

CALPUFF Status and Update

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Outline

- EPA Regulatory Version of CALPUFF
- CALPUFF Evaluation Tool
- CALPUFF management
- CALPUFF activities

Regulatory Version of CALPUFF

- Current regulatory version
 - Original CALPUFF promulgated (April 15, 2003) - remains current regulatory version
 - Implements recommendations from Interagency Workgroup on Air Quality Models (IWAQM) Phase 2 document

Regulatory Version of CALPUFF

- CALPUFF versions to date
 - 5.7.....April, 2003
 - 5.711a...July, 2003
 - 5.711b...July, 2004
 - 5.754.....February, 2006 (VISTAS)
 - 6.112.....April, 2006 (MMS)

Regulatory Version of CALPUFF

- CALPUFF update (complete)
 - evaluation and acceptance of 5.711b (July, 2004)
 - evaluation complete
 - documentation of code changes since April 2003
 - evaluation results to be posted to SCRAM
 - evaluation tool on SCRAM

CALPUFF Evaluation Tool

- developed by MACTEC
- compares 2 versions; proposed vs. current version
- determines code changes and allows evaluation to be focused
- provides a standard for evaluating changes
- will be publicly available via SCRAM

CALPUFF Evaluation Tool

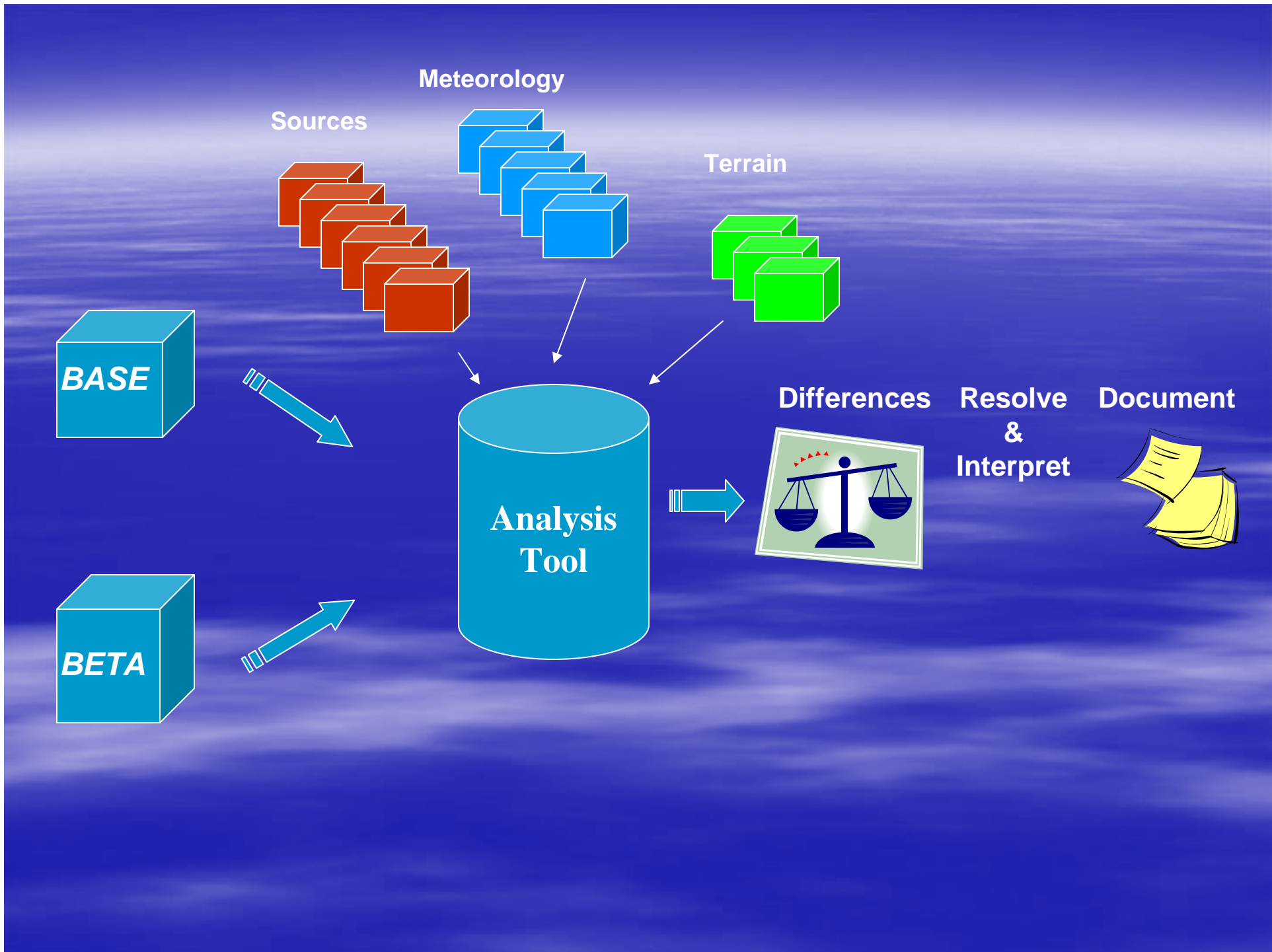
- CALPUFF sources modeled (standard)
 1. Point source, non-bouyant, 30m height
 2. Point source, bouyant, 65m height
 3. Volume source, ground-based, 10m height
 4. Area source, ground-based, 0m height, 20m x 200m

CALPUFF Evaluation Tool

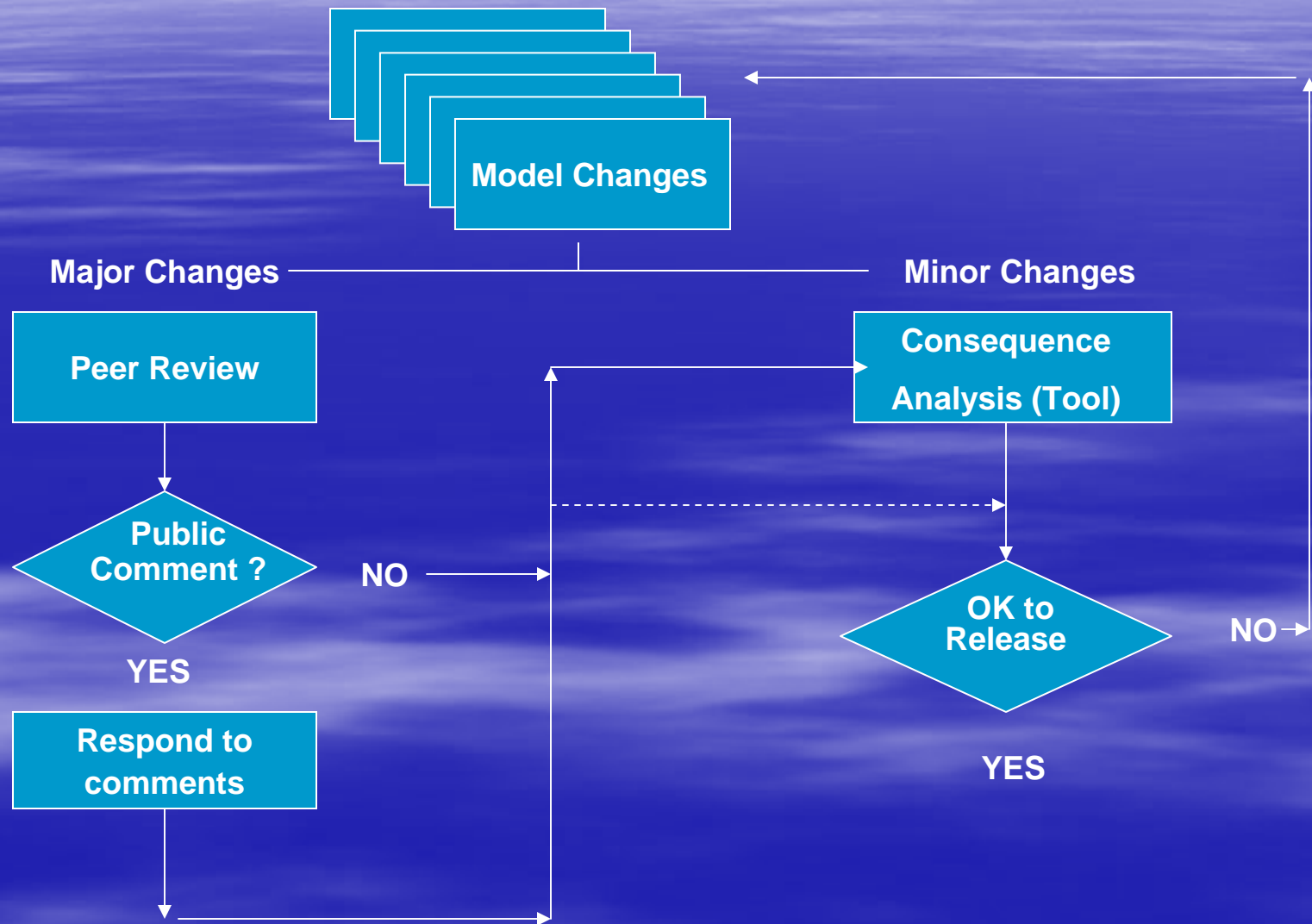
- CALPUFF sources (optional)
 1. Three stacks...subject to downwash
 - (a) 35m capped stack on 34m bldg
 - (b) 35m non-capped stack on 34m bldg
 - (c) 50m non-capped stack on 34m bldg
 2. Buoyant area source, ground-based, 1km diameter (forest fire, landfill, smelter)
 3. Tall point source, 99m, along a coast

CALPUFF Evaluation Tool

- Scenarios - divided into 3 groups, dependant on modeling domain
 - Large-scale – Long-range transport; on the order of 500km, where the curvature of the earth is significant
 - Medium-scale – typical Class I area with LRT for distances of 50-100km
 - Small-scale – complex flow in a deep valley



The Model Update Process



CALPUFF Management

- CALPUFF ownership – switch from EarthTech to TRC, effective April 21, 2006
- Transparent change to users; www.src.com to remain active
- EPA will have new contractual arrangement with TRC

CALPUFF Management

- Improvements in CALPUFF management
 1. Consistency between TRC and EPA versions
 - strive to have only 2 versions...beta and regulatory version
 - closer working relationship and communications
 - EPA to have knowledge of upcoming changes to enable testing and decision-making for defaults

CALPUFF Management

- Improvements in CALPUFF Management
2. Parallel the procedures for AERMOD regulatory updates:
 - Timely updates
 - Updated documentation with each release
 - Model Change Bulletin for changes made
 - Update to regulatory defaults, if applicable

CALPUFF Management

- Improvements to CALPUFF Management
 - Funding Collaboration – Consortium; EPA and others
- Consortium necessary to provide funding for on-going updates and research to advance the science within CALPUFF
- Contract management - likely to be outside of EPA

Current CALPUFF studies

- National Park Service - 4-corners study
- EPA (FWS) - Performance evaluation of CALMET processes
- EPA/NOAA Evaluations of Recent CALPUFF Enhancements
- Others.....

Thank You