

# Scalable QAPP IT Solution for Air Monitoring Programs

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# US EPA and Tribes Team



- Building quality assurance project plans
  - Defensible results
  - Standardized quality level

Achieving the # 1 common goal : cleaner air

# Specific Needs



## EPA

- Mandated
  - provide tools and guidance
  - receive approvable QAPPs
- Limited time and resources

## Tribes

- Inexperienced with QAPP
- Time intensive process
- Limited time and resources

# Vision



- Turbo-Tax like software to assist Tribes in creating their QAPP
  - Step 1: Develop defensible process
    - First using templates
  - Step 2: Progress from paper to automated process to address data quality issues and transfer knowledge
    - Software tools

# QAPP IT Solution



- Simple, cost effective QAPP development process to build an approvable QAPP

QAPP = Quality Assurance Project Plan

## But Who?



### Lakes Environmental Software

- Selected to develop the QAPP Software
- Experience with Tribes - Tribal Emission Inventory Software Solution (TEISS)
- Trust in ability to deliver products of high quality

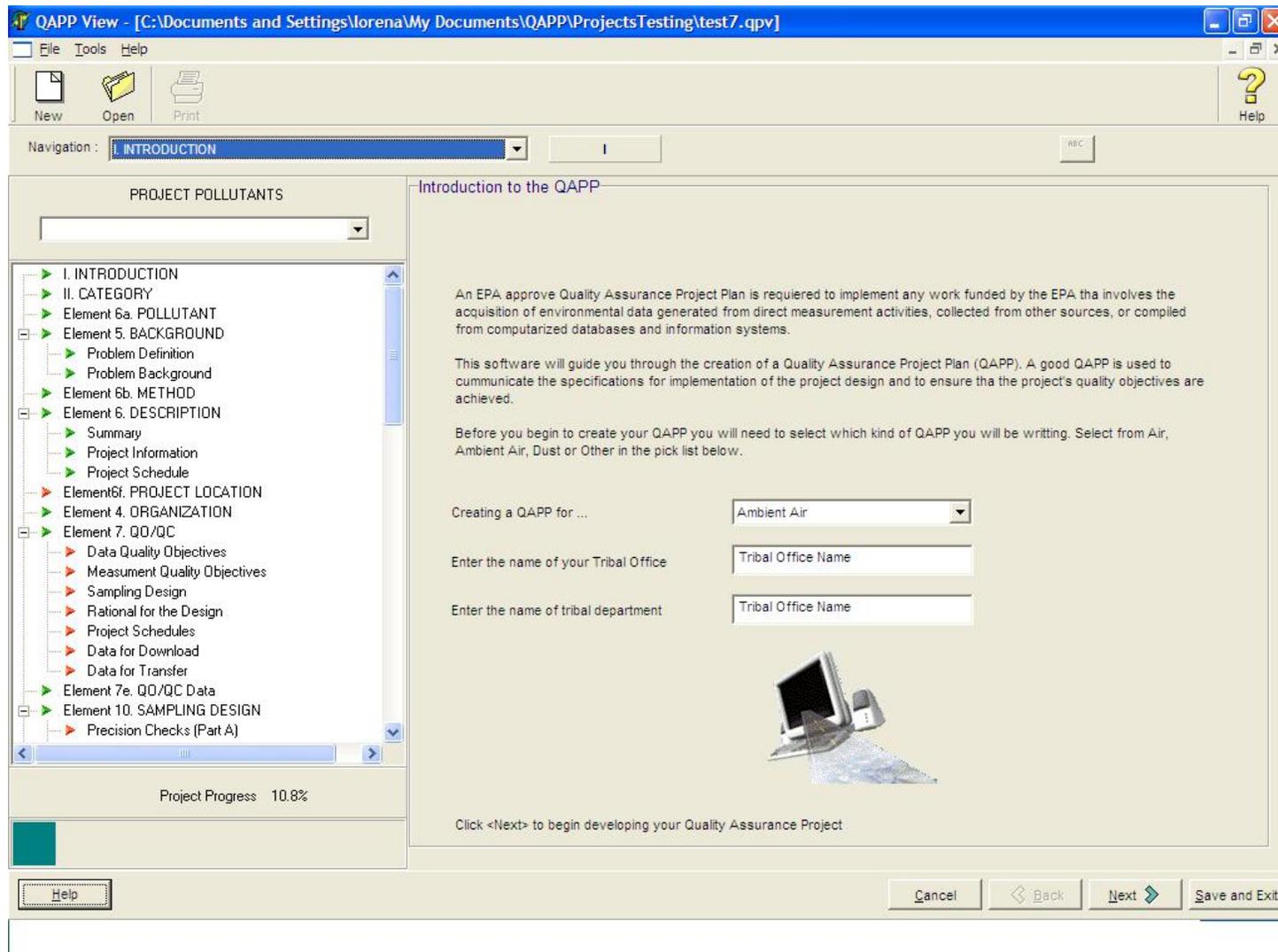
# Automating the Process



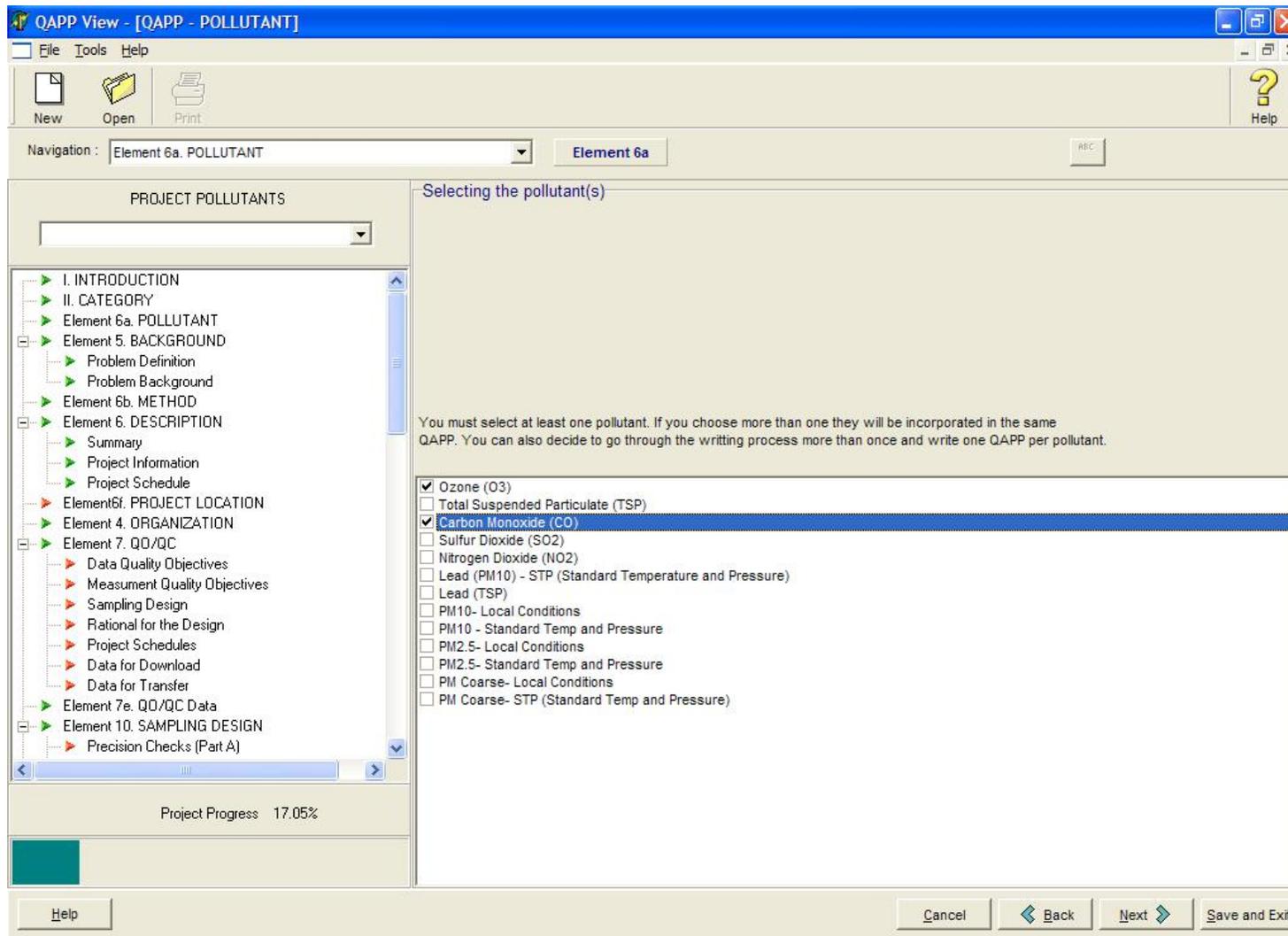
## Together EPA, Tribes and Lakes Environmental

- Developed of questions to be asks
- Picked lists for the drop-down menus
- Envisioned Help screens (including links)

# Sample Screen



# Multiple Pollutants



# Method Selection

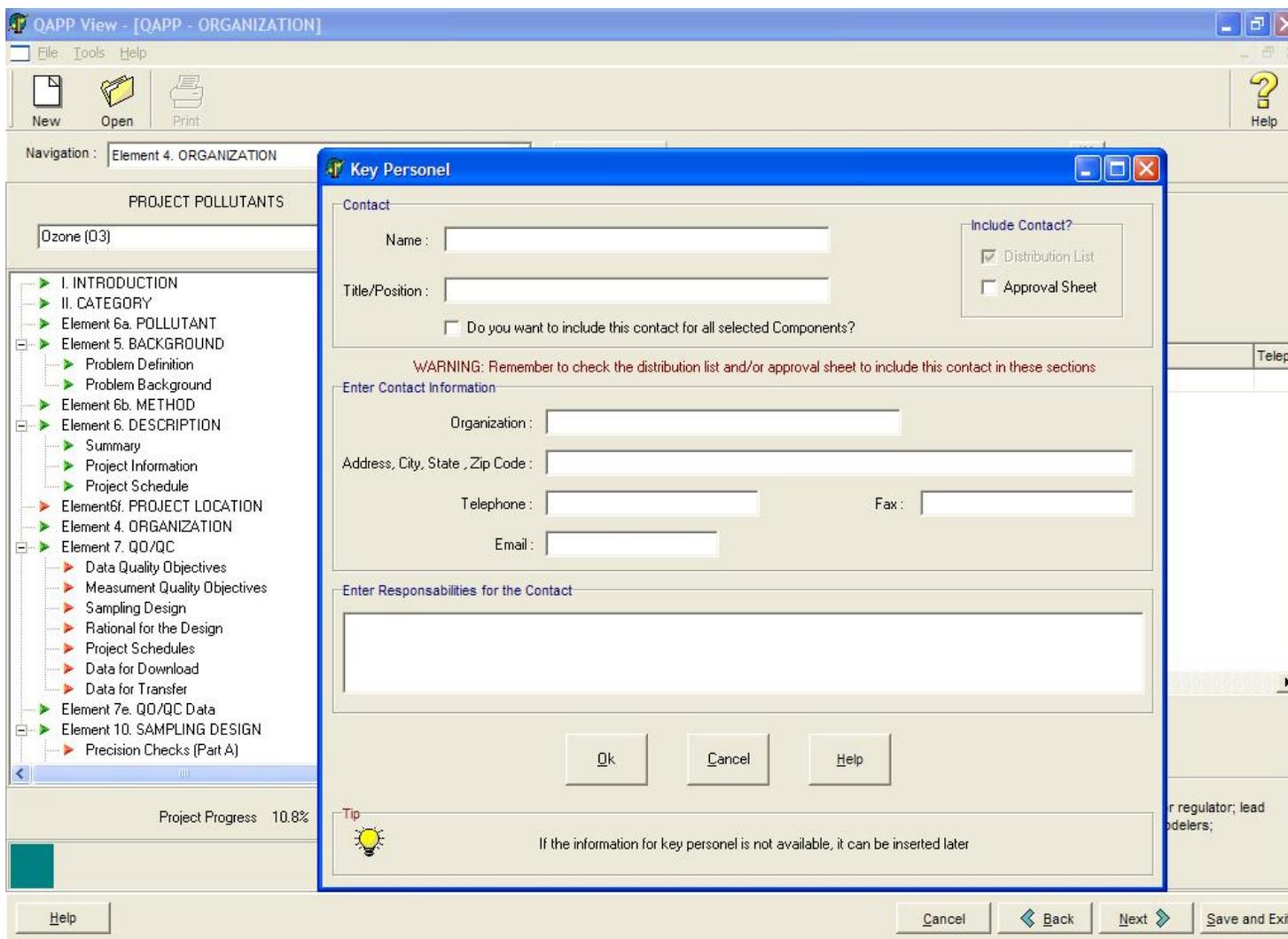


The screenshot displays the 'QAPP View - [QAPP - METHOD]' software interface. The window title bar shows 'QAPP View - [QAPP - METHOD]' and standard window controls. The menu bar includes 'File', 'Tools', and 'Help'. The toolbar contains icons for 'New', 'Open', and 'Print', along with a 'Help' icon. The 'Navigation' section shows 'Element 6b. METHOD' selected in a dropdown, with a 'Navigation: Element 6b' button and an 'ABC' button.

The main interface is divided into several panels:

- PROJECT POLLUTANTS:** A dropdown menu shows 'Ozone (O3)' selected.
- Left Panel (Tree View):** A hierarchical tree structure with expandable nodes. The 'Element 6b. METHOD' node is expanded, showing sub-nodes like 'Problem Definition', 'Problem Background', 'Summary', 'Project Information', 'Project Schedule', 'Element 6f. PROJECT LOCATION', 'Element 4. ORGANIZATION', 'Element 7. QO/QC', 'Element 7e. QO/QC Data', and 'Element 10. SAMPLING DESIGN'.
- Center Panel (Method Selection):** Titled 'Selecting the method(s)', it contains a text box with instructions: 'Select if you want to choose the method by name, designation number or method code (i.e. Beckman 866; RFCA-0876-012; 012)'. Below this are three radio buttons: 'Name' (selected), 'Designation Number', and 'Method Code'.
- Bottom Left Panel:** A list titled 'The list below shows the component(s)' containing 'Ozone (O3)' and 'Carbon Monoxide (CO)'. Below this list are 'Add', 'Edit', and 'Remove' buttons.
- Bottom Right Panel:** A list titled 'The list below is based on the component(s) you selected in the previous panel. Select the method(s) you will be using.' It contains a scrollable list of methods, with 'Columbia Scientific Industries 2000' checked. Other methods include 'Advanced Pollution Instr. 400/400A/400E', 'Beckman 950A', 'Bendix 8002', 'Dasibi 1003-AH, -PC, -RS', 'Dasibi 1008-AH, -PC, -RS', 'DKK-TOA Corp. GUX-113E, GUX-113E-1', 'Ecotech ML9810/EC9810, -9810B, -9811, -9812', 'Enviro-nics 300', 'Environnement S.A O341M', 'Environnement S.A O342M', 'Environnement S.A SANOA', 'Horiba APOA-360', 'McMillan 1100-1', 'McMillan 1100-2', and 'McMillan 1100-3'. Below the list are 'Add', 'Edit', and 'Remove' buttons.

At the bottom of the window, there is a 'Project Progress 10.23%' indicator, a 'Help' button, and a set of navigation buttons: 'Cancel', 'Back', 'Next', and 'Save and Exit'.



# Training and Support



- Training and Support
- Incorporating data collection programs in other media
- The automated QAPP - a simple, cost effective QAPP development process to build approvable QAPP.

# Thank you!

Special thanks to: Lindsay Joseph, Michael Papp, Melinda Ronca-Battista and Lorena Suarez

