



US Army Corps
of Engineers

50 foot Harbor Deepening Project Achieving General Conformity





US Army Corps
of Engineers

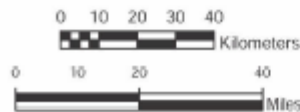
General Conformity Statute

CAA Section 176 (c) contains legislation that mandates the General Conformity Rule (GCR)

40 CFR 93.150, Subpart B “No department, agency or instrumentality of the Federal government shall engage in, support in any way or provide financial assistance for, license or permit, or approve, any activity which does not conform to an implementation plan.”



US Army Corps
of Engineers



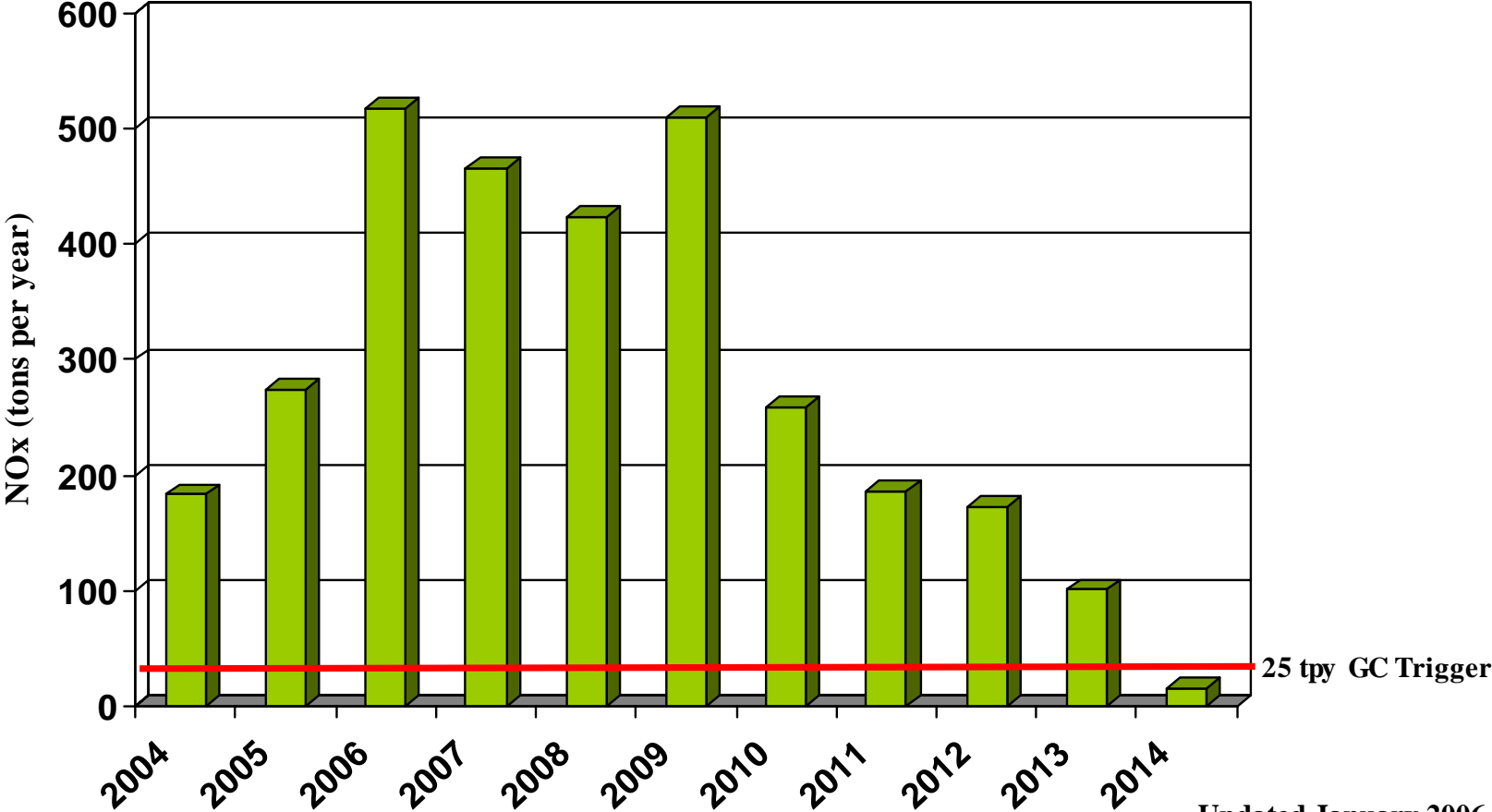
Legend

- Nonattainment Area Extent
- County Boundaries
- - - Stateline
- New York State Boundary
- New Jersey State Boundary



US Army Corps
of Engineers

Emission levels by year



Updated January 2006



US Army Corps
of Engineers

Federal Agencies Demonstrate Conformity by:

- ◆ Showing emission increases are included in a State Implementation Plan (SIP) or the state agrees to include emission increases in its SIP as long as it does not increase the baseline
- ◆ Implementing offset strategies that provide for no net gain in emissions
 - Must occur within a similar timeframe
 - Must occur within the same NAA as the action



US Army Corps
of Engineers

The Path to Conformity

- ◆ December 2002 memorandum from Corps HQ approving NYD recommendation to pursue air mitigation in a similar manner to wetlands mitigation
 - Minimize impact (reduce emissions)
 - Mitigate in-kind (marine/mobile sources)
 - Preference for offsetting public over private facilities
 - Mitigate within watershed/NAA



US Army Corps
of Engineers

Conditional Statement of Conformity (cSOC)

Innovative

- Lays out path to achieve conformity:
 - Real emission reductions
 - Offsets/credits
 - SIP inclusion
- Allows ROD to be signed and the design phase to continue

Includes commitment not to proceed to construction until
each contract demonstrates conformity

RAT advisory group oversees process



US Army Corps
of Engineers

Roadmap for Achieving Conformity

- ◆ HAMP
- ◆ RAT
- ◆ Annual Reports
 - Updates to HAMP
 - Progress In Meeting Conformity
- ◆ Monitoring and Feedback



US Army Corps
of Engineers

Harbor Air Management Plan (HAMP)

January 2006 (Currently Being Updated)

- ◆ Compares and selects emission reduction technologies, that are cost effective, and improve air quality contemporaneous to HDP emissions
- ◆ HAMP – Tiered Approach
- ◆ Tier 0 – Reducing Project Related Sources with Verified Emission Reduction Technologies
- ◆ Tier I – Staten Island Ferries (SIF) Retrofit with Selective Catalytic Reduction (SCR) Technology
- ◆ Tier II – Non-Project Related Sources with Verified Emission Reduction Technologies
- ◆ Tier III – Emerging Emission Reduction Technologies
- ◆ Tier IV – Emission Reduction Credits
- ◆ Tier V – State Implementation Plans
- ◆ Includes contingency measures



US Army Corps
of Engineers

Regional Air Team (RAT)

- ◆ Formed in Fall 2001
- ◆ Collaborative Effort Between:
 - USACE NYD
 - PANYNJ
 - USEPA Region 2
 - New York State Department of Environmental Conservation
 - New Jersey Department of Environmental Protection
 - New Jersey Department of Transportation Office of Marine Resources (2002)
 - New York City Department of Transportation (2003)
- ◆ RAT Agreed that HDP General Conformity Efforts be Coordinated/Reviewed by RAT to Ensure Successful Mitigation/Compliance with General Conformity
- ◆ Will Continue to Meet Until Project is Completed
- ◆ Broadened Communications Between All Participants



US Army Corps
of Engineers

Contract Conformity Review (CCR)

- ◆ Prior to Start of Construction for Each HDP Contract
- ◆ CCR Details the Latest Annual Emissions Estimates for Each Contract
- ◆ CCR Details Emissions Offsets to be Used (Including 10% Contingency)
- ◆ Demonstrates a Plan for Meeting Conformity for Each Contract
- ◆ CCR is Review by the RAT Prior to Start of Construction



Monitoring Program

- ◆ Since Excess Offsets Are Potentially Significant in Out Years, Monitoring Program is Being Established to Ensure a More Accurate Estimate of:
 - Project Emissions
 - Project Related Emissions Offsets
- ◆ Project Emissions Aims
 - Verify Assumptions Used in Estimating HDP Emissions (Engine Load, Horsepower, Fuel Types, Production Rates, Engine Emissions Rates, etc.)
 - Currently Monitoring Dredge Engine Load Duty Cycles
- ◆ Project Related Emissions Offsets Aims
 - Verify Emissions Reductions from Un-Verified Technologies
 - Verify Engine Repowers & Usage Within Nonattainment Area



Current Selected Alternatives

- ◆ Tier I – SIF Selective Catalytic Reduction (SCR) – provides the most and cost effective offsets & is “resident” in the harbor for the life of the HDP
- ◆ Tier II (Verified Technologies)– Repowering of 14 tugs, SIF Tier 1 & 2 engine rebuild kits, PANYNJ RFP for “clean technologies”
- ◆ Tier IV – PANYNJ owned ERCs as contingency as needed

“Living Plan” changes to meet needs/situation/new technology

Contingencies: Vessel Speed Reduction, Additional Tug Repowers, etc.



US Army Corps
of Engineers

Next Steps

- ◆ Finishing Latest Update to HAMP
 - Adjust Volumes/Emissions Levels
 - Evaluate New Mitigation Options
 - Incorporate Actual Activity & Monitoring Data
- ◆ Continue Development of Contingency Measures
- ◆ Working on Next CCRs
- ◆ Continued RAT Meetings



US Army Corps
of Engineers

Contact Information

Len Houston, Chief
Environmental Branch
USACE – New York District

917.790.8702

leonard.houston@usace.army.mil



US Army Corps
of Engineers



US Army Corps
of Engineers

50 foot Harbor Deepening Project Achieving General Conformity

- ◆ HDP Project ~ 10 years 2005-2014
- ◆ Goal is to deepen federal navigation channel to 50 feet by remove~42 million cubic yards of material to allow larger container ships
- ◆ 16 dredging contracts
- ◆ HDP is a federal project
- ◆ Project sponsors
 - Federal US Army Corps (Corps)
 - Local Sponsor Port Authority of NY &NJ (PANYNJ)



US Army Corps
of Engineers

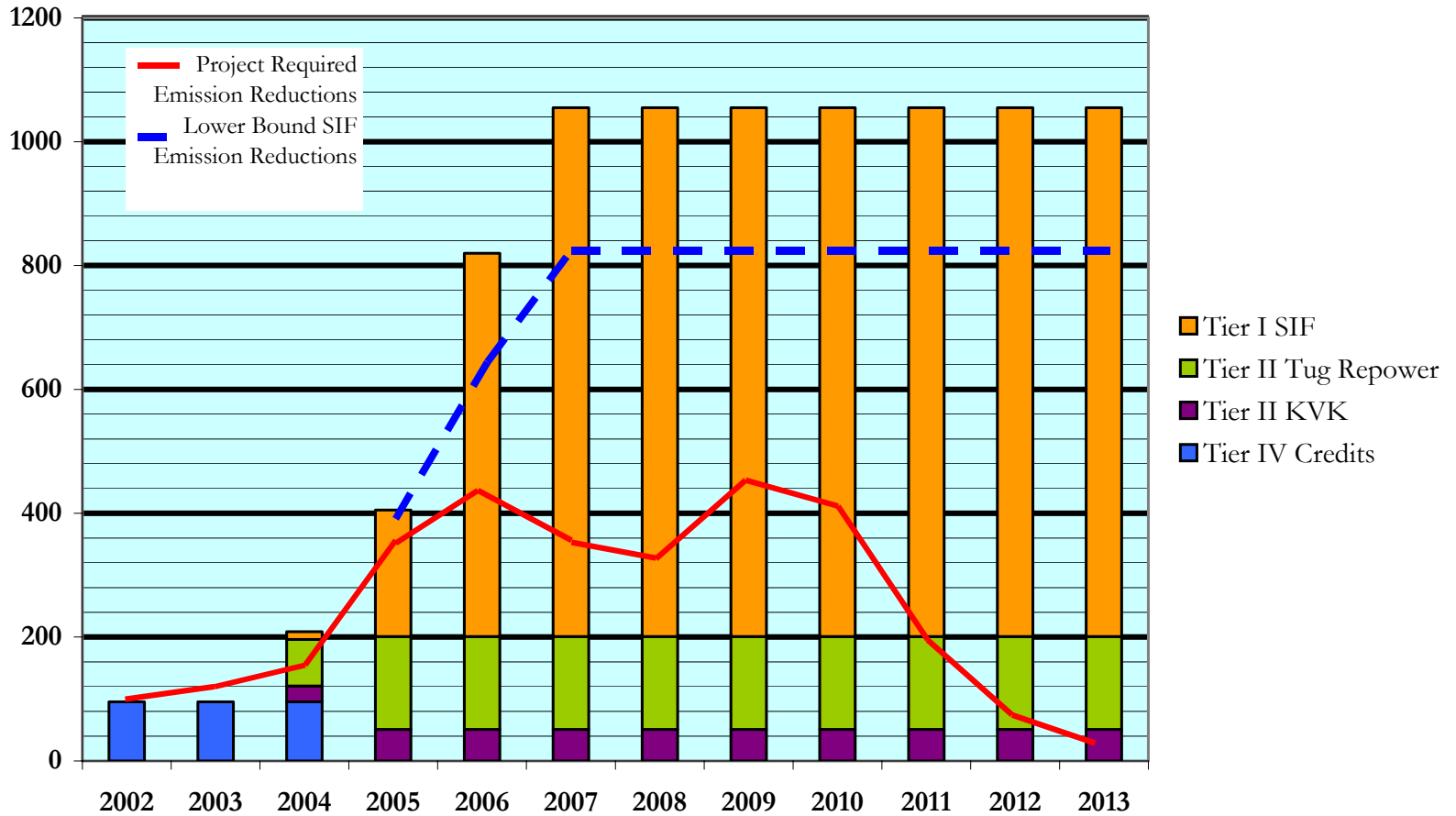
Statement of Conformity Entailed:

- ◆ Detailed analysis of actual emission levels
- ◆ Emission reduction technologies explored
 - Electrification
 - Fuel additives
 - Engine re-powering/modifications
 - Purchase Emission Reduction Credits
 - Incentives to create credits
- ◆ Marine Vessel & Cargo Handling Equipment Emission Inventories
- ◆ SIP accommodation - as needed (States)



Mitigation Plan Selected

Twin Peaks





US Army Corps
of Engineers

SIF Retrofit Program

- ◆ NYCDOT/PANYNJ MOA - SIF owned by NYCDOT, PANYNJ & its consultants/vendor doing demonstration on one vessel - *completion Sep 2004*
- ◆ Upon successful completion PANYNJ has into MOU with NYCDOT to retrofit the full fleet and pay for urea costs for at least the life of the HDP
- ◆ In addition, PANYNJ & NYCDOT are putting on emission reduction rebuild kits certified by EPA



US Army Corps
of Engineers

Tugboat Emission Reduction Programs

PANYNJ Leading

- ◆ Kill Van Kull Contract Area 5 – 2 tugs repowered, part of agreement with State of NJ, also bought ERCs *50 tpy*
- ◆ Port Jersey Channel – 6 to 8 tugs projected *155 tpy est.*