



Charlotte City Council

Environment Committee

Meeting Summary for January 14, 2015

COMMITTEE AGENDA TOPICS

- I. **Subject:** **Clean Diesel for Construction**
 Action: None
- II. **Subject:** **Storm Water Stakeholder Update**
 Action: None
- III. **Subject:** **2015 Committee Meeting Schedule**
 Action: Meeting schedule passed unanimously

COMMITTEE INFORMATION

Present: John Autry, David Howard and Kenny Smith
Time: 2:00 p.m. to 2:50 p.m.

ATTACHMENTS

1. Agenda Package
2. Clean Diesel for Construction.ppt

DISCUSSION HIGHLIGHTS

Chairman Autry called the meeting to order and asked everyone to introduce themselves. He then turned it over to Carol Jennings.

I. **Clean Diesel for Construction**

Ms. Jennings told the Committee they would receive an update on the Clean Diesel for Construction topic. She said they will be asking the Committee for feedback on their internal process but there is no need for a formal vote. She then turned it over to David Wolfe from

Environment Committee

Meeting Summary for January 14, 2015

Page 2 of 4

Engineering & Property Management.

Mr. Wolfe began reviewing the “Clean Diesel for Construction” presentation (copy attached). He discussed the previous Committee work that had been done and reviewed some of the strategies that the EPA recommends to help reduce emissions around construction projects. He discussed the retirement of older equipment and reminded the Committee that this equipment can last for 20-30 years. Mr. Wolfe reviewed the EPA regulations on clean diesel manufacturers and discussed the City’s off-road construction equipment by tiers as well as the equipment replacement criteria and trends. He also reviewed the internal process for staff with regard to the purchasing of equipment, contractor awareness regarding safe practices, sensitive sites and keeping them aware of available grants.

Autry: What are the prospects of the EPA going further in air quality standards? Have we seen anything?

Wolfe: The EPA watches the technology and when they see that the technology is there they are very anxious to say people have to meet that quality. There is a significant difference in the different tiers.

Smith: What is the cost difference between Tier 4 and Tier 1? Or is the fact that you now have the new standard it doesn’t matter about the cost because you have to use what the government requires you to use? Some of our equipment goes into a secondary market.

Wolfe: We typically buy new equipment when purchasing equipment. We are always purchasing the latest. There is a cost difference for manufacturers and the EPA has to prove that the cost is worth it for the clean air benefit. I think that is around \$7,000 for a new \$200,000 piece of equipment.

Autry: In another presentation we had Dr. Raymond said every dollar we spend on emissions saves \$11 on healthcare costs.

Smith: Looking at the chart that discusses the Tier 0 equipment, that Tier 0 equipment in our fleet is approaching the 20 years’ service mark, correct?

Wolfe: Yes, that’s correct.

Howard: The chart says it would take \$3,000,000 to get all engines replaced to Tier 4. What does that do for emissions?

Wolfe: It would be difficult to relate that to a number, but we can look into it.

Autry: It would be \$33,000,000 in savings in healthcare.

Howard: What about our recycling fleet?

Robert Taylor: That is considered on-road trucks; we are just looking at off-road equipment.

Environment Committee

Meeting Summary for January 14, 2015

Page 3 of 4

Smith: For the equipment that went out of service, how many went to the secondary market?

Marie Harris: We surplus them all so we can't tell if it's being used just for parts or if they are actually in-use.

Autry: Do we know if the old equipment we release has been retrofitted?

Harris: We don't monitor that.

Smith: Do we ever lease equipment and if so would they be the older tiers?

Taylor: If we lease it, it would be a fairly new piece of equipment because we would only lease if our equipment can't do the job.

Autry: This is great. Good work to everyone.

Jennings: Great, we will proceed in the manner discussed in the last slide.

Howard: One thing to add, can we somehow tie this into our scorecard? This is something we should be telling people about.

Rob Phocas: This will be posted on our Power2Charlotte site and will also be incorporated in our Environmental Internal Operations Plan.

Autry: Thank you. Let's move on to item two.

II. Storm water Stakeholder Process

Mr. Darryl Hammock stated that on October 27, 2014 the Council authorized staff to create a stakeholder committee to evaluate the use of mitigation fees as a compliance option in the Post Construction Control Ordinance. Staff is in the process of creating this stakeholder committee and the first meeting will be held on January 29 in Room 266 from 4:30-6:00 p.m. Staff is proposing meetings to be held twice a month, the second and fourth Thursday. Mr. Hammock called attention to the handout (copy attached) in front of the Committee and read through the charge of the stakeholder group. They are targeting 13 members; 4 from environmental groups, 4 from the redevelopment groups, 2 citizens with no formal stake in the "game", 1 Chamber member, 1 academic member, and 1 minority owner. Ten people have confirmed their participation at this time. There will be a webpage set up that will house the agendas, minutes, and presentations and that will be sent out to the Committee once it's been set up. He stated that these meetings are open to the public. The first meeting will be mostly procedural. There will be an outside facilitator, Rusty Rozzelle from Mecklenburg County, to lead the process. Mr. Rozzelle has experience in this and did the last stakeholder group 12 years ago. The hope is that the stakeholder committee will come to a consensus at the end of the process that staff can bring back to the Committee.

Autry: Thank you for the update.

Environment Committee

Meeting Summary for January 14, 2015

Page 4 of 4

III. 2015 Committee Meeting Schedule

Jennings: Angela Maynard has placed an updated schedule at your places for you to review. We have checked the schedule for conflicts and are proposing dates with no conflicts.

Vote was taken and passed unanimously to approve the 2015 meeting schedule (copy attached).

Meeting adjourned at 2:50 p.m.

Environment Committee

Wednesday, January 14, 2015; 2:00 – 3:00 p.m.
Charlotte-Mecklenburg Government Center
Room 280

Committee Members: John Autry, Chair
 Ed Driggs, Vice Chair
 David Howard
 Claire Fallon
 Kenny Smith

Staff Resource: Carol Jennings, Chief of Staff

AGENDA

I. **Clean Diesel for Construction**

Staff Resources: Gina Shell and David Wolfe, Engineering & Property Management

Staff will review the City's Construction equipment inventory and discuss opportunities for contractor awareness and education.

Action: Request Committee to endorse staff recommendations.

II. **Storm Water Stakeholder Update**

Staff Resource: Darryl Hammock, Engineering & Property Management

On October 27 Council authorized staff to create a stakeholder committee to evaluate the use of Mitigation Fees as a compliance option in the Post Construction Stormwater Ordinance. Staff will update the Committee on the proposed meeting format and tentative stakeholder meeting schedule.

Action: For information only.

III. **2015 Committee Meeting Schedule**

Staff Resource: Carol Jennings

The Committee is asked to review the draft 2015 meeting schedule attached.

Action: Approve meeting schedule.

Next Meeting

To Be Determined

Distribution:	City Council	Ron Carlee, City Manager	Executive Team
	Bob Hagemann	Stephanie Kelly	Environmental Cabinet

2015 Approved Meeting Schedule for City Council Environment Committee

2nd Wednesday of each month at 2:00 pm
Room 280
**unless otherwise noted*

January 14

February 11

March 11

***Monday, April 6 @ Noon**

***Monday, May 11 @ Noon**

June 10

September 9

October 14

November 11

Notes:

No July or August meetings due to Council's summer schedule

No December meeting pending new Committee assignments




CHARLOTTE
ENGINEERING & PROPERTY
MANAGEMENT

Clean Diesel for Construction

Council Environment Committee

January 14, 2015

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 CITY OF CHARLOTTE

Clean Diesel for Construction

- Review of the Topic: Clean Diesel for Off-Road Construction
- City of Charlotte Off-Road Construction Equipment Inventory
- Committee Guidance & Path Forward

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Definition

A set of operational and regulatory strategies designed to minimize the health and climate impacts to local communities from diesel engine emissions associated with construction activities



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National Sources of Diesel Emissions

- 31% Highway Diesel
- 21% Off-road Construction
- 21% Agricultural
- 13% Marine
- 6% Railroad
- 4% Industrial
- 4% Other



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 **CITY OF CHARLOTTE** Clean Diesel Construction Strategies
as offered by EPA

Method	Low-Cost	Medium Cost	High Cost
Idle-Reduction Policy	X		
Clear-Air Zones	X		
ULSD Fuel	X		
Preventive Maintenance	X		
Operator Training	X		
BioDiesel Fuel		X	
Retrofitting Equipment		X	
Engine/Vehicle Replacement			X

 **CITY OF CHARLOTTE** City Construction



- **City Contractors**
 - Roadway
 - Building Projects
 - Water/Sewer Projects
 - Stormwater
 - Aviation
- City Crews**
 - Street Maintenance
 - Landscape Maintenance
 - Water/Sewer Crews

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 CITY OF CHARLOTTE

Off-Road Construction Equipment Representative Examples



75-100 Horse Power (HP) Trailed Air Compressor



100-175 Horse Power (HP) Wheeled Loader

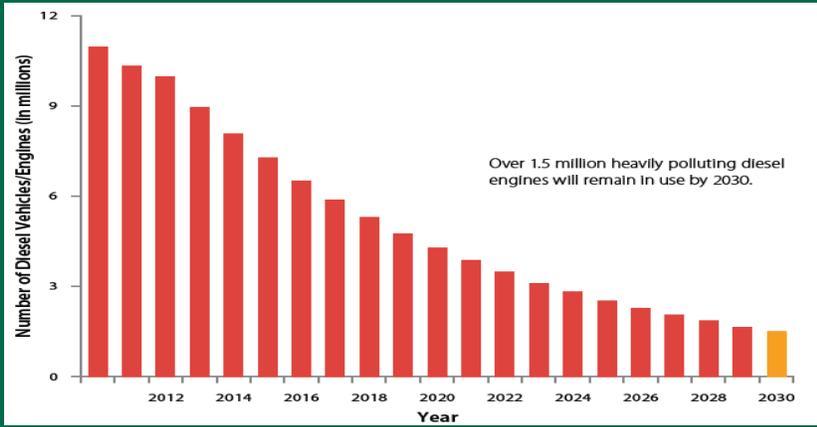


175+ Horse Power (HP) Gradall

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Clean Diesel Key Facts: Retirement of Older Equipment



Year	Number of Diesel Vehicles/Engines (in millions)
2012	11.0
2013	10.5
2014	10.0
2015	9.5
2016	9.0
2017	8.5
2018	8.0
2019	7.5
2020	7.0
2021	6.5
2022	6.0
2023	5.5
2024	5.0
2025	4.5
2026	4.0
2027	3.5
2028	3.0
2029	2.5
2030	1.5

Source: 2012 EPA DERA Grant: 2nd Report to Congress

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EPA Regulates Clean Diesel Manufacturers

Off-Road Diesel Engine Tiers by Engine Horsepower and Model Year

Engine Model Year	Engine Horsepower Groups							
	25-49	50-74	75-99	100-174	175-299	300-599	600-750	750+
1989 and Earlier	T0	T0	T0	T0	T0	T0	T0	T0
1996	T0	T0	T0	T0	T1	T1	T1	T0
1997	T0	T0	T0	T1	T1	T1	T1	T0
1998	T0	T1	T1	T1	T1	T1	T1	T0
1999	T1	T1	T1	T1	T1	T1	T1	T0
2000	T1	T1	T1	T1	T1	T1	T1	T1
2001	T1	T1	T1	T1	T1	T2	T1	T1
2002	T1	T1	T1	T1	T1	T2	T2	T1
2003	T1	T1	T1	T2	T2	T2	T2	T1
2004	T2	T2	T2	T2	T2	T2	T2	T1
2005	T2	T2	T2	T2	T2	T2	T2	T1
2006	T2	T2	T2	T2	T3	T3	T3	T2
2007	T2	T2	T2	T3	T3	T3	T3	T2
2008	T4I	T4I	T3	T3	T3	T3	T3	T2
2009	T4I	T4I	T3	T3	T3	T3	T3	T2
2010	T4I	T4I	T3	T3	T3	T3	T3	T2
2011	T4I	T4I	T3	T3	T4I	T4I	T4I	T4I
2012	T4I	T4I	T4I	T4I	T4I	T4I	T4I	T4I
2013	T4	T4	T4I	T4I	T4I	T4I	T4I	T4I
2014	T4	T4	T4I	T4I	T4	T4	T4	T4I
2015 and later	T4	T4	T4	T4	T4	T4	T4	T4

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City's Off-Road Construction Equipment Inventory by Tier (listing includes Airport Equipment)

Tier	Equip. Count	% (Count)
Tier Zero	58	21%
Tier One	58	21%
Tier Two	50	18%
Tier Three	22	8%
Tier Four	84	31%
Total	272	100%

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CITY OF CHARLOTTE

City Equipment Inventory by Usage and Engine Replacement Cost (Listing excludes Airport Equipment)

Tier	Equip. Count	% (Count)	% (Usage)	Replace Engine Cost
Tier Zero	29	16%	8%	\$580,000.00
Tier One	55	31%	22%	\$1,200,000.00
Tier Two	40	22%	20%	\$815,000.00
Tier Three	17	9%	10%	\$370,000.00
Tier Four	39	22%	40%	\$0.00
Total	180	100%	100%	\$2,965,000.00

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City Off-Road Construction Equipment Replacement Criteria and Trends

Equipment Replacement by Fiscal Year					
Fiscal Year	Equip. Count	ADD	Tier 0	Tier 1	Tier 2
2012	8	0	3	3	2
2013	7	0	5	2	0
2014	14	2	6	4	2
2015	13	0	1	12	0
Total	42	2	15	21	4
Average/Year	11	1	4	5	1

*ADD indicates additions to the fleet

- Equipment Replacement Criteria
 - Usage (mileage, hours)
 - Age
 - Maintenance Cost
 - Condition

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 CITY OF CHARLOTTE **Purchasing Guidance for New Equipment – Example from State of California**

(A) Ban on adding Tier 0s – Beginning on January 1, 2014, a fleet may not add a vehicle with a Tier 0 engine to its fleet. The engine tier must be Tier 1 or higher.

(B) Ban on adding Tier 1s – Beginning on January 1, 2014 for large and medium fleets and January 1, 2016 for small fleets, a fleet may not add any vehicle with a Tier 1 engine. The engine tier must be Tier 2 or higher.

(C) Ban on adding Tier 2s – Beginning January 1, 2018 for large and medium fleets and January 1, 2023 for small fleets, a fleet may not add a vehicle with a Tier 2 engine to its fleet. The engine tier must be Tier 3 or higher.

The chart below shows the minimum tier engine that may be added by a fleet beginning January 1 of the given calendar year.

**Adding Vehicle Requirements by Fleet Size and Calendar Year
(Minimum Engine Tier Allowed to be Added to a Fleet)**

Fleet Size	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Medium/Large	T2				T3					
Small	T1	T2						T3		

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 CITY OF CHARLOTTE **Committee Guidance & Path Forward**

- **City Equipment Inventory**
 - Update listing of City-owned equipment annually
 - The City will purchase only Tier 2, Tier 3 or Tier 4 equipment until 2018, with rare exceptions
 - After 2018, the City will purchase only Tier 3 or Tier 4 equipment, with rare exceptions
- **Contractor awareness**
 - Regularly inform all City construction bidders on this topic
 - Raise their awareness of the City’s interest in clean diesel practices
 - Make them aware of sensitive sites near City construction projects
 - Inform them of availability of grants for clean diesel (Mecklenburg County)

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Item 16

Post-Construction Stormwater Ordinance Revisions

Action: Approve a substitute recommendation for revisions to the Post-Construction Stormwater Ordinance extending the use of fee-in-lieu mitigation fees on certain redevelopment projects until December 31, 2017.

Staff Resource(s): Daryl Hammock, Engineering & Property Management

Substitute Recommendation

- Revise the current Environment Committee recommendation to extend the mitigation fee in the Temporary District for three years until December 2017 or until the adoption of any proposed changes instead of five years.
- The City Manager will convene a stakeholder group to determine what options for hardship sites should be considered in the future for redevelopment projects in the Temporary District.
- The stakeholder group will be made up of Environment and Development industry interests. Staff will serve as facilitator and will provide technical expertise.
- The stakeholder group will use sound science, data, and findings of fact to reach agreement on any proposed changes.
- The charge to the City Manager appointed stakeholder group is to:
 - To develop a recommendation for a permanent solution to allow a mitigation fee option for the temporary district and if so, under what circumstances such as costs, site constraints and other factors.
 - To develop that recommendation in the context of the 2008 Council decision.
 - To determine other mitigation measures, such as catch basin inserts that would further the goal of mitigation.
- The process will begin in January 2015 and will have a goal to conclude within 6-9 months but no later than by January 2016. The Council Environment Committee will monitor the progress of the stakeholder group and provide regular updates to the City Council.

Explanation

- On April 28, 2014, the City Council approved the extension of the mitigation fee until October 31, 2014, and asked staff to evaluate options including developing a case-by-case decision process to determine applicability of the fee for eligible redevelopment sites.
- On May 29, 2014, staff held a public meeting to receive input on the options considered.
 - Most commenters supported the extension of the mitigation fee and did not support other options presented.
 - A few commenters expressed concerns that:
 - Onsite control should be required,
 - Oil, gas, grease, and other chemicals are reaching streams; and
 - Upland streams are not improved through mitigation fees.
- On August 13, 2014, staff presented five options to the Environment Committee and made a recommendation to extend the fee until December

31, 2019. The Environment Committee voted 3-1 (Driggs, Howard, and Smith voted yes; Autry voted no) to recommend extending the option of fee-in-lieu of onsite runoff controls for certain redevelopment sites from October 31, 2014, until December 31, 2019, an extension of 5 years.

- On September 22, 2014, the City Council held a public hearing with 11 speakers. Seven spoke in opposition, and four spoke in favor of extending the use of fee-in-lieu mitigation fees on certain redevelopment projects.
- Because there has been a great deal of input both in favor and in opposition to the proposed revision, a substitute recommendation was proposed after the public hearing. The substitute recommendation would allow temporary continuance of the mitigation fee option while a stakeholder process can be convened to determine the permanent future of the mitigation fee option.

Background

- The Post-Construction Stormwater Ordinance has been in effect since July 1, 2008.
- Staff has determined that several redevelopment projects face substantial technical and economic challenges accommodating water quality measures on-site.
- On October 11, 2011, the City Council approved the temporary expansion of the mitigation fee to redevelopment in all areas until April 30, 2014.
- The Storm Water Advisory Committee unanimously recommended extending the option at its November 2013 and July 2014 meetings.

Attachment

Map

Text Changes to City Code Section 18-161