

Request to Change the Phase 7 Model Development Schedule and Timeline for Delivery of 2035 Climate Change Loads

At their December 17, 2020, meeting the PSC approved a number of actions related to addressing current and evaluating future load due to climate change.

- In 2025, the Partnership will consider results of updated methods, techniques, and studies and revisit existing estimated loads due to climate change to determine if any updates to those 2035 load estimates are needed.

In order to provide a in depth evaluation of 2035 and beyond loads due to climate change and to provide better assessment of shallow/open water response to increased loads due to climate change a new estuarine model is needed.

This leads to the development of a new set of models (Airshed, Watershed, Estuarine) that will become the next generation set of tools that will serve the partnership beyond 2025 and for years to come.

In order to develop the best set of models possible, CBPO staff engaged the partnership to determine how this new set of modeling tools could help serve their needs. We got tremendous feedback.

Engagement and Suggestions for the Phase 7 Suite of Models

- The first suggestions and ideas for the Phase 7 Suite of models came from STAC evaluation of the Phase 6 Modeling suite of Tools and Suggestions/ideas/changes that did not make it into Phase 6
- CBPO staff have engaged the Modeling Workgroup, WQGIT, and all partnership Goal Team Chairs to solicit ideas on what should be included in a new suite of modeling tools
- Engagement for these groups included
 - Modeling Workgroup – Every Quarterly Meeting 2021
 - WQGIT – 2 day meeting 10/25-26 with focus on the Phase 7 suite of Tools
 - WQGIT – individual meetings with each voting member to discuss Phase 7 Options/suggestions – occurred prior to the 10/25-26 meeting
 - WQGIT – Schedule Discussion on 12/13/21 and 1/24/21
 - All GIT Chairs – Meeting on 12/1/21
 - All GIT Chairs – Individual meetings prior to the 12/1/21 meeting
- Has resulted in the tremendous number of suggestions and options to consider in the Phase 7 Development process

Bottlenecks/Issues with the Current Schedule

- The current schedule leaves insufficient time for model development, considering the list of potential improvements from the great suggestions received
- 2025 is the target date for Phase III WIP implementation, however the implementation data and therefore model results won't be available until 2026
- The Phase III WIPs must be evaluated with Phase 6 CAST in 2026. Reviewing the Phase 7 CAST in 2024 and using it in 2025 will likely cause confusion and conflicting results
- Simultaneously considering revised planning targets, evaluating program performance, and planning for the future is a lot to ask of Partnership Managers and Staff.
- New planning targets based on Phase 7 CAST must be tracked with Phase 7 CAST leading to 2 separate targets tracked with two separate models in 2026
- Review of the estuarine model is scheduled for the same year as the target development
- High Resolution land use data and 2022 ag census will likely become available during the year of review for CAST, necessitating changes during the review period

Current Phase 7 Development Schedule

Year	2022	2023	2024	2025	2026	2027	2028
Phase 6 CAST	CAST21		CAST23				
Phase III WIP evaluation	Implement				Evaluate and track with Phase 6		
Current Climate Plans	Build Models		Review CAST	Develop 2035 targets with P7 models, Review estuary model	P7 CAST 25 Available for Use		

Important Notes:

- CAST23 will be the model of record for the evaluation of 2025 Progress
- CAST23 will not include the FY22 Ag Census or the High Resolution Land Use Data from 2021-2022
- Phase 7 CAST25 would not include either of those data sets
- Phase 7 CAST25 would be in use at the same time as the 2025 Evaluation that is using Phase 6 CAST23

Proposed Phase 7 Development Schedule

Year	2022	2023	2024	2025	2026	2027	2028
Phase 6 CAST	CAST6-2021		CAST6-2023		CAST6-2025		
Phase III WIP evaluation	Implement				Evaluate and track with Phase 6		
Current Climate Plans	Build Models		Review CAST	Develop 2035 targets with P7 models, Review estuary model	P7 CAST25 Available for Use		
WQGIT Recommends	Build Models				Review Models	New 2035 climate targets with P7 models	P7 CAST27 Available for Use

Important Notes:

- CAST23 will be the model of record for the evaluation of 2025 Progress
- CAST23 will not include the FY22 Ag Census or the High Resolution Land Use Data from 2021-2022
- CAST25 will introduce FY22 Ag Census or the High Resolution Land Use Data from 2021-2022
- Schedule provides a full year of review for Phase 7 suite of tools
- Schedule results in Climate Targets at the end of 2027

Requested Action from the Management Board

Approve making a recommendation to the PSC to elongate the current Phase 7 model development schedule to add two full years to the development timeline, and produce 2035 Climate Change loads and new planning targets for Jan 1, 2028.

- It will allow all partnership teams and workgroups to do a more thorough job to address all of the great input we have received with regard to improving our modeling tools
- It will allow for the evaluation of 2025 progress to be completed before diving into application of the Phase 7 suite of models

Backup Slides

Model Development Schedules

