**

The DEP plan outlines the following strategies on page 16:

1. Inventory locomotives and assess viability of retrofit technologies. Provided it is technically feasible and funding is available, proceed to retrofit.
2. Inventory marine Vessels (ferries) and assess viability of retrofit technologies. Provided it is technically feasible and funding is available, proceed to retrofit.
3. Inventory state and municipally owned heavy-duty diesel vehicles. Assess timeframe by which such fleets will be in compliance with federal 2007 emission standards.

When is “long-term?” to the DEP? If funding not available but a project is technologically feasible, will DEP request funding from CGA or CT diesel fund? When will this inventory and assessment be completed and does the DEP require further support from the legislature on this? Any further information will be helpful to the CGA.

#### 4. Transit Bus Report

The only option that fulfills the intent of the CGA and results in great than 85% reductions is recommendation #1. It is incorrect and misleading to suggest that there are multiple options to reach this goal by presenting them as equals, and by stating: “DEP is recommending consideration of three options for reducing emissions of PM from the state’s transit fleet by 85%, as set out in the Act.”

Option 2 (page 12) simply mandates DOT’s 12-year fleet turnover policy and will not reduce pollution 85% by 2010 so it should be rejected. As DOT is currently retiring buses after 12 years it is disingenuous to list this as an *additional* cost as the report does here: “It will cost approximately \$3,896,000 to implement a mandatory 12-year fleet turnover program.” The cost-effectiveness table does not indicate that this option would not come close to meeting the goals of the act.

The costs of DPF cleaning, ULSD and replacements in new buses is also a business as usual cost, and if mentioned at all should be under a section titled “pollution reductions and anticipated costs under a ‘business as usual’ scenario.”

Option 3 also fails to meet the requirements of the act and we strongly object to it as it seems to exist only on the basis of cost. We suggest that reasonable cost is for the CGA to determine, and that option 3 falls far short of providing the environmental benefits of option 1 as some of the buses will not be cleaned up until 2019.

**Recommendation:** DEP should recommend an option that fulfills the requirements of the legislation and present the others as variant BAU scenarios. If DEP rejects this approach we urge DEP to include a detailed assessment of pollution reductions (or lack thereof) from option 2 and 3 and a description of health exposures to facilitate comparison with retrofits.

#### 5. School bus Report

Does DEP have a recommendation for the CGA? Has DEP evaluated the feasibility of Environment Northeast’s request to regulate the school bus owners directly rather than change the contract language?

Option 2 is not an alternate option that meets the requirements of the act, but is rather an overview of the results of the roll-out of Federal standards. We respectfully request that for clarity “option 2” be made less prominent (perhaps as a footnote or in the appendix) and it should be labeled as a business as usual scenario. The costs listed might also confuse legislators as these are not related to CT state action in any way. As it is written, it gives the false impression that this requires the CT legislature’s attention.

Option 3 also fails to meet the requirements of the act and would be more correctly titled “supplemental options to encourage voluntary retrofit measures.”

**Recommendation:** Remove option 2, re-label option 3 as a supplemental recommendation and include estimated pollution reductions and a description of avoided health effects for each policy so that legislators are clear about the effects of each. If some children will continue to be exposed to higher PM levels until 2019 this should be made clear.

Thank you for your consideration of our recommendations, and if you would like more information or clarification of any of the comments, please email [rsmith@cleanwater.org](mailto:rsmith@cleanwater.org).

Sincerely,

Roger Smith  
Campaign Director  
Clean Water Action