PSC Decision 3: WTWG Recommendations to the WQGIT
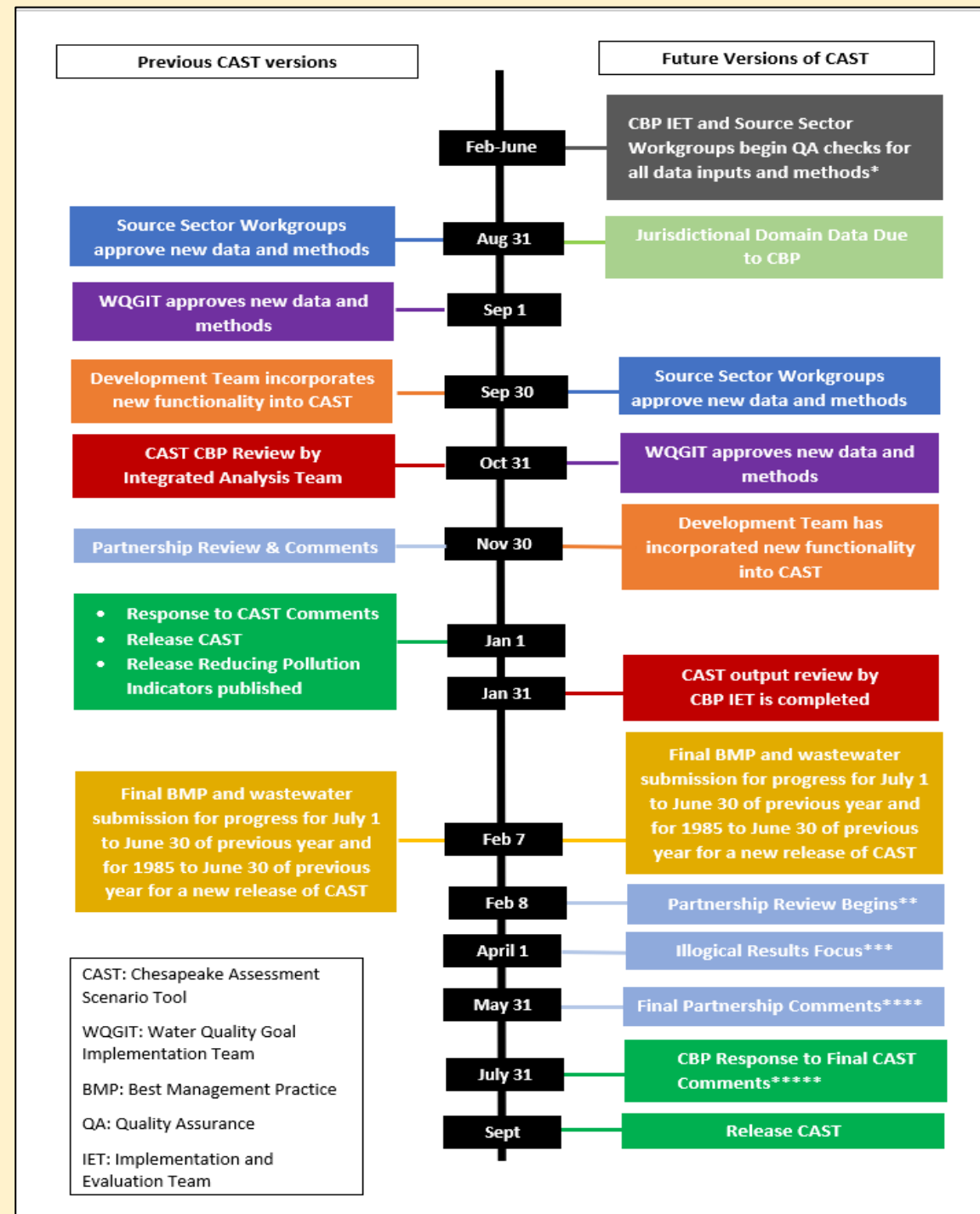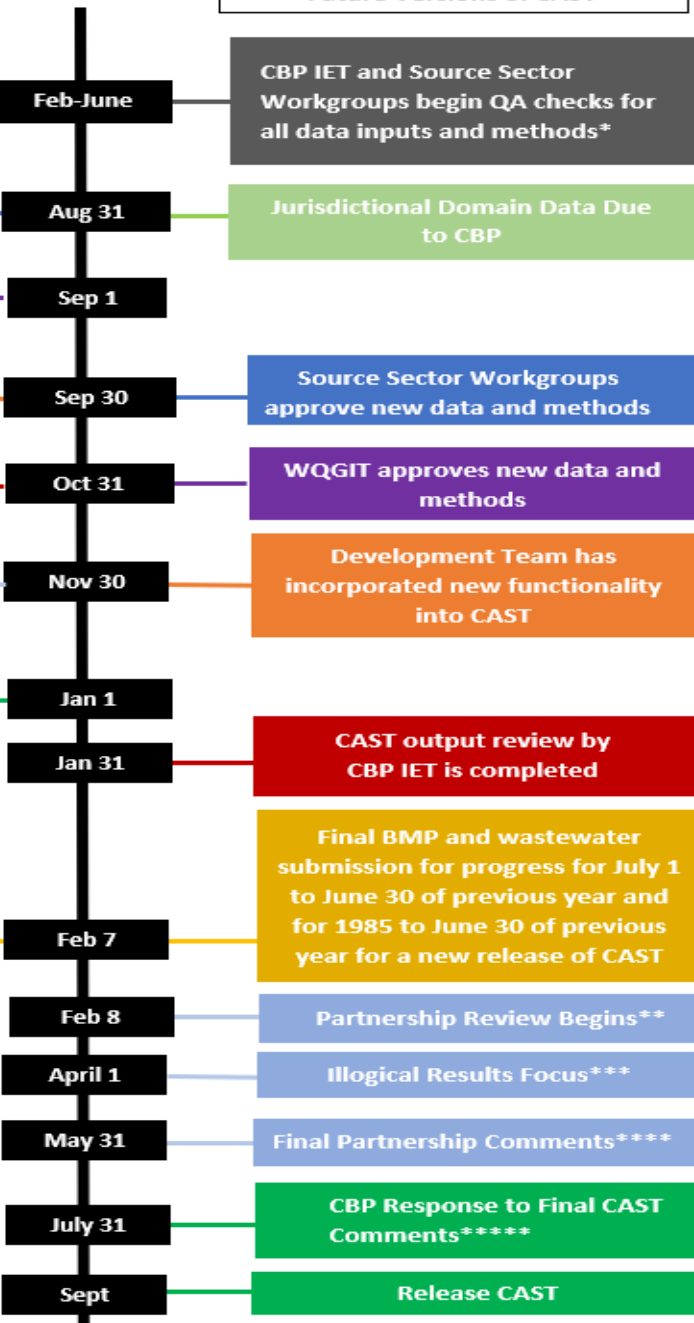
- **August 2022 PSC Decision 3**: The partnership will **update the process for incorporating data into CAST to include additional safeguards to prevent data analysis errors** and **to assess reasonability of modeling results after CBP protocols are applied.**

- **WQGIT charged WTWG with developing recommendations for this charge**

- **WTWG broke charge into two parts**: **PRE (Track 1) and POST data processing (Track 2)**

  o **Pre-Data Processing**: Safeguards and protocols to prevent and protect against data input errors

  o **Post Data Processing**: A process/protocols to assess reasonability of results ("after protocols are applied" means "when we see results")

- Evaluated each track separately; addressed both within the framework of a formalized *CAST Updates Review Process*

- Presented *Draft CAST Updates Review Process Outline* and detailed recommendations to WQGIT for consideration in June, expect a decision at the 7/24 WQGIT meeting

Revised *Phase 6 CAST Updates Review Process-* outlines a comprehensive quality assurance procedure and corresponding timeline for CAST data updates

➢ Emphasizes and incorporates the initial data, methods, processes and documentation review into the timeline- partnership, WG's & IET

➢ Lengthens IET and partnership review periods

➢ Adjusts timing of the partnership review

➢ Emphasizes IET support, communication and prioritization during partnership review

➢ Addresses perceived anomalies in a timely, scientifically valid and consistent fashion

➢ Suggests recourse for unresolved issues

Previous CAST versions | Future Versions of CAST

Previous CAST versions		Future Versions of CAST
	Feb-June	CBP IET and Source Sector Workgroups begin QA checks for all data inputs and methods[+]
Source Sector Workgroups approve new data and methods	Aug 31	Jurisdictional Domain Data Due to CBP
WQGIT approves new data and methods	Sep 1	
Development Team incorporates new functionality into CAST	Sep 30	Source Sector Workgroups approve new data and methods
CAST CBP Review by Integrated Analysis Team	Oct 31	WQGIT approves new data and methods
Partnership Review & Comments	Nov 30	Development Team has incorporated new functionality into CAST
• Response to CAST Comments • Release CAST • Release Reducing Pollution Indicators published	Jan 1	
	Jan 31	CAST output review by CBP IET is completed
Final BMP and wastewater submission for progress for July 1 to June 30 of previous year and for 1985 to June 30 of previous year for a new release of CAST	Feb 7	Final BMP and wastewater submission for progress for July 1 to June 30 of previous year and for 1985 to June 30 of previous year for a new release of CAST
	Feb 8	Partnership Review Begins[**]
	April 1	Illogical Results Focus[***]
	May 31	Final Partnership Comments[****]
	July 31	CBP Response to Final CAST Comments[*****]
	Sept	Release CAST

CAST: Chesapeake Assessment Scenario Tool

WQGIT: Water Quality Goal Implementation Team

BMP: Best Management Practice

QA: Quality Assurance

IET: Implementation and Evaluation Team

Future Versions of CAST

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Sep 30	Source Sector Workgroups approve new data and methods
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WTWG Recommendations: Quality assurance CAST inputs

- **Model update review process begins with a quality assurance review of data input sources, data preparation methods, model processing methods, and corresponding documentation**
- Process is guided by relevant source sector WG coordinators with CBP Implementation and Evaluation Team support (IET)

  ➢ Review of the processing of data that informs the load
  ➢ Review of methods, processes and documentation
  ➢ As new data becomes available a data specific quality assurance review begins
  ➢ Workgroup coordinators initiate this process with support from the CBP IET to maximize the review period prior to the approval of new data and methods.

Future Versions of CAST

Date	Milestone
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WTWG Recommendations: Quality Assurance Outputs and Anomalies

- **Timely Partnership review supported by CBP IET staff:**
  - ➤ Prioritize ongoing communication and technical support for analyses

- **Anomalies:**
  - ➤ Within appropriate source sector workgroup- contender illustrates why data results are illogical with scientific support that the result is not representative of real change that has occurred from the previous model version
  - ➤ Workgroup confirms illogical results
  - ➤ Workgroup, supported by IET seeks resolution

  Path for unresolved anomalies: WQGIT
  - ➤ Partnership confirms illogical results and lack of acceptable resolution
  - ➤ Continue to investigate options for addressing the anomaly
  - ➤ Option to revert to previous model data and methods related to the anomaly
  - ➤ CAST released

Summary PSC Decision 3 WTWG Recommendations to WQGIT:

- To address the charge made in August 2022 by the PSC, the WTWG has recommended adopting a revised CAST Update Review Process.
- Revisions were made to address concerns with the quality assurance of model updates while balancing the commitment of the CBP partnership to:

Use science-based decision-making to support sound management decisions in a changing system

Use an adaptive management approach to respond to changing conditions and better information

Ensure our goals are aligned with the best available science to attain restoration success