

# OVERVIEW OF NCTCOG CLEAN CONSTRUCTION DEMONSTRATION PROJECT

## Best Southwest Transportation Committee Luncheon

November 18, 2010



**Lori P. Clark, Senior Transportation Planner  
Air Quality Policy & Program Development  
Transportation Department**

# **DEVELOPMENT AND IMPLEMENTATION PROCESS**

**Initial Stakeholders' Meeting – May 9, 2007**

**Statewide Collaboration – Started April 2008**

**Stakeholders' Meeting – June 25, 2009**

**Task Force Meetings – Sept. 14, Oct. 5, Nov. 2, Nov. 23, 2009**

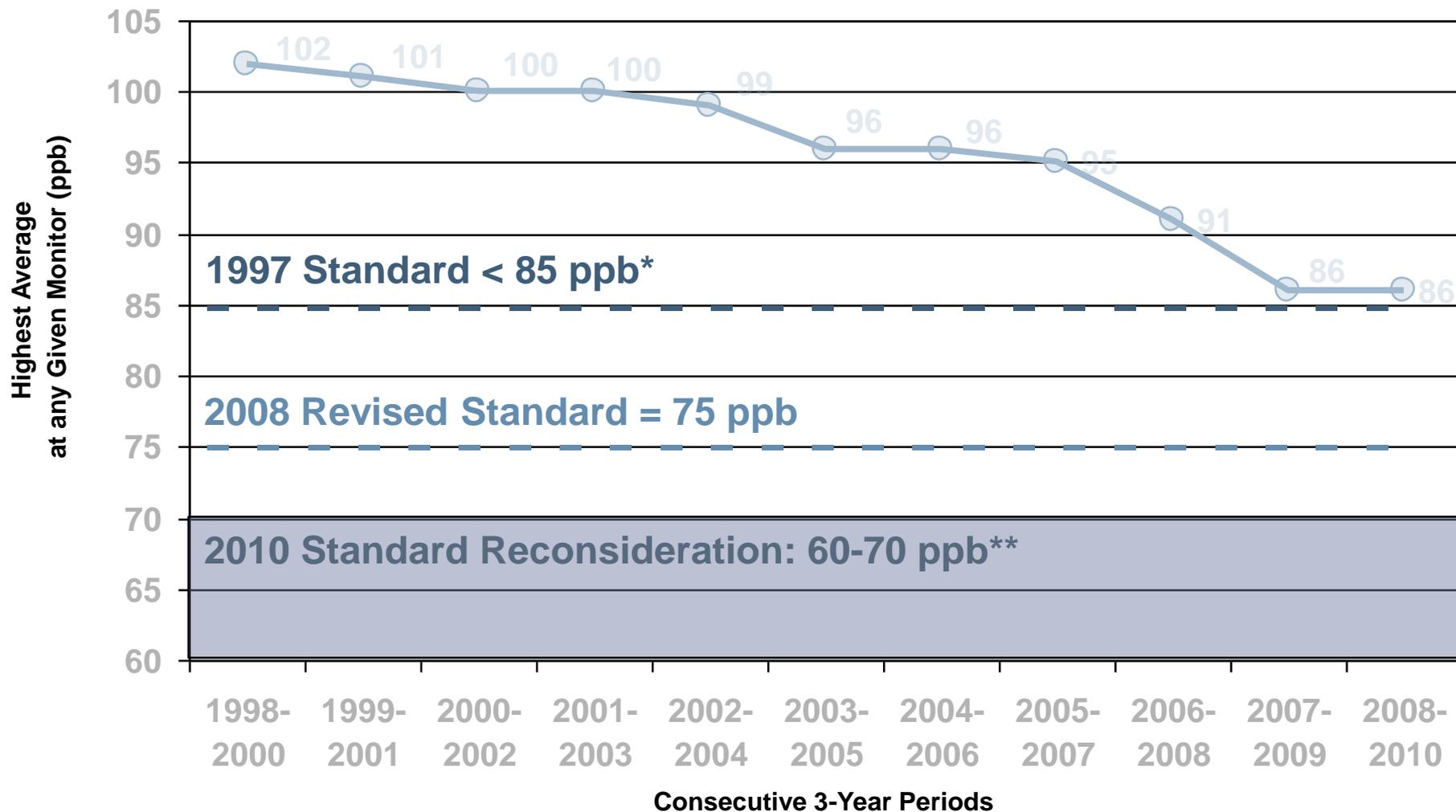
**RTC Sustainability and Environment Subcommittee –  
February 11, 2010**

**RTC Approval of Demonstration Project – March 11, 2010**

**Implementation of Demonstration Project**

**Solicit Comments from Regional Partners to Determine  
Next Steps**

# DALLAS-FORT WORTH 8-HOUR OZONE TREND



\* 2010 Attainment Goal - According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the three-year average of the annual fourth-highest daily maximum 8-hour average ozone concentration is less than 85 parts per billion (ppb).

\*\* Ozone Standard is currently under reconsideration by the EPA and will likely be revised in August 2010 to between 60 and 70 ppb.

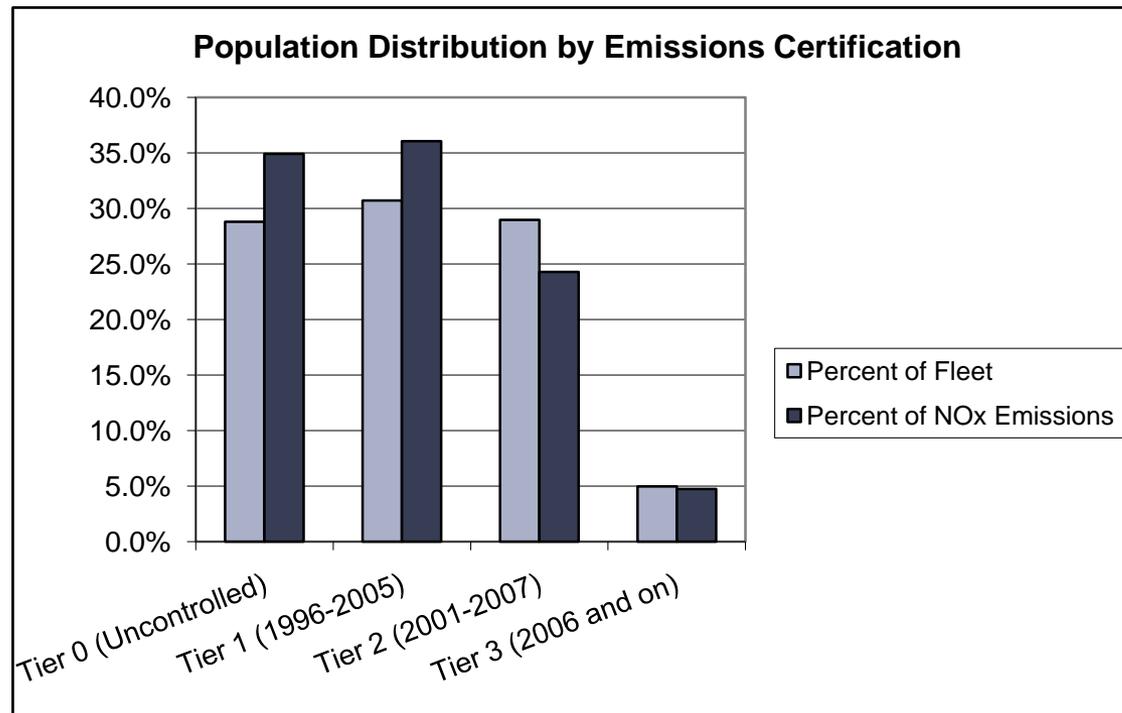
Source: NCTCOG TR Dept

# RATIONALE

**10% (40 tons/day) of all DFW Nonattainment Area Nitrogen Oxides (NO<sub>x</sub>) Emissions Attributed to Construction Equipment Public Works is ~ 20-25% of All Construction Activity**

## Existing Fleet Composition

**Approximately 60% Uncontrolled and Tier 1 Engines**



# EXISTING SPECIFICATIONS

## General Applicability

Illinois – Cook County

Massachusetts Bay Transportation Authority

Massachusetts Department of Environmental Protection

New York City

New York Metropolitan Transportation Authority

New York – Westchester County

State of Rhode Island

## Project-Specific Applicability

Columbia University

Connecticut Department of Transportation

Illinois Department of Transportation

Illinois O'Hare Modernization Program

Maryland State Highway Administration Program

Massachusetts Dana Farber Cancer Institute

Massachusetts Highway Department

Michigan – University of Michigan Hospitals

# **CLEAN CONSTRUCTION SPECIFICATION**

## **Equipment/Engine Requirements**

**Tier 2 or Equivalent Engine Standard**  
**Exemptions Recommended**

## **Operational Requirements**

**Use of Ultra Low Sulfur Diesel Fuel**  
**Restriction on Idling**  
**Staging/Minimizing Use of Equipment**

## **Reporting to Contracting Entity**

**Inventory of Equipment Used On-Site**  
**Documentation for Low Use Exemption**

## **Enforcement**

**Entity Standard Contracting Procedures**  
**Option for Penalties/Fines**

# **DEMONSTRATION PROJECT OVERVIEW**

**Applicable to Equipment Owned by, Operated by, or on Behalf of,  
or Leased by a Local Government/Public Agency**

**Goal: Gather Information on Potential Impacts**

**Bid Price**

**Emissions**

**Administrative Process**

**One Year Beginning Late Spring/Early Summer 2010**

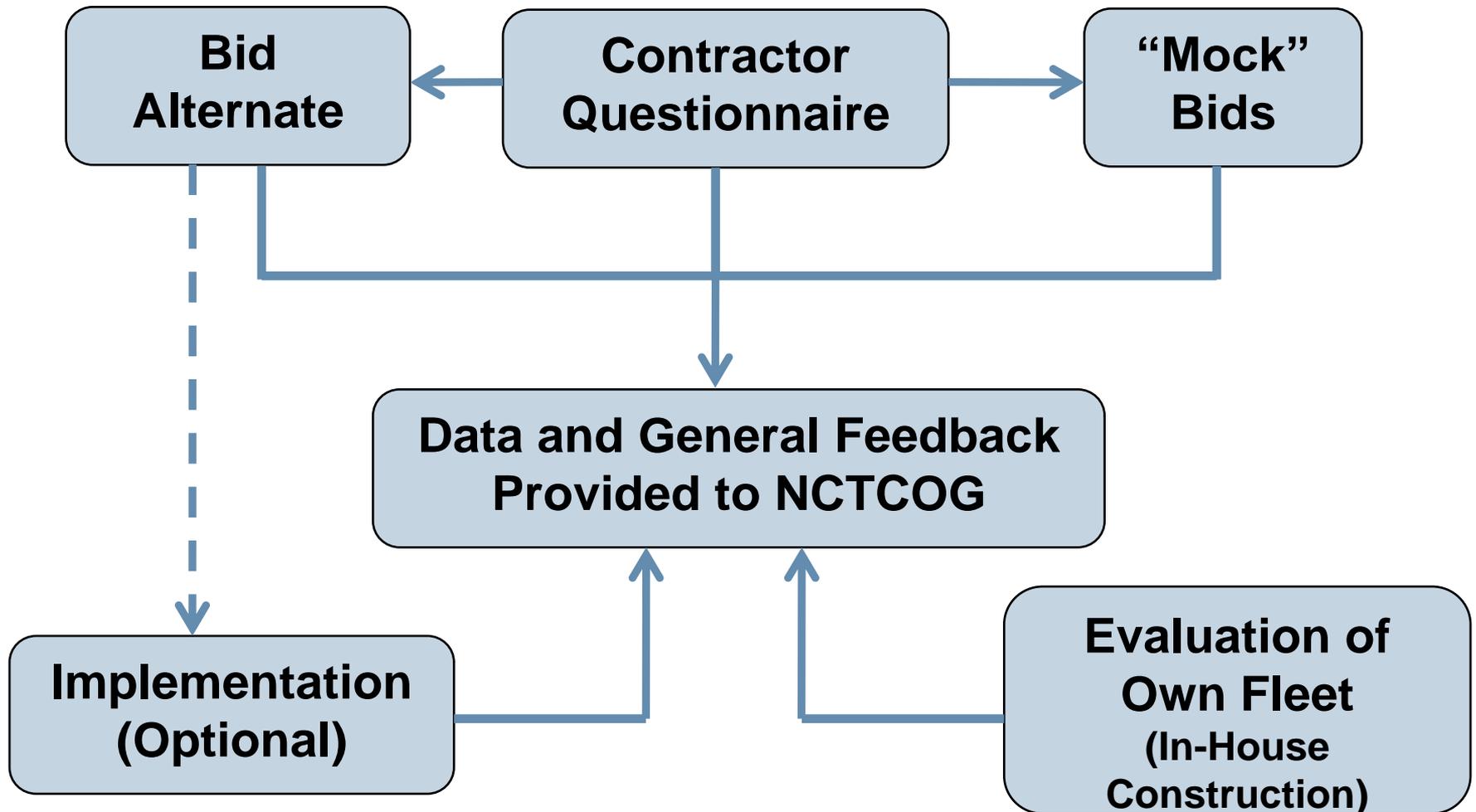
**Local Government Involvement**

**NCTCOG Staff Effort**

**Seek “Mock” Bids for Recently Awarded Projects**

**Support Local Government Implementation**

# LOCAL GOVERNMENT PARTICIPATION



# **PARTICIPATING ENTITIES**

**City of Arlington**

**2 Projects Bid to Date**

**City of Dallas**

**City of Denton**

**City of Fort Worth**

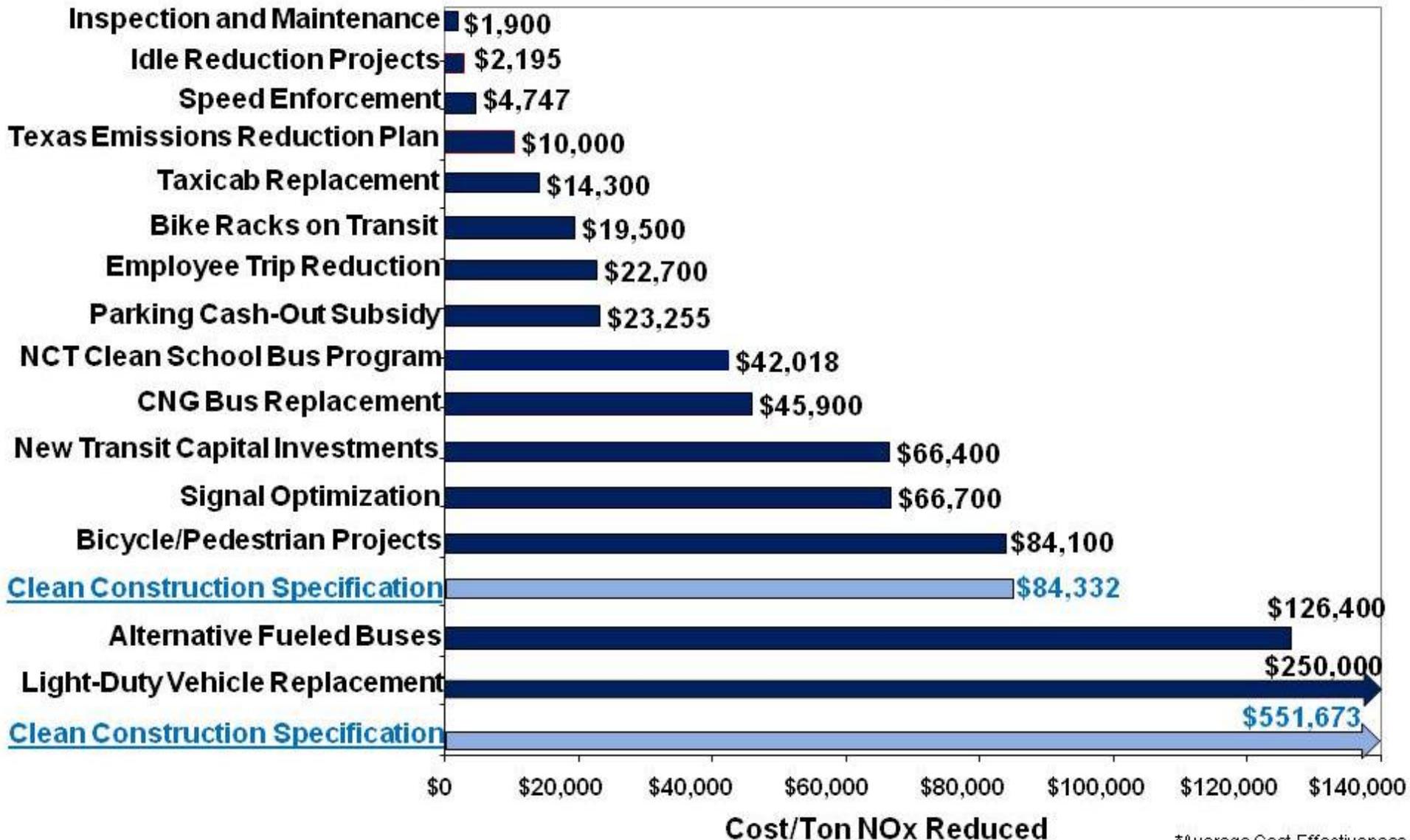
**North Texas Tollway Authority**

**Tarrant County**

## RESULTS TO DATE

City of Arlington	Project 1 (Rolling Meadows)	Project 2 (Arkansas Lane Rebuild)
<b>Overview of Bid Responses</b>		
<b>Contractor Responses</b>	<b>9</b>	<b>6</b>
<b>Cost of Clean Construction Spec</b>	<b>\$0.50-\$500,000 0-17%</b>	<b>\$1.00-\$1 Million 0-16%</b>
<b>Additional Analysis on Awarded Bid</b>		
<b>Potential NOx Reductions</b>	<b>1.48 Tons</b>	<b>0.14 Tons</b>
<b>Cost per Ton</b>	<b>\$84,332</b>	<b>\$551,673</b>

# COST PER TON COMPARISON (2 PROJECTS)



\*Average Cost-Effectiveness

# SPECIFICATION IMPLEMENTATION

## Inspection

Engine Horsepower (hp)	Compliant Engine Model Years
Less than 25 hp	Exempt
25 – 100 hp	2004 and newer
100 – 300 hp	2003 and newer
300 – 600 hp	2001 and newer
600 – 750 hp	2002 and newer
Over 750 hp	2006 and newer

## Enforcement

## Reporting

Contractor to Owner  
Owner to NCTCOG

# **NCTCOG RESOURCES**

**Local Government Participation Guide**

**Contractor Fact Sheet**

**Template Forms**

**Model Specification**

**Data Gathering**

**Existing and Proposed Equipment Detail**

**Contractor Questionnaire**

**Cover Letters**

**Implementation of Spec**

**Equipment Inventory**

**Low Use Exemption Form**

**Cost-Benefit Estimation**

**Other Needs?**

**[www.nctcog.org/construction](http://www.nctcog.org/construction)**

# CONTACT INFORMATION

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