2023 COASTAL MASTER PLAN

COASTAL ADVISORY TEAM (CAT) GROUND RULES, MEETING SUMMARIES

SUPPLEMENTAL MATERIAL A1.1

REPORT: VERSION 03
DATE: MAY 2023

COASTAL PROTECTION AND RESTORATION AUTHORITY

This document was developed in support of the 2023 Coastal Master Plan being prepared by the Coastal Protection and Restoration Authority (CPRA). CPRA was established by the Louisiana Legislature in response to Hurricanes Katrina and Rita through Act 8 of the First Extraordinary Session of 2005. Act 8 of the First Extraordinary Session of 2005 expanded the membership, duties, and responsibilities of CPRA and charged the new authority to develop and implement a comprehensive coastal protection plan, consisting of a master plan (revised every six years) and annual plans. CPRA's mandate is to develop, implement, and enforce a comprehensive coastal protection and restoration master plan.

CITATION

Coastal Protection and Restoration Authority. (2023). 2023 Coastal Master Plan: Supplemental Material A1.1: Coastal Advisory Team Ground Rules, Meeting Summaries. Version 3. (pp. 1-112). Baton Rouge, Louisiana: Coastal Protection and Restoration Authority.

ACKNOWLEDGEMENTS

INTRODUCTION

In 2018, CPRA convened the Coastal Advisory Team (CAT). The intent of the CAT is to provide input and feedback on the 2023 Coastal Master Plan process and components. The CAT includes invited representatives who have a coastwide, big picture perspective of coastal challenges and opportunities from federal, state, and local government; NGO's; business and industry; and academia. The goal of the CAT is to discuss options, solicit ideas, gain input to the planning process, and provide recommendations to CPRA. The following pages detail the CAT ground rules and meeting summaries, or key outcomes memos (KOMs).

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COASTAL ADVISORY TEAM - GROUND RULES

1.1 BACKGROUND

The Coastal Protection and Restoration Authority (CPRA) is convening a Coastal Advisory Team (CAT) to support CPRA in fulfilling its mission to develop the 2023 Coastal Master Plan.

The CAT will serve as the primary collaborative group supporting and providing insight and counsel to the Master Plan Delivery Team (MPDT). The CAT membership will draw upon individuals who have previously served on the Framework Development Team (FDT) during the 2012 and 2017 Coastal Master Plan efforts, as well as new participants. The CAT will consist of representatives from federal, state and local governments; NGOs; business and industry; community; and academia. CAT members will offer specific guidance on all of the major elements of the 2023 Coastal Master Plan. As key advisors, CAT members will work collaboratively to identify, discuss, and reach a common understanding about the tough choices that lie at the heart of protecting and restoring Louisiana's coast. CAT members will reach out to citizens who share their interests, bring these citizens' ideas to the table, and report back to these citizens about how their ideas were discussed and addressed in the 2023 Coastal Master Plan. In this capacity, the CAT serves as an important distribution network for early-stage communications.

The CAT will meet approximately 10 times in person between September 2018 and April 2023. The CAT may also meet in additional webinars as appropriate. Most CAT meetings will be held in centrally located areas and will begin at 9:00 a.m. and conclude before 3:00 p.m.

The CAT's work will be guided by several key principles:

- *"We are all in this together."* To be successful, the 2023 Coastal Master Plan must integrate the interests of a wide variety of coast wide interests and be mindful of the institutional context of the work.
- *Legitimacy, accountability, and representativeness.* To ensure the process is credible and results in advice useful to CPRA and the MPDT, the CAT's work must be structured to foster effective representation, accountability, and thoughtful deliberation and weighing of choices and tradeoffs.

- *Outcome-focused deliberations*. There are no easy answers, and all CAT members have their own ideas and desires. While disagreements and difficult discussions are expected, the purpose of the CAT is to outline concerns and work to develop solutions.

It is expected that the time commitment necessary to prepare for and actively participate as a CAT member is not likely to be substantial.

In addition to the CAT, Regional Workgroups are being created to obtain local input on technical aspects of plan development. These workgroups will encourage multi-interest options and work products rather than work products put forward by a single block or interest group. Opportunities will be provided during CAT meetings for Regional Workgroup products to be discussed.

1.2 GROUND RULES

Membership. Members have been appointed to serve by CPRA's executive director and were selected to represent a broad range of stakeholder groups, geographies, and agency perspectives rather than individual interests. Members will make every effort to attend all CAT meetings.

Communication with Stakeholders. CAT members should keep their stakeholders informed of the CAT's efforts and report relevant feedback to the CAT. In reporting back, CAT members will strive to integrate the views of their constituency.

Collaborative, Effective, and Respectful Deliberations. The following ground rules are intended to foster collaborative, effective, and respectful CAT deliberations:

- *Active, focused participation.* Every participant is responsible for communicating his/her perspectives. Everyone is encouraged to participate; no one dominates. Only one person will speak at a time. Everyone will help stay on track.
- *Respectful interaction.* Participants will respect each other's personal integrity, values, and legitimacy of interests. Participants will assist each other in creating an effective atmosphere by turning off cell phones, refraining from sidebar conversations, and using computers for CAT-related work only.
- *Integration and creative thinking.* Participants will strive to be open-minded and integrate members' ideas and interests. Participants will attempt to reframe contentious issues and offer creative solutions in a timely fashion to enable constructive dialogue.
- *Adherence to ground rules.* As a set of mutual obligations, CAT members will commit to adhere to these rules once they are adopted. CAT members should help uphold and enforce these rules.

Meeting Materials. The MPDT commits to provide, to the extent practicable, all primary meeting materials at least three days prior to meetings in order to give CAT members ample time to review the relevant information. All CAT members will have equal access to meeting materials. Members are expected to review meeting materials beforehand to foster informed deliberations. Members also are

asked to bring supporting materials to each CAT meeting.

Information Sharing. CAT members recognize deliberation on the 2023 Coastal Master Plan depends on access to the best readily available information. CAT members commit to identify information needs in a timely fashion and to contribute in framing needs for additional research and analysis. CAT members commit to share, and not withhold, relevant information. Likewise, the MPDT will strive to share information to the greatest extent possible, consistent with existing legal and regulatory constraints. At times, draft and preliminary information will be provided to the CAT, and CAT members will be asked to treat that information as such. Analyses will be presented in a manner that distinguishes interpretation and inference from underlying data.

Meeting Participation. Participation in meeting deliberations and discussions will be limited to CAT members only. As needed, the MPDT may ask CPRA staff and other experts in attendance to share relevant expertise and information.

Decision-Making. The CAT will seek to develop recommendations that reflect broad, cross-interest concurrence. In this context, "concurrence" means the recommendation in question is supported by all CAT members present at the meeting. This does not necessarily mean each CAT member likes every aspect of the recommendation but that each member is willing to accept and support it. When broad, cross-interest concurrence cannot be reached in the time available, the range of possibilities considered by the CAT will be presented.

Meeting Summaries. The MPDT will prepare and distribute a Key Outcomes Memorandum (KOM) to CAT members following each meeting. The KOM will summarize key decisions made, issues discussed, and the next steps identified. It will not serve as a meeting transcript, nor will it typically attribute comments or suggestions to specific individuals. In general, the KOM will characterize the extent of concurrence reached on important Master Plan elements and issues that will require further deliberation.

In the event that CAT members believe the KOM significantly misrepresents particular decisions, issues, or next steps, they should notify the project facilitators, or conveners in a timely fashion. The MPDT will review the matter and use their professional judgment to determine if revisions are needed. If so, the MPDT will prepare a revised KOM and distribute it in a timely fashion to all CAT members.

Communication Protocols. CAT members wishing to send email correspondence, or documents to the full CAT are asked to send these through the MPDT. Should CAT members email documents to their constituents to elicit feedback, CAT members are asked to make clear that the materials are being provided to support CAT deliberations and not targeted for general distribution.

Media Contact. The CAT recognizes that the press may contact members during the course of the CAT

deliberations. CAT members agree to the following ground rules for interaction with the press:

- CAT members agree to not attribute particular comments to particular individuals, nor to characterize others' views.
- CAT members agree not to portray ideas as consensus before the CAT has explicitly agreed on them.
- CAT members agree to inform CPRA when the 2023 Coastal Master Plan appears to be the primary focus of the media contact.

Role of Master Plan Delivery Team. The MPDT will strive to enforce the ground rules in a consistent, fair, and firm manner and will ensure meetings stay on track. The MPDT will keep a list of those waiting to speak but may opt to take speakers out of turn to foster focused discussions on a particular topic. The MPDT may, at its discretion call for breaks to refine meeting strategies to foster effective CAT deliberations. The MPDT may also recommend the use of within- and across-interests, small-group breakout sessions and will be responsible for drafting KOMs.

CAT MEETING #1 KOM

DATE: 2018-26-09

RE: COASTAL ADVISORY TEAM MEETING #1 KEY OUTCOMES MEMO (VIA WEBINAR)

MEETING PARTICIPANTS

Todd Baker (LDWF), Susan Bergeron (BTNEP), Mike Carloss (DU), Brady Carter (LDWF), Chett Chiasson (Greater Lafourche Port Commission), Steve Cochran (MS River Delta Coalition), Sidney Coffee (AWF), Anne Coglianese (City of New Orleans), Laurie Cormier (Calcasieu Parish Police Jury), John Ettinger (RESTORE Council), Quenton Fontenot (Nicholls State University), Pat Forbes (OCD), Karen Gautreaux (TNC), Craig Gothreaux (NMFS), Tyler Gray (LMOGA), Brad Inman (USACE), Quin Kinler (USDA-NRCS), Scott Kirkpatrick (Coast Builders), Keith Lovell (DNR), Simone Maloz (ROR), Tim Matte (St. Mary Levee District), Karen McCormick (EPA), Michael Miller (Associated Branch Pilots), Spencer Murphy (Canal Barge Co.), David Muth (NWF), George Ramseur (MDMR), Patrick Witty (LED)

CAT MEMBERS NOT PRESENT

Sam Bentley (LSU), Dwayne Bourgeois (NLLD), Joey Breaux (LDAF), David Cresson (CCA), Paul Frey (LLA), Henry Graham (LCA), Pat Landry (DOTD), Ronnie Paille (USFWS), Brad Robin (Oyster Task Force), Robert Twilley (LA Sea Grant)

ADDITIONAL PARTICIPANTS

Seth Irby (Emergent Method), Brett McMann (Arcadis), Nick Speyrer (Emergent Method)

ABOUT THIS KEY OUTCOMES MEMORANDUM

The Master Plan Delivery Team (MPDT) has prepared and distributed this Key Outcomes Memorandum (KOM) to all CAT members as a summary of the above-mentioned meeting. The purpose of the KOM is to outline key decisions made, issues discussed, and next steps identified. The KOM does not serve as a meeting transcript, nor will it typically attribute comments or suggestions to specific individuals. Rather, it attempts to characterize areas of emerging agreement, topics requiring future deliberation, and important next steps. While the MPDT believes this is an accurate and complete summary, CAT members are asked to closely review the document. If you feel that essential points are misrepresented, please respond to Ashley Cobb (ashley.cobb@la.gov) with your specific suggestions for revision of the KOM by October 12, 2018. The MPDT will review and integrate any proposed edits received and produce a final KOM, which will serve as the official summary of the CAT meeting.

MEETING SUMMARY

WELCOME

Stuart Brown welcomed everyone to the CAT Meeting #1 and introduced the MPDT.

COASTAL ADVISORY TEAM (CAT)

Seth Irby introduced the purpose of the CAT, explaining that as the CPRA Executive Director approved its membership, meeting participation is therefore limited to invited members. Seth provided an overview of the CAT Ground Rules (attached) and asked members to make every effort to attend and participate in meetings. The CAT will play a critical role in the 2023 Coastal Master Plan process by providing feedback on plan components; helping to facilitate better coordination with other groups and planning efforts; and helping keep stakeholders informed about master plan news, updates, and progress. CPRA will make every effort to provide meeting materials three days prior to CAT meetings and requests that CAT members share any relevant materials, studies, and/or initiatives with CPRA. The meeting summary, or KOM, will be provided one week following the meeting for the CAT to review and provide feedback. Lastly, if contacted by the media regarding the 2023 Coastal Master Plan or this group, CAT members are to strictly follow the policy in the CAT Ground Rules document.

CPRA AND THE MASTER PLAN PROCESS

Elizabeth Jarrell provided a summary of the 2017 Coastal Master Plan development process and how CPRA projects are implemented. Previously mandated to be updated every five years, the master plan cycle was changed to every six years in the last legislative session. Projects recommended in the 2017

Coastal Master Plan were briefly discussed along with predictions of future land change and risk reduction without and with plan implementation.

PROJECT IMPLEMENTATION

Elizabeth recapped CPRA's progress since 2007 and provided a few project implementation examples to illustrate projects currently in engineering and design, under construction, or recently completed.

2023 COASTAL MASTER PLAN

Stuart described how the 2023 Coastal Master Plan will build off of the 2017 plan and other past CPRA work. The 2023 plan will focus on project sequencing, managing transitions/adaptation, illustrating medium-term outcomes, solving future problems, and providing better links between protection and restoration. With this in mind, CPRA plans to improve technical analyses and modeling over the next few years, revisiting key assumptions and incorporating newly available data. Stuart explained how coordinating with CPRA partners' ongoing efforts is important for the 2023 plan and provided a few examples. Stuart discussed the formation of Regional Workgroups, which will be convened to incorporate local experience and insight into the 2023 Coastal Master Plan. Lastly, Stuart requested that CAT members participate in the New Project Development webinar on October 17th, which will provide explanation of the types of projects being sought (those having basin, or sub-basin scale impacts) and how projects will be screened for the 2023 Coastal Master Plan. The webinar is open to the public and the New Project Development Guidelines and Criteria are posted to the CPRA website. Stuart invited the CAT to share this information with stakeholders and to encourage participation in the webinar.

OPEN DISCUSSION:

The following items were discussed:

- LMOGA is part of a pipeline task force developing a framework of best practices to avoid damage to pipeline infrastructure when constructing coastal restoration projects. LMOGA will share the task force output with CPRA when complete.
- CPRA confirmed that the majority of future CAT meetings will be in-person.
- CPRA currently intends that the 2023 Coastal Master Plan will be a 50-year, $50 billion plan. A $50 billion plan provides CPRA with the flexibility for Louisiana to take advantage of large funds should a disaster occur or significant new funding sources become available. However, CPRA also plans to perform a sensitivity analysis to assess what a plan with a lower budget might look like. In addition, focusing on project sequencing and medium-term outcomes will result in a 2023 Coastal Master

Plan that places greater emphasis on what is achievable over the next 20-30 years, as suggested by a CAT member.

- CPRA clarified that project types that will be handled programmatically moving forward include shoreline protection and bankline stabilization. As with barrier islands, CPRA intends to recommend a specific amount of funding for projects in the programmatic category. CAT feedback was requested on how CPRA can use modeling to assist in determining where programmatic funds should be used; for example, to identify areas where edge erosion is expected to be the dominant factor of land loss and programmatic funds should be targeted for shoreline protection projects.
- CPRA confirmed that all submitted projects will be given equal consideration; no weighting is applied to specific project types or to projects that are in advanced stages of design. If there are project submittal-specific questions, please contact CPRA directly at masterplan@la.gov.

NEXT STEPS

- The MPDT will send the presentation slides, CAT Ground Rules, and draft CAT #1 KOM to CAT members for review/feedback.
- The New Project Development Webinar is on Wednesday, October 17th from 2:00-3:00pm. CPRA requests that CAT members participate and circulate the opportunity to their stakeholders.
- The next CAT meeting will occur after the initial screening of new project ideas, likely summer 2019.

CAT MEETING #2 KOM

DATE: 2019-07-18
RE: COASTAL ADVISORY TEAM MEETING #2 KEY OUTCOMES MEMO

MEETING PARTICIPANTS

Todd Baker (LDWF), Sam Bentley (LSU), Susan Bergeron (BTNEP), Chett Chiasson (Greater Lafourche Port Commission), Sidney Coffee (AWF), Anne Coglianese (City of New Orleans), Laurie Cormier (Calcasieu Parish Police Jury), John Ettinger (RESTORE Council), Pat Forbes (OCD), Paul Frey (LLA), Karen Gautreaux (TNC), Craig Gothreaux (NMFS), Brad Inman (USACE), Quin Kinler (USDA-NRCS), Simone Maloz (ROR), Tim Matte (St. Mary Levee District), Spencer Murphy (Canal Barge Co.), David Muth (NWF), George Ramseur (MDMR), Robert Twilley (LA Sea Grant)

CAT MEMBERS NOT PRESENT

Dwayne Bourgeois (NLLD), Joey Breaux (LDAF), David Cresson (CCA), Ronnie Paille (USFWS), Brad Robin (Oyster Task Force), Mike Carloss (DU), Brady Carter (LDWF), Steve Cochran (MS River Delta Coalition), Quenton Fontenot (Nicholls State University), Tyler Gray (LMOGA), Scott Kirkpatrick (Coast Builders), Keith Lovell (DNR), Karen McCormick (EPA), Michael Miller (Associated Branch Pilots)

ABOUT THIS KEY OUTCOMES MEMORANDUM

The MPDT has prepared and distributed this Key Outcomes Memorandum (KOM) to all CAT members as a summary of Meeting #2. The purpose of the KOM is to outline key decisions and areas of emerging agreement, issues discussed and topics requiring future deliberation, and next steps. The KOM does not serve as a meeting transcript and will not typically attribute comments or suggestions to specific individuals.

While the MPDT believes this is an accurate and complete summary, CAT members are asked to closely review the document. If you feel that essential points are misrepresented, **please respond to Ashley Cobb (ashley.cobb@la.gov) with your specific suggestions for revision of the KOM by August 12, 2019.** The MPDT will review and integrate any proposed edits received and produce a final KOM, which will serve as the official summary of the CAT meeting.

MEETING SUMMARY

WELCOME & INTRODUCTIONS

Stuart Brown welcomed everyone and emphasized that the master plan is more than just a project selection process; it is a way to communicate and illustrate how coastal Louisiana is going to change. The master plan uses tools to help people and communities make decisions in order to adapt and adjust to changing conditions.

UPDATES ON NEW PROJECT DEVELOPMENT

Eric White recapped the project development process and described ongoing work with Regional Workgroups (RW), including modeling of new project concepts using the 2017 Integrated Compartment Model (ICM).

The following items were discussed:

- Nonstructural projects are included in the new project solicitation as an approach to address adaptation.
- Project concepts for programmatic project types (e.g., oyster reefs, small scale hydrologic projects, etc.) that are expected to have localized benefits will be supported by the master plan but will not be evaluated for selection through the modeling effort.
  - Request to include messaging in the master plan to explain that programmatic projects not specifically mentioned are not necessarily inconsistent with the plan.
- The RWs will help identify project concepts to explore adjusting or combining to provide regional-scale solutions. Integrated Projects are a new concept for the 2023 plan introduced to encourage regional-scale thinking. Landbridge projects are an example of an integrated project concept intended to capture up-basin hydrologic benefits.
- When projects are evaluated, results from model runs with the project are compared

to a run for the Future Without Action (FWOA). Projects that have been constructed or received funding for construction should be included on the landscape for all model runs, including FWOA, so that impacts on existing projects from new projects being modeled are captured.

- Updated models will be calibrated using CRMS data. Assumptions regarding future operations of water control structures are being revisited for the 2023 plan.
- Project costs will be considered in project selection for the 2023 plan, but costs have not been part of the discussion for this initial modeling exercise. Small projects can be selected if their costs are low, and expensive projects can be selected if their benefits justify their costs. Ballpark costs will be available to discuss along with project benefits at the next round of RW meetings.
- Voluntary acquisition is included in the 2017 Master Plan for residential structures that are predicted to experience 14 ft or more (including 2 ft of freeboard) of storm surge for a 1% storm.

NEW FOR 2023 COASTAL MASTER PLAN

Elizabeth Jarrell provided an overview of the 2023 Coastal Master Plan's vision, reviewed the 2023 predictive modeling components and improvements, and described the adjusted Planning Tool approach to reduce the uncertainty about how projects will perform across various scenarios (vs. only one scenario for the 2017 plan).

The following items were discussed:

- In the adaptive pathways approach to be tested in the Planning Tool, the intention is that projects selected for the first implementation period are assumed to be on the landscape for evaluation and selection of remaining projects in later implementation periods.
- Document format and messaging is being revisited for the 2023 plan.
- Existing projects are captured using updated LIDAR data and through incorporation of information from CPRA planners and engineers and their partners who are involved with and/or aware of new projects. The MPDT is also relying on the parishes and RWs to remind/inform us of projects completed.
- Risk assessment modeling for the 2017 plan assumed that HSDRSS would be maintained in the future. Assumptions about levee fragility varied across risk scenarios but align with assumptions from recent USACE studies in the scenario used for protection projects' selection. The landscape for storm surge modeling is updated based on ICM predictions of land change.

COMMUNITY GROUPS AND ENGAGEMENT FRAMEWORK

Krista Jankowski gave an overview of the outreach and engagement for the 2017 plan and feedback regarding how the process could be improved for the 2023 plan. Krista described planned outreach and proposed community-focused groups for the 2023 plan. Krista confirmed that CPRA intends to seek input and guidance from the Community Engagement Workgroup regarding how to avoid community fatigue.

DISCUSSION AND NEXT STEPS

Stuart reviewed the next steps and requested CAT feedback on future meetings format and content.

The following items were discussed:

- 2017 Focus Group interests will be represented on the 2023 CAT, RWs, and the community engagement workgroup. CPRA is open to scheduling additional meetings with specific interest groups and/or subject-based webinars or group discussions with CAT members.
- CPRA is thinking about how to better couple environmental scenario variables, including sea level rise, with IPCC pathways. Timing is a challenge as some of the data will become available after we need inputs.
  - The pathways approach to be tested in the Planning Tool allows for selection of projects that perform well across multiple environmental scenarios.
  - CPRA is following recent studies assessing the probabilities of different sea level rise scenarios and intends to incorporate this type of information into messaging about expectations for the future.
- CPRA will bring specific questions to the CAT to help the CAT provide advice and structured feedback on key issues.
- Suggestion that for community meetings, it is helpful to let people know ahead of time what will be asked. It is also helpful to go through community nonprofits to engage with more individuals (everyone is a "stakeholder" in coastal Louisiana).
- Request to see more on adaptive management and how lessons learned from previous projects and programs (e.g., CRMS data, other monitoring data) are feeding back into the master plan.

NEXT STEPS

- The MPDT will send the presentation slides and draft CAT #2 KOM to CAT members for review along with a copy of the CAT ground rules for reference.
- CPRA requests that the CAT continue to keep us informed of relevant coast wide or regional efforts.

- Modeling webinar in Spring 2020 – deep dive into improvements made, how the model works, and input on updated model calibration and validation.
- Second public solicitation for additional project ideas in Winter/Spring 2020.
- CAT Meeting #3 in Spring 2020 - report out on RW refined projects; build the rest of the meeting around what the CAT thinks is important/wants to know more about.
    - RW slides will be provided as a read-ahead for CAT Meeting #3.

CAT MEETING #3 KOM

DATE: 2019-11-12

RE: COASTAL ADVISORY TEAM MEETING #3 KEY OUTCOMES MEMO (VIA WEBINAR)

MEETING PARTICIPANTS

Sam Bentley (LSU), Chett Chiasson (Greater Lafourche Port Commission), Steve Cochran (MS River Delta Coalition), Sidney Coffee (AWF), Anne Coglianese (City of New Orleans), Laurie Cormier (Calcasieu Parish Police Jury), John Ettinger (RESTORE Council), Craig Gothreaux (NMFS), Quin Kinler (USDA-NRCS), Simone Maloz (ROR), Tim Matte (St. Mary Levee District), Karen McCormick (EPA), Spencer Murphy (Canal Barge Co.), David Muth (NWF), Ronnie Paille (USFWS), George Ramseur (MDMR), Kimberly Davis Reyher (CRCL), Robert Twilley (LA Sea Grant)

CAT MEMBERS NOT ON THE WEBINAR

Todd Baker (LDWF), Susan Bergeron (BTNEP), Dwayne Bourgeois (NLLD), Joey Breaux (LDAF), David Cresson (CCA), Brad Robin (Oyster Task Force), Mike Carloss (DU), Brady Carter (LDWF), Quenton Fontenot (Nicholls State University), Pat Forbes (OCD), Paul Frey (LLA), Karen Gautreaux (TNC), Tyler Gray (LMOGA), Brad Inman (USACE), Scott Kirkpatrick (Coast Builders), Pat Landry (DOTD), Keith Lovell (DNR), Michael Miller (Associated Branch Pilots), Patrick Witty (LED)

ABOUT THIS KEY OUTCOMES MEMORANDUM

The Master Plan Team has prepared and distributed this Key Outcomes Memorandum (KOM) to all CAT members as a summary of Meeting #3. The purpose of the KOM is to outline key decisions and areas of emerging agreement, issues discussed and topics requiring future deliberation, and next steps. The KOM does not serve as a meeting transcript and will not typically attribute comments or suggestions to specific individuals.

While the Master Plan Team believes this is an accurate and complete summary, CAT members are asked to closely review the document. If you feel that essential points are misrepresented, **please respond to Ashley Cobb (ashley.cobb@la.gov) with your specific suggestions for revision of the KOM by December 13, 2019.** The Master Plan Team will review and integrate any proposed edits received and produce a final KOM, which will serve as the official summary of the CAT webinar.

MEETING SUMMARY

NEW PROJECT DEVELOPMENT UPDATES

Stuart Brown recapped the goal of the project development process and described the next steps for the second public solicitation for new projects.

The following items were discussed:

- Responses regarding proposal status were sent to those who submitted projects in the first new project solicitation period.
- A matrix that includes descriptions of proposed projects and responses was shared on 11/15. As a reminder, this information is not to be distributed outside of the CAT membership.
- The full list of submitted and considered projects will be reviewed at the Regional Workgroup #3 meetings.

MODEL IMPROVEMENT UPDATE

Eric White provided an overview of the 2023 Coastal Master Plan's model improvement process and the various teams' timelines. Eric also described the current activities occurring within the ICM-Hydro, Storm Surge and Waves, Risk Assessment, and High Tide Flooding teams in more detail.

Following the High Tide Flooding team update, CPRA shared a set of questions for CAT feedback. The overall comments received included suggestions for additional focus communities to fill in the gaps across the coast and other studies for CPRA to consider as data sources. The High Tide Flooding Team will look into gage availability and existing data records, as well as suggested studies, in order to identify additional locations. CPRA will respond individually to address specific questions and comments from those who provided feedback.

PREDICTING FUTURE CONDITIONS

PLANNING TOOL APPROACH

Stuart gave an overview of the 2023 plan's Planning Tool approach and the proposed changes from the 2017 plan, including evaluating benefits over time and identifying a robust set of projects that performs well across scenarios. CPRA is planning to select projects for the 2023 plan based on two scenarios and two implementation periods.

SCENARIO DEVELOPMENT

Krista Jankowski described preliminary thinking on the environmental scenarios approach for the 2023 plan and planned improvements including incorporating new data, changing subsidence to a boundary condition, updating eustatic sea level rise rates, and looking at precipitation and how it impacts channel flow.

STRATEGY FOR COMMUNICATION

Krista also reviewed the preliminary outreach and engagement framework for the 2023 plan, including advisory groups and their intended roles. Currently there are eight members onboard for the Community Engagement Workgroup. While the total number of members is limited, CPRA is open to any membership suggestions from the CAT.

Following this update, CPRA shared a set of questions for CAT feedback. In general the comments received included suggestions for maps, graphics, and other outreach products. In addition to these recommendations, feedback included suggestions regarding the timing of outreach and the explanation of technical information. All of the comments received were greatly appreciated and will be helpful when framing future CAT meeting discussions. Again, CPRA will follow up individually with those who provided feedback.

WRAP UP AND NEXT STEPS

Stuart reviewed the next steps and requested written CAT feedback on the questions on slides 30 and 59 by November 30, 2019. Additional feedback outside of the specific sets of questions presented was solicited as well. CPRA will respond to those who provided additional feedback.

NEXT STEPS
- The Master Plan Team sent the presentation slides following the webinar and shared a draft CAT Meeting #3 KOM for review on December 6, 2019.
- CPRA requests that the CAT continue to keep us informed of relevant coast wide or regional efforts.
- The Second New Project Solicitation period is open through February 14, 2020.
- Modeling webinar in Spring 2020 – deep dive into improvements made, how the model works, and input on updated model calibration and validation.

- CAT Meeting #4 to be held on March 18, 2020 at CPRA - report out on RW refined projects; build the rest of the meeting around what the CAT thinks is important/wants to know more about.
    - RW slides will be provided as a read-ahead for CAT Meeting #4.
- CPRA/2023 Master Plan has several sessions planned for the State of the Coast conference in May 2020.

CAT MEETING #4 KOM

DATE: 2020-09-02

RE: COASTAL ADVISORY TEAM MEETING #5 KEY OUTCOMES MEMO (VIA WEBINAR)

MEETING PARTICIPANTS

Todd Baker (LDWF), Sam Bentley (LSU), Dwayne Bourgeois (NLLD), Joey Breaux (LDAF), Mike Carloss (DU), Brady Carter (LDWF), Steve Cochran (MS River Delta Coalition), Anne Coglianese (City of New Orleans), John Ettinger (RESTORE Council), Quenton Fontenot (Nicholls State University), Michelle Gonzales (Jefferson Parish), Craig Gothreaux (NMFS), Quin Kinler (USDA-NRCS), Lori Leblanc (LMOGA), Simone Maloz (ROR), Tim Matte (St. Mary Levee District), Karen McCormick (EPA), David Muth (NWF), George Ramseur (MDMR), Kimberly Reyher (CRCL)

CAT MEMBERS NOT PRESENT

Susan Bergeron (BTNEP), Chett Chiasson (Greater Lafourche Port Commission), Tokesha Collins-Wright (LCA), Laurie Cormier (Calcasieu Parish Police Jury), David Cresson (CCA), Pat Forbes (OCD), Paul Frey (LLA), Karen Gautreaux (TNC), Brad Inman (USACE), Scott Kirkpatrick (Coast Builders), Michael Miller (Associated Branch Pilots), Spencer Murphy (Canal Barge Co.), Ronnie Paille (USFWS), Brad Robin (Oyster Task Force), Keith Lovell (DNR), Robert Twilley (LA Sea Grant)

ADDITIONAL PARTICIPANTS

Theron Cooper (LCA), Amy Dixon (USACE), Danielle Keller (USACE), Sara Krupa (DNR), Nick Speyrer (Emergent Method)

ABOUT THIS KEY OUTCOMES MEMORANDUM

The Master Plan Team has prepared and distributed this Key Outcomes Memorandum (KOM) to all CAT members as a summary of Meeting #4. The purpose of the KOM is to outline key decisions and areas of emerging agreement, issues discussed and topics requiring future deliberation, and next steps. The KOM does not serve as a meeting transcript and will not typically attribute comments or suggestions to specific individuals.

While the Master Plan Team believes this is an accurate and complete summary, CAT members are asked to closely review the document. If you feel that essential points are misrepresented, **please respond to Ashley Cobb** (ashley.cobb@la.gov) **with your specific suggestions for revision of the KOM by October 16, 2020**. The Master Plan Team will review and integrate any proposed edits received and produce a final KOM, which will serve as the official summary of the CAT meeting.

MEETING SUMMARY

WELCOME AND GENERAL UPDATE – STUART BROWN

Due to Hurricane Laura, an initial informational webinar took place on September 2, 2020 and was recorded for those who were unable to attend. The CAT reconvened on September 23, 2020 for a second webinar to discuss CAT responses and feedback to the shared focus questions. It was reiterated that information shared during the webinar series is draft and should not be widely shared to avoid confusion with having multiple versions in circulation.

The September 2nd webinar provided updates on the subsidence approach, sea level rise scenarios, scenario selection, scenarios for presenting future change, and storyline scenarios.

- CAT members provided feedback that the land change uncertainty idea and storyline scenarios were good ideas to pursue.
- Subsidence values are still being tested but could fairly easily be overlain with time step sea level rise (SLR) values on a map.

SEPTEMBER 23RD DISCUSSION

The following items were discussed during the September 23rd focus question webinar:

SUBSIDENCE:
- Vertical accretion is excluded from the subsidence calculations but simulated separately by the ICM. It was clarified that shallow subsidence (SS) and surface elevation change are not synonymous.

- For the 2023 plan, the Master Plan Team is in a better position than for the 2017 plan to identify and quantify uncertainty associated with SS due to the availability of new data.
- Several options for grouping subsidence regions were explored including summary by regions/basins, old subsidence polygons, or the 2023 ecoregions.
  - Using ecoregions to aggregate was a good balance as the delineations were large enough to smooth out more extreme values yet small enough to show variability based on similar hydrologic and landscape conditions that likely contribute to SS.
- Biloxi Marsh-specific clarifications:
  - Data to calculate deep subsidence (DS) values comes from GPS and USACE and includes Byrne's benchmark data.
  - SS was calculated using RSET data from CRMS sites and additional SET data from other studies in the Biloxi Marsh. The CRMS data used for the SS analysis is not the same thing as the CRMS benchmarks Byrnes references.
  - For scenarios, the 25th percentile and median values of SS were selected rather than the mean or 75th percentile values to avoid over-weighting higher SS values within an ecoregion.

SLR:

- An outside firm, SCAPE, is under contract to assist with communicating key concepts to the public.
- The Master Plan Team is trying to select two SLR curves for project selection that support development of the best plan for investing the state's dollars in protection and restoration. The curves are not meant to try to predict the future and will not be used for detailed E&D for projects; they will be used to identify projects that perform well across a range of future scenarios.
- The Master Plan Team is limited in its ability to speak to the relative confidence/certainty in the NOAA curves beyond what is reported in related guidance.
- Cumulative relative sea level rise (RSLR) is generally equal to or less for the proposed 2023 scenarios compared to the 2017 plan's medium/high scenarios.
- Different SLR curves are derived using different starting points. For the master plan analysis, the curves are normalized/shifted to start at a single starting point by shifting vertically at the year 2020.
  - NOAA satellite altimetry data shows an acceleration in SLR, and this data can be used to inform recent trends.
- The team is thinking about ways to incorporate probabilistic distributions for SLR into the uncertainty analysis, which previously only focused on model performance.
- The team will continue to think about how selected SLR curves affect project selection.

- Proposed SLR curves for project selection and subsidence rates generally result in cumulative RSLR that is slightly lower than conditions modeled for 2017 (with a few exceptions).

SCENARIO SELECTION:

- There are limitations to running the model beyond 50 years, but the team is interested in trying to find a way to convey consequences and what impacts mean beyond 2070.
- Project selection scenarios need to be selected in the near term for use in the models; however, there is more time to think about scenarios for storyline purposes, etc.

NEXT STEPS

The next CAT meeting be in the November/December 2020 timeframe, followed by a meeting in January/February 2021 to discuss model outputs and future without action (FWOA).

CAT MEETING #5 KOM

DATE: 2020-12-17

RE: COASTAL ADVISORY TEAM MEETING #5 KEY OUTCOMES MEMO (VIA WEBINAR)

MEETING PARTICIPANTS

Sam Bentley (LSU), Dwayne Bourgeois (NLLD), Joey Breaux (LDAF), Mike Carloss (DU), Steve Cochran (MS River Delta Coalition), David Cresson (CCA), John Ettinger (RESTORE Council), Pat Forbes (OCD), Karen Gautreaux (TNC), Michelle Gonzales (Jefferson Parish), Craig Gothreaux (NMFS), Scott Kirkpatrick (Coast Builders), Greg Linscombe (LLA), Simone Maloz (ROR), Tim Matte (St. Mary Levee District), Spencer Murphy (Canal Barge Co.), David Muth (NWF), Ronnie Paille (USFWS), George Ramseur (MDMR), Kimberly Reyher (CRCL)

CAT MEMBERS NOT PRESENT

Susan Bergeron (BTNEP), Brady Carter (LDWF), Chett Chiasson (Greater Lafourche Port Commission), Tokesha Collins-Wright (LCA), Laurie Cormier (Calcasieu Parish Police Jury), Quenton Fontenot (Nicholls State University), Brad Inman (USACE), Quin Kinler (USDA-NRCS), Patrick Landry (DOTD), Lori Leblanc (LMOGA), Michael Miller (Associated Branch Pilots), Brad Robin (Oyster Task Force), Keith Lovell (DNR), Robert Twilley (LA Sea Grant), Patrick Witty (LED)

ADDITIONAL PARTICIPANTS

Amy Dixon (USACE), Danielle Keller (USACE), Sara Krupa (DNR), Alexis Rixner (NMFS), Nick Speyrer (Emergent Method)

ABOUT THIS KEY OUTCOMES MEMORANDUM

The Master Plan Team has prepared and distributed this Key Outcomes Memorandum (KOM) to all CAT members as a summary of Meeting #5. The purpose of the KOM is to outline key decisions and areas of emerging agreement, issues discussed and topics requiring future deliberation, and next steps. The KOM does not serve as a meeting transcript and will not typically attribute comments or suggestions to specific individuals.

While the Master Plan Team believes this is an accurate and complete summary, CAT members are asked to closely review the document. If you feel that essential points are misrepresented, **please respond to Ashley Cobb** (ashley.cobb@la.gov) **with your specific suggestions for revision of the KOM by January 15, 2021**. The Master Plan Team will review and integrate any proposed edits received and produce a final KOM, which will serve as the official summary of the CAT meeting.

MEETING SUMMARY

INTRODUCTION – STUART BROWN

Stuart Brown provided an update on the master plan schedule and identified future milestones and key points for which CPRA will be seeking the CAT's feedback. Stuart reviewed major model improvements that have been made for the 2023 Coastal Master Plan and the rationale for those updates. Next, Stuart explained the changes that were made to the sea level rise (SLR) curves following feedback received after the last CAT meeting.

BREAKOUT GROUPS

#1: MASTER PLAN DOCUMENT AND RELATED MATERIALS/RESOURCES

The following focus questions were discussed:

- What topics/key points should be emphasized in the main document text?
    - It is important to explain in the narrative what happened between 2017 and 2023 to build confidence in the science (e.g., regarding SLR). Emphasize that the SLR information was not wrong before, rather the science has since improved.
        - Pull this type of narrative forward from Chapter 3 and include it in

the executive summary.

- How can fact sheets be improved (different geographic scale, etc.)?
  - Fact sheets at the regional scale would be useful.
- What additional materials/tools would be helpful to develop (stand-alone executive summary, etc.)?
  - Executive Summary (ES) comments:
    - A stand-alone ES is extremely helpful – it provides a shorter document for sharing and was better for printing/dissemination purposes.
    - The ES infographics were useful for content purposes and are still used today.
    - Offer the ES as a separate pdf.
      - NGOs are planning to translate it, possibly into Vietnamese, Spanish, French, and Khmer.
    - Include reference to available "resources" in the ES (e.g., Master Plan Data Viewer) as some people do not read the full master plan text.
    - "What the Plan Delivers" content in the ES (ES-16) and p104 contain two different types of content under the same heading – this can be confusing and inefficient.
  - Parish and project fact sheets allowed information to be tailored to each group NGOs met with and included useful demographic information.
  - While CPRA is planning to add regional fact sheets to its list of report outs, it would be helpful if information could be packaged as a 'kit' to include in one file all of the individual parish fact sheets, the regional fact sheet, plus all of the projects information for that region.
- Report out on planned revisions to structure of appendices & consideration of accessibility
  - Including "Progress on the Ground" within the master plan text dates the document and prohibits it from being as evergreen as it could or needs to be.
  - Chapter 3 includes large chunks of text with many acronyms that the average citizen likely glosses over and skips.
  - An opportunity to condense the document would be to have consistent formatting regarding the amount of text on pages.
  - Accounting for color blindness and including image descriptions, especially for the electronic document, would make it reader friendly for all groups.

Other comments that were discussed included:

- The cover for the 2023 plan should look different than the 2017 plan (it is difficult to distinguish between the 2012 and 2017 plans when on the shelf) and to signal the advancements and changes in the 2023 plan.

- Consider using flash drives for the draft plan vs. printing – expect that the cost would be less and while intended to be temporary, some people hold onto and reference the printed draft plans after the final plan is published.
  - QR codes were also suggested to point people to the full master plan document and/or additional information.
- While a number of plans will have to be printed (e.g., ensure each legislator has a printed copy, etc.), Restore or Retreat offered to help explore options for digital dissemination.
  - Anecdotally, in one specific parish only 1 out of 10 people needs/wants the full printed master plan document; all others are interested in the executive summary level of detail.
- CRCL offered use of their advisory group to serve as a focus group if fresh eyes are needed on any particular pieces.
- It would be great if the digital version of the plan could be interactive (e.g., the ability to click on a specific project on the project map and view that project's information).
- The Funding and Implementation sections need to be managed in a way that is flexible and current. For example, between the 2012 and 2017 plans there was the Deepwater Horizon settlement.

#2: CONSTRAINTS AND PROJECT SELECTION CONSIDERATIONS

The following focus questions were discussed:

- What is an appropriate total budget for the 2023 Coastal Master Plan?
  - The messaging around a 50-year/$50 billion plan is really strong.
  - Suggestion to see if there is a way to both keep the easy to digest idea of a 50-year/$50 billion plan but add some reality by including the dollars that have actually been secured, what is expected to be secured, and what dollars are unknown.
  - An argument for keeping the plan at $50 billion is that the optics of asking Congress for less money could imply that the problem is under control/solved.
- How should funding be split between restoration projects and protection projects?
  - Keep in mind that the original 50/50 split between restoration and protection projects was based in part on anticipated project needs rather than arbitrarily pre-determined.
  - As protection project types include nonstructural projects, it was suggested that "risk reduction projects" would be more fitting than "protection projects".
  - There are a finite number of projects that perform well; if more money is allocated towards one bucket, then more marginally performing projects start to be selected.

- Once individual projects are uploaded to the Planning Tool there is an opportunity to do sensitivity testing to play with different budget levels/splits. CPRA is looking to the CAT for input on what ranges we should experiment across – is it the total budget, or the risk vs. restoration balance?

- How should funding be allocated across Implementation Periods (Two Implementation Periods for 2023 - years 1-20, years 21-50)?
  - Clarified that the Planning Tool is not solely focused on cost effectiveness, but cost effectiveness and the scale of a project's effect.
    - For example, if the budget is $20 billion and is then increased to $22 billion, a large project that was previously unaffordable might be selected and replace smaller projects that were chosen to meet the $20 billion benchmark.

- Should funds be set aside for Programmatic Projects? If so, how much (e.g., barrier island restoration, shoreline protection)?
  - Restoration of barrier islands is assumed to continue as part of the future without action (FWOA), therefore CPRA has knowledge of what that expense might be. Perhaps CPRA should rethink the $50 billion budget assumption if real projects have been built with real dollars.
  - The challenge is to factor reality into the budget somehow when the uncertainty regarding project performance and budgets increases in the future.
  - It was discussed if this is a control budget (e.g., you are given this much money and there is nothing else to spend) or more of a guidance (e.g., if you reach a point where the best decision means you go outside the budget, then you go outside the budget and account for it elsewhere).
  - There is a tradeoff: if more money is put into the Programmatic projects category it shows flexibility and a promise; however, that money is taken out of the $50 billion budget and the master plan project list will then be shorter.
  - If CPRA is going to say there is a program to increase/maintain barrier islands, structural oyster reefs, tree planting etc. there should be a dollar amount to correspond to that.
  - Outside of 20 years the budget is aspirational. There is value in staying consistent in the budgeting message ($50 billion with a 50/50 split) but there is room for more explanation about what the master plan is doing and why.
    - For the 2012 plan different budget scenarios were investigated (e.g., adding an additional $10 billion to the budget). The result was diminishing returns on the quality of projects that could get selected.
  - Additional support for the messaging around a $50 billion plan with a 50/50 split was voiced, however Congress has provided money and how that money was spent should be accounted for.

    ○ From an industry perspective, the 50-year/$50 billion plan is not a compelling advocacy tool. It takes a lot of work for people in Congress, and at the state and local levels to understand it. Would like to see the budget better tied to actual funding streams that can be accessed or advocated for.

      ▪ Industry would advocate for greater emphasis on the initial, shorter period of 20 years.

Other comments that were discussed included:

- Find a way to capture the fact that projects have been executed at a lower cost than the US Corps of Engineers anticipated. This is important as projects' benefits and costs are tied together.
- CPRA is updating and modernizing the project costing tools that are used. This will result in greater flexibility to dive into specific projects to look at the cost assumptions, what project features are assumed, and the unit costs/where the unit costs were derived from.
- The group ran out of time to discuss land sustainability and how we value land in the first period vs. in the next period.

#3: MODELING PROJECTS

The following items were discussed:

- For diversion projects, the ICM will likely never be able to exactly capture the land building capacity, but the important point for project selection is for the basin-wide hydrology to be representative so that when other projects are selected they are selected under conditions we expect to see with the diversion operating.
- Understanding it is a circular problem, there might be messaging challenges if for example, we are spending $1 billion on diversions and the land building capability cannot be incorporated into the FWOA base map.
  ○ CPRA acknowledges there are messaging challenges regardless of whether diversions are in the FWOA or not. However, we are not relying on the ICM to justify the diversions (other modeling efforts are tasked with that).
- At some point CPRA plans to have a "Future Without Any Further Action" option that shows what the landscape might look like if all funding were to be cut off today.
- One result of including the large diversion projects in the FWOA is that the delta between FWOA and the alternative future with action is not going to be as large. This could be another messaging challenge.
- Suggestion to see if in the future there might be a way to use Delft 3D land building predictions for a particular SLR scenario to add to the DEM.
  ○ This could be done just be for illustrative purposes rather than dynamically within the model.
- It was noted that there are no candidate projects around the Bird's Foot Delta, Wax

Lake, or the Atchafalaya and very little in the Biloxi Marsh area.

- ○ CPRA does not invest in large scale marsh creation in areas (like the Bird's Foot and Atchafalaya) that are currently building land. However, the master plan supports projects in those areas such as the crevasse and terracing projects that harness the natural processes in those areas.
- ○ The projects in the Biloxi Marsh area were discussed and refined with regional workgroups and landowners. They may appear less substantial than past candidate projects in eastern Biloxi Marsh, but much of the footprint in Eastern Biloxi was in deep water that could not have been constructed cost-effectively.
- The breakout group consensus regarding the possibility of changing project ID conventions was that it would be informative to have the project IDs tied to a hydrologic basin.

CLOSING AND NEXT STEPS

The next CAT meeting will be in the March 2021 timeframe.

CAT MEETING #6 KOM

DATE: 2020-12-17 AND 2021-01-14

RE: COASTAL ADVISORY TEAM MEETING #6 KEY OUTCOMES MEMO (VIA WEBINAR)

MEETING PARTICIPANTS

Sam Bentley (LSU), Dwayne Bourgeois (NLLD), Joey Breaux (LDAF), Mike Carloss (DU), Steve Cochran (MS River Delta Coalition), Laurie Cormier (Calcasieu Parish Police Jury), David Cresson (CCA), John Ettinger (RESTORE Council), Pat Forbes (OCD), Karen Gautreaux (TNC), Michelle Gonzales (Jefferson Parish), Craig Gothreaux (NMFS), Scott Kirkpatrick (Coast Builders), Greg Linscombe (LLA), Simone Maloz (ROR), Tim Matte (St. Mary Levee District), Spencer Murphy (Canal Barge Co.), David Muth (NWF), Ronnie Paille (USFWS), George Ramseur (MDMR), Kimberly Reyher (CRCL)

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    - Parish and project fact sheets allowed information to be tailored to each group NGOs met with and included useful demographic information.
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be less and while intended to be temporary, some people hold onto and reference the printed draft plans after the final plan is published.

- ○ QR codes were also suggested to point people to the full master plan document and/or additional information.
- While a number of plans will have to be printed (e.g., ensure each legislator has a printed copy, etc.), Restore or Retreat offered to help explore options for digital dissemination.
    - ○ Anecdotally, in one specific parish only 1 out of 10 people needs/wants the full printed master plan document; all others are interested in the executive summary level of detail.
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#2: CONSTRAINTS AND PROJECT SELECTION CONSIDERATIONS

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    - ○ The messaging around a 50-year/$50 billion plan is really strong.
    - ○ Suggestion to see if there is a way to both keep the easy to digest idea of a 50-year/$50 billion plan but add some reality by including the dollars that have actually been secured, what is expected to be secured, and what dollars are unknown.
    - ○ An argument for keeping the plan at $50 billion is that the optics of asking Congress for less money could imply that the problem is under control/solved.
    - ○ $50 billion is good to keep as a goal, but we need to evolve the messaging.
    - ○ Can we evaluate what we've done so far and the benefits?
    - ○ It'd be helpful to address "if we got $X over the next 10 years, we'd build…"
        - ▪ Produce something with plans between the scale of the annual plans (3 year budget) and master plan (50 year project prioritization) - not necessarily a master plan issue
        - ▪ Want a tractable message about what the ask is
    - ○ $7-8 billion has been invested from the Deepwater Horizon settlement, should be able to show that this has made a dent.
- How should funding be split between restoration projects and protection projects?
    - ○ Keep in mind that the original 50/50 split between restoration and

protection projects was based in part on anticipated project needs rather than arbitrarily pre-determined.

- As protection includes nonstructural projects, it was suggested that "risk reduction projects" would be more fitting than "protection projects".
- There are a finite number of projects that perform well; if more money is allocated towards one bucket, then more marginally performing projects start to be selected.
- Once individual projects are uploaded to the Planning Tool there is an opportunity to do sensitivity testing to play with different budget levels/splits. CPRA is looking to the CAT for input on what ranges we should experiment across – is it the total budget, or the risk vs. restoration balance?
- Outside of 20 years the budget is aspirational. There is value in staying consistent in the budgeting message ($50 billion with a 50/50 split) but there is room for more explanation.
  - For the 2012 plan different budget scenarios were investigated (e.g., adding an additional $10 billion to the budget). The result was diminishing returns on the quality of projects selected.
- Additional support for the messaging around a $50 billion plan with a 50/50 split was voiced, however Congress has provided money and how that money was spent should be accounted for.
- From an industry perspective, the 50-year/$50 billion plan is not a compelling advocacy tool. It takes a lot of work for people in Congress, and at the state and local levels to understand it. Would like to see the budget better tied to actual funding streams that can be accessed or advocated for.
  - Industry would advocate for greater emphasis on the initial, shorter period of 20 years.

- How should funding be allocated across Implementation Periods (Two Implementation Periods for 2023 - years 1-20, years 21-50)?
  - Clarified that the Planning Tool is not solely focused on cost effectiveness, but cost effectiveness and the scale of a project's effect.
    - For example, if the budget is $20 billion and is then increased to $22 billion, a large project that was previously unaffordable might be selected and replace smaller projects that were chosen to meet the $20 billion benchmark.
- Should funds be set aside for Programmatic Projects? If so, how much (e.g., barrier island restoration, shoreline protection)?
  - Restoration of barrier islands is assumed to continue as part of the future without action (FWOA), therefore CPRA has knowledge of what that expense might be. Perhaps CPRA should rethink the $50 billion budget assumption if real projects have been built with real dollars.
  - The challenge is to factor reality into the budget when uncertainty regarding project performance and budgets increases in the future.

- Analyzing what we've spent could be a good starting point.
  - It was discussed if this is a control budget (e.g., you are given this much money and there is nothing else to spend) or more of a guidance (e.g., if you reach a point where the best decision means you go outside the budget, then you go outside the budget and account for it elsewhere).
  - There is a tradeoff: if more money is put into the Programmatic projects category it shows flexibility and a promise; however, that money is taken out of the $50 billion budget and the master plan project list will then be shorter.
    - Programmatic projects won't show up on the project list but will be considered consistent (shouldn't be an issue to get funding for CWPPRA, etc.) and will potentially show up in future annual plans
  - If a programmatic program is a modest amount compared to the overall budget, no need to set anything aside
    - The $50 billion budget is aspirational/theoretical, no need to worry about taking a cut out unless we're talking about billions of dollars.
  - Messaging should be about describing the projects that are important
    - Keep in mind why we put them in the programmatic category (e.g., difficult to model, difficult to maintain long-term, etc.) – careful not to push projects aside without considering their potential benefits
  - There is pressure from some parts of the coast to include shoreline protection projects - if money isn't allocated, they may argue it's not real.
  - Potential options for developing a cost:
    - Use numbers from the 2017 plan
    - Estimate amount spent on projects over the past ~20 years
      - e.g., the Parish Matching program is $100 million over 15 years.
      - Could make a statement that we'll continue funding at the same level without providing a specific number
    - Estimate $1 billion, or another easy number
    - Leave out of the budget
      - Could still include a discussion of cost in the document
      - Should save money for the best projects and also encourage people to look for funding for other projects (to have some skin in the game)
- How important are benefits in the near-term vs. longer-term? What are the most appropriate time slices to reflect long-term (individual years e.g., 50, or 5/10 yr intervals, e.g., 45-50)? What is most useful to include in 'land sustainability' constraint (The proportion of total benefits that are long-term; that benefits are always positive)? Does every project need to deliver long-term benefits?
  - For 2023, we're planning to calculate benefits over the entire 50 year simulations by taking the area between two curves (FWA and FWOA) instead of 2 time slices; we're also planning to account for interim benefits while

projects are constructed (e.g., large marsh creation)
- The concept of sustainability is in the master plan's fundamental objectives.
- Agree with giving more weight to long-term benefits, but only if we can assume equal confidence in the predictions. Is there a way to weight benefits based on confidence?
  - In an analysis for the 2017 plan, later years had greater uncertainty.
- If we could come up with way to assess confidence, how would we use it?
  - For example, if the model says year 40-50 = a project provides 100% benefit, but we're not 100% confident in the model accuracy, maybe the benefit is scaled back, e.g., to 80%.
    - This/similar analysis can be done, but it might make things complicated and difficult to explain.
    - It's important to make the best decisions, then decide how to explain it.
- Suggestion to identify when projects perform best to judge their performance
- There will be tradeoffs, but overall we want to see positive change.
  - Where we see negative benefits – who is receiving them?
- CWPPRA projects have a 20 year lifetime – are there benefits beyond the project area that might last longer? What did we learn from projects on the ground (e.g., Shell Island? What are the impacts of storms?)
  - Changes beyond the project footprint should be captured in modeling (e.g., changes in salinity, water level reduction, etc.)
  - Storms will be handled differently for the 2023 plan; when available an update on the new approach will be provided to the CAT.
  - We can't model past the 50 year horizon, but is there a way that we can describe what the benefits would be beyond 50 years?
- Recognize the reality of having to pay for projects; link dollars to when things will happen. For example, if we had $10 billion in IP1, what would we build?
  - Need a balance - maximize benefits in the near-term/be aggressive right now, but also be conservative enough to plan for the future.
  - The longer we wait to build projects, the less land is left to maintain; hanging onto land you have is cheaper than building new land.
- Does it matter where benefits occur?
  - Consider which areas will be lost first for the timing of projects.
  - Consider communities not protected by levees.
  - If we value long-term benefits more, would that drive us away from more vulnerable areas?
  - Some areas really need projects, but they aren't sustainable.
- What role does social vulnerability play?
  - Serves as a double check - the Planning Tool doesn't make decision, just informs decision and identifies where gaps are
  - Is there political value in weighting projects that perform better in

the short-term?

Other comments that were discussed included:

- Find a way to capture the fact that projects have been executed at a lower cost than the US Corps of Engineers anticipated. This is important as projects' benefits and costs are tied together.
- CPRA is updating and modernizing the project costing tools that are used. This will result in greater flexibility to dive into specific projects to look at the cost assumptions, what project features are assumed, and the unit costs/where the unit costs were derived from.
- Need to be very careful about messaging (e.g., picture of LA-1 = consistent)

#3: MODELING PROJECTS

The following items were discussed during the 12/17/20 and 1/14/21 breakout groups:

- For diversion projects, the ICM will likely never be able to exactly capture the land building capacity, but the important point for project selection is for the basin-wide hydrology to be representative so that when other projects are selected they are selected under conditions we expect to see with the diversion operating.
- Understanding it is a circular problem, there might be messaging challenges if for example, we are spending $1 billion on diversions and the land building capability cannot be incorporated into the FWOA base map.
  - CPRA acknowledges there are messaging challenges regardless of whether diversions are in the FWOA or not. However, we are not relying on the ICM to justify the diversions (other modeling efforts are tasked with that).
- At some point CPRA plans to have a "Future Without Any Further Action" option that shows what the landscape might look like if all funding were to be cut off today.
- One result of including the large diversion projects in the FWOA is that the delta between FWOA and the alternative future with action is not going to be as large. This could be another messaging challenge.
- Suggestion to see if in the future there might be a way to use Delft 3D land building predictions for a particular SLR scenario to add to the DEM.
  - This could be done just be for illustrative purposes rather than dynamically within the model.
- It was noted that there are no candidate projects around the Bird's Foot Delta, Wax Lake, or the Atchafalaya and very little in the Biloxi Marsh area.
  - CPRA does not invest in large scale marsh creation in areas (like the Bird's Foot and Atchafalaya) that are currently building land. However, the master plan supports projects in those areas such as the crevasse and terracing projects that harness the natural processes in those areas.
  - The projects in the Biloxi Marsh area were discussed and refined with regional workgroups and landowners. They may appear less substantial than

past candidate projects in eastern Biloxi Marsh, but much of the footprint in Eastern Biloxi was in deep water that could not have been constructed cost-effectively.

- It would be informative for project IDs to be tied to a hydrologic basin.
- How are we going to portray and communicate the 2017 projects that are included in the Future Without Action (FWOA) model runs?
  - In the FWOA outputs, "built land" will be categorized as such and designated with a color, and "maintained land" will continue to be gray on the map.
  - FWOA will capture 2017 projects (implemented in the near-term) and their associated benefits, this will prevent redundant project benefits.
  - We need to think about the way we convey project benefits in the 2023 Master Plan. We don't want to communicate that we are building and maintaining less acres of land in the 2023 plan because we included so many 2017 projects in FWOA. An example solution may look like starting land area plots at an earlier time and following three steps: 1. FWOA, 2. FWOA + funded 2017 projects 3. FWA.
- When do Barataria and Mid-Breton projects go online?
  - For modeling purposes, these will go online for 2020 to allow us to test other projects against them and evaluate other projects' performances with the diversions online.
  - The diversions are expected to have modest benefits for the first 8-15 years, but will have more significant benefits in the long-term.
- Barrier Islands
  - We have no way of predicting the barrier islands that will be impacted by acute events (hurricanes), so we assume a level of restoration in our modeling and set aside money for barrier island restoration.
  - In FWOA, barrier islands will appear to be performing well, but this is only due to significant rebuilding that is assumed to take place.
  - We assume that money is available for these projects in the future.
- Community Boundaries
  - All communities are captured and at a much higher resolution, making it easier to assess risk to communities on a finer scale.
  - A key for identifying ecoregion abbreviations will be shared with the notes.
- Candidate Project List
  - Look into candidate projects on the south-eastern tip of Golden Meadow, which is currently exposed and unaddressed by current projects.
  - Note that some marsh creation polygons look larger than they are because we do not fill in deep water (in reference to Caminada Marsh Creation).
  - There is ~$125B in candidate projects. This will be narrowed down to a smaller list of projects based on performance and cost-effectiveness. Landbridge projects, for example, may be selected in pieces or not at all.
  - Blue lines in Cameron Parish are hydrologic restoration projects, many of

which involve clearing out canals to improve drainage toward the Lake.

- ○ Some of the hydrologic restoration will use flap gates and gravity drainage. The goal is to maintain a constant head from the North so that water continuously flows out of the Cameron Creole area toward the Gulf. We have to model the project, however, to evaluate its effectiveness.
- ○ Integrated projects are projects that incorporate multiple project types: marsh creation and shoreline protection, for example.
- ○ Landbridge projects are integrated projects that combine marsh creation and hydrologic restoration, and are meant to have up-basin effects.
- ○ Project descriptions will be shared after updates are made. We are still finalizing the candidate project list.

CLOSING AND NEXT STEPS

The next CAT meeting will be in the March 2021 timeframe.

CAT MEETING #7 KOM

DATE: 2021-06-23

RE: COASTAL ADVISORY TEAM MEETING #7 KEY OUTCOMES MEMO (HYBRID
MEETING/WEBINAR)

MEETING PARTICIPANTS

Dwayne Bourgeois (NLLD), Brady Carter (LDWF), Steve Cochran (MS River Delta Coalition), Tokesha
Collins-Wright (LCA), Laurie Cormier (Calcasieu Parish Police Jury), John Ettinger (RESTORE Council),
Quenton Fontenot (Nicholls State University), Karen Gautreaux (TNC), Craig Gothreaux (NMFS), Brad
Inman (USACE), Quin Kinler (USDA-NRCS), Scott Kirkpatrick (Coast Builders), Greg Linscombe (LLA),
Simone Maloz (ROR), Tim Matte (St. Mary Levee District), David Muth (NWF), Spencer Murphy (Canal
Barge Co.), George Ramseur (MDMR), Patty Taylor (EPA).

CAT MEMBERS NOT PRESENT

Sam Bentley (LSU), Susan Bergeron (BTNEP), Joey Breaux (LDAF), Mike Carloss (DU), Chett Chiasson
(Greater Lafourche Port Commission), David Cresson (CCA), Pat Forbes (OCD), Michelle Gonzales
(Jefferson Parish), Patrick Landry (DOTD), Lori Leblanc (LMOGA), Keith Lovell (DNR), Michael Miller
(Associated Branch Pilots), Sharon Osowski (EPA), Ronnie Paille (USFWS), Kimberly Reyher (CRCL),
Brad Robin (Oyster Task Force), Robert Twilley (LA Sea Grant), Patrick Witty (LED)

ADDITIONAL PARTICIPANTS

Chip Kline (GOCA), Bren Haase (CPRA), Brian Lezina (CPRA), Charles Sutcliffe (GOCA), Sara Krupa
(DNR), Emily Vuxton (CRCL)

ABOUT THIS KEY OUTCOMES MEMORANDUM

The Master Plan Team has prepared and distributed this Key Outcomes Memorandum (KOM) to all CAT members as a summary of Meeting #7. The purpose of the KOM is to outline key decisions and areas of emerging agreement, issues discussed and topics requiring future deliberation, and next steps. The KOM does not serve as a meeting transcript and will not typically attribute comments or suggestions to specific individuals.

While the Master Plan Team believes this is an accurate and complete summary, CAT members are asked to closely review the document. If you feel that essential points are misrepresented, **please respond to Forrest Town** (Forrest.Town@la.gov) **with your specific suggestions for revision of the KOM by August 6, 2021.** The Master Plan Team will review and integrate any proposed edits received and produce a final KOM, which will serve as the official summary of the CAT meeting.

MEETING SUMMARY

INTRODUCTION

OLD BUSINESS

The Master Plan Team provided an overview of the December 17, 2020 webinar breakout group discussions and the corresponding updates:

BREAKOUT GROUP #1 – MASTER PLAN DOCUMENT AND RESOURCES

The following updates were discussed:

- Reorganization of appendices, etc. for the 2023 Coastal Master Plan.
- Revised mapping styles for flood depth, land change, and project maps
  - Concern was expressed about the closeness in color of ridge restoration and shoreline protection symbols in the candidate project map.
  - The land change map color scheme was discussed with support for both the new color scheme and the previous red/green map; it was requested that both versions be available digitally.

BREAKOUT GROUP #2 – CONSTRAINTS AND PROJECT SELECTION CONSIDERATIONS

The following updates were discussed:

- Regarding budgeting and project selection, trade-offs will be tested using sensitivity tests with different budget splits in the Planning Tool, and the programmatic budget will be based on the results of these tests. An example test of different budget levels

was presented. It was clarified that the effects of projects funded programmatically are not included in land areas assessments in the Planning Tool and that as funding amounts are changed and distributed differently through the two implementation periods the mix of projects selected may shift.

BREAKOUT GROUP #3 – MODELING PROJECTS

The following updates were discussed:

- Project modeling will include "Future Without Any Future Action" runs to show impacts of the 2017 projects now included in Future Without Action (FWOA).
- It was clarified that any FWOA projects not already captured in the Digital Elevation Model (DEM) are added at year 0 for model purposes.
- Interest was expressed in seeing a model that starts at 2012 or pre-CWPPRA.
- Hindcasting may take place in the exploratory phases of the analyses.
- Updated candidate project maps were presented along with data on the fate of proposals submitted for new project concepts.
  - Suggestion to add a category for programmatic projects to show that they are still considered as part of the plan.
  - The "sediment diversion" label will be changed to "diversion".
  - Differences between hydrological restoration and freshwater diversions were discussed. There could be value in differentiating siphons/locks and other forms on the map because they have different purposes.
  - Additional iterations of the candidate projects map will be shared.
- The distribution of projects by cost is currently 50% restoration/50% risk reduction, but a variety of possibilities will be tested using the Planning Tool.

PROGRESS UPDATES

MODEL RUNS AND QA/QC: CURRENT STATUS

Krista Jankowski described the status of the model updates and activities:

- Existing conditions have been finalized for the ICM and runs have been completed for risk assessment.
- FWOA runs are in progress. Next steps will be the selection of the final environmental scenarios, FWOA runs for risk assessment, and QA/QC of FWOA runs.
- Future With Action (FWA) runs are in preparation: the project list and definitions are refined and a QA/QC web portal and database for informational exchange has been created through the Pittsburgh Supercomputing Center.

OUTREACH AND ENGAGEMENT

Krista provided a summary of the outreach and engagement activities that have taken place since the December webinar:

- Developed a 2023 Coastal Master Plan email list.
- CPRA website update with model improvement reports and recorded modeling-focused webinars posted to the Technical Resources and Outreach pages, respectively.
- Master Plan Team conference participation in a 3-part session series at the State of the Coast (June 2021) and planned sessions for CERF (November 2021).
- Master Plan materials development is in progress.
- 18 virtual meetings have occurred with the CAT, CEW, RWs, and PM-TAC as well as Webinar Wednesday (6/3) and Technical Modeling Update Webinar (6/16).
- Planning is in progress for transition back to in-person outreach opportunities.
- Confirmed emails sent to masterplan@la.gov are disseminated to the correct team members.
- Suggestion to create a 'Master Plan 101' video that includes captions and voice-over translations.

SCHEDULE OVERVIEW

Krista provided an overview of the schedule and described the steps for robust project selection. The following requested feedback was received regarding the strategy for regional meetings:

- CAT members have no preference on the number of meetings (3 vs 5), as long as meeting locations rotate throughout the regions.
- Meeting should be held in places where there are not normally public meetings (i.e., Dulac vs Houma or Thibodaux).
  - Ensure that information is tailored to the audience (e.g., elected officials vs general community). For meetings with combined regions, each of place needs their own information presented separately.
  - There is meeting fatigue; try to limit the amount of meetings by tacking onto other CPRA meetings or having a table at those meetings.
  - Need to have concrete things to present to make it worthwhile for people.
  - Have specific email groups to get different information.

NEW BUSINESS – PRESENTATION & DISCUSSION

METRICS

Sam Martin provided an overview of the master plan objectives, the metrics used for the 2017 Coastal

Master Plan, and the new metrics and approaches that are in progress for the 2023 plan. Denise Reed described the land sustainability metric and discussed how to communicate the future coast and plan impacts. The following items were discussed:

New Metrics and Approaches for 2023:

- The 2017 metrics used indices which are useful for comparisons but can be difficult to interpret.
- Candidate decision drivers will include land area with sustainability and new risk metrics as alternatives to the traditional Expected Annual Damage (EAD) calculation.
- EAD implicitly prioritizes higher-valued assets when the plan is optimized around EAD$ reduction and lumps residential and industrial/commercial/etc. structures together.
- Clarified that EAD is annualized – it expresses the expected value of damages in a given year.
- An alternative to EAD would include not an asset value. Instead, it would calculate an Annualized Proportional Damage (APD) value (name subject to change), which would represent the annualized proportion of damaged partial assets. This could be reported out for each community by asset class and include an average APD and number of structures/assets and the average damage as a proportion of replacement (e.g., Single-Family Residential: 3 assets, average 4.9% APD).
  - Essentially shows expected proportion of structure damage while being agnostic to home value.
  - APD is not necessarily a standalone metric, could be applied as a decision driver.
    - APD will be run once the FWOA flood risk runs are available in the fall evaluate its effects on project selection. This exploration of equity and how to apply metrics to even the playing field is important.
    - Can frame it as protection of the more vulnerable for funding purposes, this could be helpful for people seeking grants.
- If additional information is needed, CAT members offered to try to get access/connect CPRA with those at the federal level who have started to look at this type of analysis.

Land Area and Land Sustainability:

- Continuous land area benefits approach considers benefits at all periods as equivalent; negative benefits are offset by positive benefits. Benefits over time can be equivalent but the results can be quite different.
- The objective function of land sustainability is to maximize the average land area difference (FWA-FWOA) and considers the entire 50-year period. Doing so allows prolonged but diminished benefits to better compete and 'balancing' between near-

and long-term benefits is no longer required.

- Land Sustainability Index (LSI) adds all projects effects for each alternative and compares the benefit in the last decade. Negative values indicate FWA is more degraded than FWOA during the period considered for long-term benefits. The Planning Tool seeks to ensure LSI is positive coastwide.
- Attempts to capture the area under the curve beyond year 50 will not be calculated for the 2023 Coastal Master Plan.

<u>Communication of Future Coast and Plan Impacts:</u>

- Think about where pushback has been received in the past.
- More information specifically for communities will be available this time.
    - The challenge is how much do people need to know. There is a fine line between making people feel confident in CPRA's work and giving them the information they need.
    - The new structure of appendices and attachments should help with the level of detail for different audiences.

RISK MODELING

Elizabeth Jarrell compared preliminary outputs from existing conditions for the 2023 plan to the current conditions from the 2017 plan, noting that QA/QC of results is ongoing. The following items were discussed:

- Flood depth exceedances show a general increase in depth over a range of return periods due to changes in the modeling approach.
- The existing conditions flood depths include precipitation and waves associated with tropical storm events but not from other events or river flooding. While the model does not yet have the ability to incorporate events like the 2016 flood, it should now capture impacts from more frequent, less intense tropical storms. Data from recent tropical storms and hurricanes is incorporated for the updated storm suite.
- For risk assessment, storms are modeled individually, not in a sequence over time.

ICM FUTURE WITHOUT ACTION MODEL UPDATES

Eric White confirmed that the ICM is now fully cross-platform and running on high-performance computing clusters at the Pittsburgh Supercomputing Center (PSC). All previously planned model improvements have been implemented in the code and the ICM FWOA simulations are underway. Eric then provided an overview of the ICM FWOA model updates and presented the final ICM-Hydro domain, noting that the domain is consistent with the Louisiana Watershed Initiative and can be coupled with their model when available. The following items were discussed:

- Topobathymetric DEM uses the existing conditions (represented by the 2018

surface) DEM as a starting point. To represent the FWOA initial conditions, projects that were built after LiDAR was last collected or projects assumed to be built during FWOA were added to the 2018 existing conditions surface.

- The wetland vegetation species coverage initial condition is classified using weighted Forest, Fresh, Intermediate, Brackish, Saline (FFIBS) scores for each ICM-LAVegMod grid cell.

- The marsh edge erosion initial condition was updated through 2018 - the area edge erosion retreat rates were calculated for all coastal areas exposed to at least 2 km of fetch (in any direction). This results in an increased spatial coverage from 2017 when the retreat rates were calculated for all areas with at least 4 km of fetch.

- A balanced storm suite was built by selecting storms from the historical proxies; 'balanced' means that each sample point should experience the same number of different types of events (e.g., all sample points will be exposed to the same number of "10-yr" flood depths throughout the 50-year simulation).

- The Mississippi River flow boundary conditions is based off of a future scenario hydrograph for the Mississippi River at Tarbert Landing which uses daily river flows from USACE Engineer Research and Development Center (ERDC). The flow hydrograph was developed from an ensemble model run using IPCC-generated climate change scenario data from RCP 4.5.

- Suggestion to present inundation differences from the 2017 outputs.

CLOSING AND NEXT STEPS

CAT Meeting #8 is anticipated to be in September 2021 in-person at CPRA where ICM FWOA results will be discussed.

CAT MEETING #8 KOM

DATE: 2021-09-29

RE: COASTAL ADVISORY TEAM MEETING #8 KEY OUTCOMES MEMO (HYBRID MEETING/WEBINAR)

MEETING PARTICIPANTS

Sam Bentley (LSU), Joey Breaux (LDAF), Steve Cochran (MS River Delta Coalition), Laurie Cormier (Calcasieu Parish Police Jury), Pat Forbes (OCD), Karen Gautreaux (TNC), Craig Gothreaux (NMFS), Brad Inman (USACE), Quin Kinler (USDA-NRCS), Greg Linscombe (LLA), Simone Maloz (ROR), David Muth (NWF), Sharon Osowski (EPA), George Ramseur (MDMR), Kimberly Reyher (CRCL)

CAT MEMBERS NOT PRESENT

Susan Bergeron (BTNEP), Dwayne Bourgeois (NLLD), Mike Carloss (DU), Brady Carter (LDWF), Chett Chiasson (Greater Lafourche Port Commission), Tokesha Collins-Wright (LCA), David Cresson (CCA), John Ettinger (RESTORE Council), Quenton Fontenot (Nicholls State University), Michelle Gonzales (Jefferson Parish), Scott Kirkpatrick (Coast Builders), Patrick Landry (DOTD), Lori Leblanc (LMOGA), Keith Lovell (DNR), Tim Matte (St. Mary Levee District), Michael Miller (Associated Branch Pilots), Spencer Murphy (Canal Barge Co.), Ronnie Paille (USFWS), Brad Robin (Oyster Task Force), Robert Twilley (LA Sea Grant), Patrick Witty (LED)

ADDITIONAL PARTICIPANTS

Bren Haase (CPRA), Brian Lezina (CPRA), Charles Sutcliffe (GOCA), Sara Krupa (DNR), Cassidy Lejeune (DU), Jackson Martinez (GOCA), Alexis Rixner (NOAA)

ABOUT THIS KEY OUTCOMES MEMORANDUM

The Master Plan Team has prepared and distributed this Key Outcomes Memorandum (KOM) to all CAT members as a summary of Meeting #8. The purpose of the KOM is to outline key decisions and areas of emerging agreement, issues discussed and topics requiring future deliberation, and next steps. The KOM does not serve as a meeting transcript and will not typically attribute comments or suggestions to specific individuals.

While the Master Plan Team believes this is an accurate and complete summary, CAT members are asked to closely review the document. If you feel that essential points are misrepresented, **please respond to Forrest Town** (Forrest.Town@la.gov) **with your specific suggestions for revision of the KOM by November 5, 2021**. The Master Plan Team will review and integrate any proposed edits received and produce a final KOM, which will serve as the official summary of the CAT meeting.

MEETING SUMMARY

INTRODUCTION

Bren Haase made opening remarks, acknowledging the ongoing impacts of Hurricane Ida across the coast and offered to share the recorded presentation with any CAT members who were not able to join. Stuart Brown welcomed everyone and requested that meeting materials not be widely shared outside of the CAT membership as the information is still draft.

STORM UPDATE

Brian Lezina shared updates on Hurricane Ida impacts and CPRA's response, including the intention to collaborate with USGS on analysis of land loss and impacts related to restoration.

The following items were discussed:

- While it is too early to determine the degree of marsh loss due to Hurricane Ida, this will be monitored as areas dewater through the growing season. Brady Couvillion with USGS will give a presentation at the November CPRA Board meeting regarding marsh loss due to Ida and provide additional insights.
- Overall, the CPRA-built marsh creation and barrier island projects appear to have performed well against such a powerful storm.
- CPRA is working to set up a collaboration with USGS observations through multiple avenues.
- Guidelines and information about resources to elevate residential structures are available through CPRA, Louisiana Watershed Initiative (LWI), Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP), and others
  - e.g., LWI resources include guidebooks for post-disaster recovery funds, etc.

- The Integrated Compartment Model (ICM) includes years that experience multiple storms during 50 year future simulations but does not capture the situation where a specific location experiences an initial stressor from a large storm and is then hit with another big storm shortly thereafter.
  - CPRA offered to follow up with more detail on how this could be tested outside of currently planned ICM runs and how storms are handled in the risk assessment models.
- For high altitude imagery taken after Hurricane Ida see: https://storms.ngs.noaa.gov/storms/ida/index.html#9/29.2029/-90.1932.
- The impacts of Hurricane Ida will not be captured in the 2023 plan's Future Without Action (FWOA) landscape as the data used to develop existing conditions maps of elevation and vegetation predate Hurricane Ida.

OLD BUSINESS

Stuart Brown provided updates and responses to questions from the CAT related to the final candidate project list shared during the June 23, 2021 meeting. It was noted that once available, a final map product will be sent to the CAT to review.

Stuart explained that reasons for screening out proposed projects were explained in the criteria laid out in the project solicitation and do not represent an indictment of a project. If a project is screened out during the candidate evaluation process (meaning it will not be modeled individually), it does not necessarily mean that the project is screened out from or inconsistent with the master plan. For example, some proposals described methods/technologies for construction of projects rather than new projects that could be considered through model evaluation; others included up-basin flood control programs, ideas for grants and research, or project concepts for which the size was too small to show benefits in our models and/or not expected to show impacts at the regional scale. It was confirmed that nonstructural projects will be defined based on FWOA results and then included programmatically for the 2023 plan.

PROGRESS UPDATES

Forrest Town provided an overview of progress and schedule updates, emphasizing that the team still plans to have a draft plan defined by August of 2022.

NEW BUSINESS – PRESENTATION & DISCUSSION

ENVIRONMENTAL SCENARIOS FOR PROJECT SELECTION

Krista Jankowski explained the process used to select environmental scenarios for modeling, particularly the "higher" and "lower" scenarios that will be used for project selection (S07 and S08). It was noted that the main difference between the two subsidence scenario values applied to the two environmental scenarios is the amount of subsidence contributed by shallow processes; a full report

with additional details is available on the CPRA website [here](#).

It was clarified that both the lower and higher scenarios will be used to select projects for the 2023 plan. For the 2017 plan, projects were evaluated for three environmental scenarios but then prioritized/selected based on the outputs of the high scenario only. Although additional scenarios will be explored and described for the 2023 plan, projects will be evaluated based on their performance against the lower and higher scenarios chosen for project selection. The purpose of this change is to select projects that perform well across a range of potential future outcomes.

Bren emphasized that decisions related to environmental scenarios and project selection are fundamental to the master plan and encouraged CAT members to provide feedback. If helpful, this topic can be revisited during the next CAT meeting.

ICM FUTURE WITHOUT ACTION (FWOA) RESULTS

Eric White reviewed major model improvements and changes for background and context, including results from the spin-up period for ICM runs and the impacts of including the two mid diversions (with different operation assumptions) in FWOA.

Stuart discussed FWOA results coastwide for land change and vegetation patterns over time, mainly for S07 and S08 but also compared to two other scenarios for which FWOA results are currently available (S06 and S09).

The following items were discussed:

- S06 and S07 include lower subsidence rates, while S08 and S09 include higher rates for subsidence.
- In comparison to land change output from the 2017 plan, results from the lower scenario for project selection for 2023 (S07) are in line with the low scenario from 2017 and results from the higher scenario for project selection for 2023 (S08) are tracking between the medium and high scenarios from 2017.
- Land building in the Wax Lake area could be due to some degree to a backwater sedimentation effect, but it is probably more so an artifact of changes during the spin-up period.
- Master plan materials will use the new blue/green land change maps; however, red/green maps can be created/provided for others to use in their outreach.
- Model improvements that allow for re-establishment of vegetated land can be observed in land change patterns over time in the Sabine area and impounded areas of Marsh Island.
- Mardi Gras Pass and Fort St. Phillip are both included in the model. Land gain is more obvious in land change maps at Fort St. Phillip.
- Vegetation maps show land loss through conversion to open water (i.e., change to white/no color).
- The Initial Conditions maps show ICM output after the 2 year spin-up period and

display vegetation categories based on weighted FFIBS scores, which are calculated from model outputs tracking species-level mixtures.

- ○ Areas with forest/fresh marsh mixtures may appear as one or the other on maps, but the model is tracking % coverages at the species level for each.
- ○ The map displays categories of weighted vegetation scores (not actual vegetation coverage); however, bar plots that show species mixtures over time for individual grid cells are also available for many locations.

- Cumulative land change mechanism through year 50 maps represent the initial cause of land loss; alternatively, similar maps could be created to show the ultimate (or persistent) cause of land loss.
- Sabine water build up is due to storm surge signals; Toledo Bend flow is captured as a tributary flow that varies by scenario.

Eric provided additional details on ICM results and model mechanics using case studies zoomed in at the regional level.

The following items were discussed:

- The loss and return of marsh in the Chenier Plain seen in land change results matches observations after Hurricane Rita. It would be interesting to see what processes occurred causing marsh loss near Delta Farms during Hurricane Ida.
- CPRA will discuss with landowners how long it takes impounded areas to drain to help validate the model during the October Regional Workgroup (RW) meetings. CPRA's Operations team from Lafayette has also looked at flooding and drainage patterns in these areas (e.g., after Harvey and Toledo Bend releases).
- The data extraction point graphs (slide 88) showing conversion from water to land by the diversions show that the ICM is working to reproduce expected patterns based on observations; one big improvement from the 2017 plan is to have this output from various model subroutines consolidated and available to review for specific locations across the coast.
- Model improvements resulted in areas of forested wetlands (e.g., around Lake Maurepas) that are much more stable over time compared to 2017 except in the highest environmental scenarios.
- Areas in Western Terrebonne show land loss that is strongly (and inversely) correlated to sea level rise (SLR) curves associated with environmental scenarios due to a lack of mineral deposition and/or hydrologic connection to the river, etc.
- In the Wax Lake area, organic accretion overwhelms mineral deposition in vegetated areas for moderate levels of SLR.

CLOSING AND NEXT STEPS

- CPRA will provide a draft CAT #8 KOM to CAT members for review along with updated

presentation slides that include Year 50 outputs for land change and FFIBS maps.

- CAT Meeting #9 is TBD (anticipating late November/early December)
    - Discuss FWOA risk results and ICM Future With Action (FWA) results
    - If possible, this meeting will be held in-person at CPRA. CPRA will continue to monitor the status of Covid and CDC guidelines and will plan to provide a remote option for those who need to call in.

CAT MEETING #9 KOM

DATE: 2021-12-16
RE: COASTAL ADVISORY TEAM MEETING #9 KEY OUTCOMES MEMO

MEETING PARTICIPANTS

Dwayne Bourgeois (NLLD), Joey Breaux (LDAF), Mike Carloss (DU), Brady Carter (LDWF), Laurie Cormier (Calcasieu Parish Police Jury), John Ettinger (RESTORE Council), Pat Forbes (OCD), Quin Kinler (USDA-NRCS), Greg Linscombe (LLA), Simone Maloz (MRD), Tim Matte (St. Mary Levee District), David Muth (NWF), Kimberly Reyher (CRCL), Natalie Snider (EDF)

CAT MEMBERS NOT PRESENT

Sam Bentley (LSU), Susan Bergeron (BTNEP), Chett Chiasson (Greater Lafourche Port Commission), Tokesha Collins-Wright (LCA), David Cresson (CCA), Quenton Fontenot (Nicholls State University), Karen Gautreaux (TNC), Michelle Gonzales (Jefferson Parish), Craig Gothreaux (NMFS), Brad Inman (USACE), Scott Kirkpatrick (Coast Builders), Patrick Landry (DOTD), Lori Leblanc (LMOGA), Keith Lovell (DNR), Michael Miller (Associated Branch Pilots), Spencer Murphy (Canal Barge Co.), Sharon Osowski (EPA), Ronnie Paille (USFWS), George Ramseur (MDMR), Brad Robin (Oyster Task Force), Robert Twilley (LA Sea Grant), Patrick Witty (LED)

ADDITIONAL PARTICIPANTS

Victoria Bourque (ROR), Ann Hijuelos (USACE), Alexis Rixner (NOAA)

ABOUT THIS KEY OUTCOMES MEMORANDUM

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areas of emerging agreement, issues discussed and topics requiring future deliberation, and next steps. The KOM does not serve as a meeting transcript and will not typically attribute comments or suggestions to specific individuals.

While the Master Plan Team believes this is an accurate and complete summary, CAT members are asked to closely review the document. If you feel that essential points are misrepresented, **please respond to Forrest Town** (Forrest.Town@la.gov) **with your specific suggestions for revision of the KOM by January 28, 2022**. The Master Plan Team will review and integrate any proposed edits received and produce a final KOM, which will serve as the official summary of the CAT meeting.

MEETING SUMMARY

INTRODUCTION

Stuart Brown welcomed everyone and explained that the meeting's purpose is to help familiarize CAT members with information that will be shared and discussed frequently at future meetings over the next several months. Forrest Town provided an overview of progress and schedule updates, emphasizing that the team still plans to have a draft plan defined by August 2022. Forrest reminded members that the information shared is still draft and requested that meeting materials not be shared widely outside of the CAT membership.

Stuart confirmed that Hurricane Ida has not changed the timeline for the master plan's release. Even if the timeline were to be pushed back by two years, the input data needed to update the ICM Digital Elevation Model (DEM) would not be available yet for incorporation. While at this point the landscape model input files cannot be changed, Hurricane Ida's effects <u>will</u> have an influence on the way that project results are analyzed and interpreted. The team will be doing a lot of analysis to overlay and consider land change information from USGS as well as using CRMS station data to understand if there are any significant changes in the area's hydrology to try to understand the impact of the storm and how those impacts may affect projects being evaluated.

FLOOD RISK INITIAL CONDITIONS

Stuart revisited the initial conditions outputs and described the changes in outputs since the last time the information was presented. Stuart discussed the major risk model advancements regarding asset inventory and evaluation and explained that the full 50 years of Future Without Action (FWOA) flood risk outputs will be available to share at the next CAT meeting.

Stuart then reviewed the risk modeling metrics and how the current approach removes asset value from the equation, addressing criticisms that past methodology inherently prioritized higher value properties.

The following items were discussed:

- The difference between the 2023 Master Plan expected annual damages (EAD$) of $5.5 billion compared to the 2017 plan's EAD$ of $2.7 billion is largely due to the improved storm suite.
- When looking at EAD$ by parish, Lafayette displays $0M because storm surge-based flooding is not project in the parish under initial conditions (the master plan does not capture riverine/rain-based flooding). With continued sea level rise and land loss, Lafayette may see more damages and impacts in future years.
- While there is a substantial increase in the initial conditions EAD$ when comparing the 2017 vs. 2023 plan, the analysis will look at how much of the current risk can be mitigated by projects; even though the dollar amount of existing risk is greater, the amount of risk that can be mitigated by the projects will be greater as well.
- The comparison between EAD$ and annualized proportional structure damage (EASD) for single-family residences shows that the two metrics do not exactly track with each other. This is helpful to identify communities that have proportionally fewer, more valuable residences and communities with proportionally more, less valuable residences.
  - Once all of the project runs are available, the team will do prioritization testing and share those outputs sometime early next year.

LOOKING AHEAD – RESTORATION OUTCOMES

Denise Reed reviewed the restoration projects selection and Planning Tool processes and explained the updates made since the 2017 plan.

The following items were discussed:

- Not every project will have to meet the land sustainability constraint. The Planning Tool will take the best set of projects (those that build the most land for the budget over 50 years) and look at the net benefit of that set of projects over the last decade compared to the net benefit over the whole 50 years.
- The 2023 Planning Tool will be able to point to why a project was not selected.
- The current plan is for the Planning Tool to do a phased selection, where the best of 124 candidate projects are selected for IP1. Those projects are then put on the landscape for a "Future With IP1 Projects" run which will serve as the baseline from which to evaluate the remaining projects to be prioritized for IP2.
  - It was suggested to run all of the projects again in IP2 to see if the Planning Tool selects to rebuild the exact same project (e.g., a type of maintenance).
  - Projects are expected to have a longer lifespan in the 2023 model than they did for the 2017 plan because the rate of sea level rise for the 2023 plan's higher scenario is not as extreme as it was in the 2017 plan's high scenario

and construction elevation targets for the 2023 plan are regionally specific. This topic will be added to the next meeting's agenda.

CLOSING AND NEXT STEPS

- CPRA will provide a draft CAT #9 KOM to CAT members for review.
- CAT Meeting #10 is TBD (anticipating late January/early February)
    - Planned topics include: FWOA flood risk results outputs, Nonstructural, and Implementation Period 1
    - If data availability allows, CPRA will send meeting materials as close to two weeks ahead of time as possible.
    - If possible, this meeting will be held in-person at CPRA. CPRA will continue to monitor the status of Covid and CDC guidelines and will plan to provide a remote option for those who need to call in.
- After the meeting's close Stuart walked through the marsh creation project implementation details for those interested, explaining how the design elevations are dependent on the scenario, implementation year, and location.

CAT MEETING #10 KOM

DATE: 2022-02-24

RE: COASTAL ADVISORY TEAM MEETING #10 KEY OUTCOMES MEMO

MEETING PARTICIPANTS

Joey Breaux (LDAF), Mike Carloss (DU), Brady Carter (LDWF), Chett Chiasson (Greater Lafourche Port Commission), Laurie Cormier (Calcasieu Parish Police Jury), John Ettinger (RESTORE Council), Pat Forbes (OCD), Karen Gautreaux (TNC), Craig Gothreaux (NMFS), Quin Kinler (USDA-NRCS), Scott Kirkpatrick (Coast Builders), Greg Linscombe (LLA), Simone Maloz (MRD), Tim Matte (St. Mary Levee District), David Muth (NWF), Sharon Osowski (EPA), Kimberly Reyher (CRCL), Natalie Snider (EDF)

CAT MEMBERS NOT PRESENT

Dwayne Bourgeois (NLLD), Sam Bentley (LSU), Susan Bergeron (BTNEP), Tokesha Collins-Wright (LCA), David Cresson (CCA), Quenton Fontenot (Nicholls State University), Michelle Gonzales (Jefferson Parish), Brad Inman (USACE), Patrick Landry (DOTD), Lori Leblanc (LMOGA), Keith Lovell (DNR), Michael Miller (Associated Branch Pilots), Spencer Murphy (Canal Barge Co.), Ronnie Paille (USFWS), George Ramseur (MDMR), Brad Robin (Oyster Task Force), Robert Twilley (LSU CSS), Patrick Witty (LED)

ADDITIONAL PARTICIPANTS

Bren Haase (CPRA), Greg Grandy (CPRA), Brian Lezina (CPRA), Ann Hijuelos (USACE), Caitlin Joubert (LDAF), Oliva Ledet (GOCA), Charles Sutcliffe (GOCA)

ABOUT THIS KEY OUTCOMES MEMO

The Master Plan Team has prepared and distributed this Key Outcomes Memorandum (KOM) to all CAT members as a summary of Meeting #10. The purpose of the KOM is to outline key decisions and areas of emerging agreement, issues discussed and topics requiring future deliberation, and next steps. The KOM does not serve as a meeting transcript and will not typically attribute comments or suggestions to specific individuals.

While the Master Plan Team believes this is an accurate and complete summary, CAT members are asked to closely review the document. If you feel that essential points are misrepresented, **please respond to Forrest Town** (Forrest.Town@la.gov) **with your specific suggestions for revision of the KOM by April 8, 2022**. The Master Plan Team will review and integrate any proposed edits received and produce a final KOM, which will serve as the official summary of the CAT meeting.

MEETING SUMMARY

INTRODUCTION

Stuart Brown welcomed everyone and Madeline LeBlanc provided an overview of the master plan progress and schedule updates. It was requested that meeting materials not be shared widely outside of the CAT membership as information is still draft.

Stuart provided an update on Hurricane Ida impacts, NOAA's sea level rise guidance report, and the vegetation mapping approach.

The following items were discussed:

- Hurricane Ida Impacts:
  - Stuart showed recently developed maps of loss associated with Ida. CPRA will continue to work with Brady Couvillion at USGS to receive land change and vegetation updates as they become available to determine hurricane impacts.
  - The Little Lake project is included in CPRA's surplus project request to the legislature; if CAT members are interested in the project, talk to your legislators to encourage them to approve the surplus request.
- NOAA's "Global and Regional Sea Level Rise Scenarios for the United States" guidance document was released in February. The sea level rise projections are

consistent with the IPCC Climate Change Report (2021) and with the scenarios being used in master plan modeling – caveats to keep in mind when using or interpreting this report:

- NOAA's projected relative sea level rise data is much more limited compared to how CPRA treats vertical land motion as NOAA only interpolates between a few gages.
- Care should be taken with applying the report's high tide flooding section to Louisiana. The report uses a 'bathtub model', taking the high tide signal at Grand Isle and projecting it as a flat surface across the coast; this is not representative of how Louisiana's coastal dynamics work. This approach also does not take into account many non-federal levees.
  - Predicting high tide flooding is very difficult. The 2023 Coastal Master Plan will include vignettes for a handful of communities where long-term water level records are available.
- The vegetation mapping for the 2023 master plan uses has been adjusted based on discussions with some CAT members.
  - There are also three species that cover a wide range of habitat types and could be categorized differently than they currently are – this will be explored by conducting a sensitivity analysis.

OUTREACH UPDATE

Krista Jankowski gave an update on the master plan's outreach activities including meetings, documentation, and development of outreach materials.

The following items were discussed:

- Include virtual meeting options for master plan public meetings going forward; CAT member organizations have found that their meetings have had a much larger, inclusive audience when meetings have been available on Zoom vs. in-person.
- The Master Plan team is looking into options for translating materials and what is needed to have digital content be ADA accessible.
- Consider using one of the community meetings to demonstrate the new master plan data viewer to see how actual users interact with the tool.
- Stakeholders really liked the approach used in the 2022 Annual Plan meetings, suggest doing something similar for the master plan.
- Re: the master plan data viewer:
  - It is important for transparency that all of the information the Master Plan team produces be available and accessible in the viewer.
  - Allowing people to access all of the "under the hood" modeling information via the data viewer can be problematic as the information can be extremely

nuanced; a great deal of context needs to be provided for much of the detail.
- ○ In general, the 2017 data viewer is buried on the website, it takes a lot of clicks to find it. The new data viewer should be a feature of the website.

FLOOD RISK – FUTURE WITHOUT ACTION (FWOA)

Stuart reviewed the initial conditions flood risk model output previously shared with the CAT and introduced the recently received future flood risk outputs. When looking at the 2023 initial conditions, expected annual damages is approximately double what was projected for the 2017 initial conditions. This is due to model improvements that better reflect risk such as an upgraded asset database (knowing where assets are and what they are worth), improved first floor elevation information, and a new storm suite that allows for increased coverage across the coast to represent storms tracks and better represent both very frequent (5-, 10-year) and infrequent (1,000-year) storms.

The following items were discussed:

- Expected Annual Damage $ (EAD$) and Expected Annual Structure Damage (EASD) are metrics that are able to be modeled into the future and allow CPRA to identify priorities and how programs will be implemented; it is an oblique step in the direction of examining population vulnerability.
- The community boundaries vary widely in size and population; each polygon is a community.
- The master plan modeling assumes the Hurricane Storm Damage Risk Reduction System (HSDRRS) is maintained at its authorized elevations (for certain reaches, the future authorized elevation is 1-2 feet higher than current levee authorized elevations). With these assumptions, the HSDRRS system remains effective at Year 50 in both the lower and higher scenarios for 100-year water levels.
- The modeling shows flooding within the Larose to Golden Meadow levee at Year 50 in both the lower and higher scenarios. This appears to be due to a combination of factors: overtopping precipitation and levee fragility assumptions.
  - ○ New for the 2023 plan is employing pumping scenarios and an updated hurricane-correlated rain field that was developed by the Louisiana Watershed Initiative.
  - ○ Rainfall was included in the 2017 model but how it is used has been updated in the 2023 CLARA model.
  - ○ The master plan risk model only included storm related rainfall. It is possible to separate the effects of this rainfall vs. storm surge and waves.
- EAD$ measures both direct damage to a structure and indirect damage (e.g., damage to the contents of a building, crops, vehicles, lost wages, lost rents, the inability of people to work, etc.).
  - ○ Crop asset data originated with LSU AgCenter and consists of aquaculture

(including farmed crawfish), pasture, rice, soybeans, and sugarcane.

- When Future With Action (FWA) outputs are available, a Tableau link will be shared with CAT members to help explore and digest the data.
- The population model makes assumptions based on the current demographics and past population changes to predict future population changes. A recorded webinar on population modeling can be found on the CPRA website here.
- Historically, if an asset was on located on land that was lost, the model moved that asset elsewhere in the community. This aspect was removed from the 2023 model as it affected a small number of structures relative to the total number of structures coastwide, and placed a large computational burden on the model for something that makes almost no difference in the outputs.
- A major caveat of the risk modeling is that it only includes hurricane storm surge-based flooding; massive rain events or riverine flooding is not captured in the master plan models.
  - Suggestion to include this caveat on the risk maps.
- When showing FWOA risk exposure graphs, more clearly show structures 'not at risk' on the plot as well.
- CPRA to confirm the underlying resolution when talking about flood depths.
- Suggestion to include a few bullets to define what risk is and is not for presentation/communication purposes as 'risk' has various meanings for different audiences.

NONSTRUCTURAL

Stuart reviewed the nonstructural approach from the 2017 Coastal Master Plan and explained how nonstructural risk reduction will be analyzed for the 2023 plan.

The following items were discussed:

- Nonstructural risk reduction will continue to be a key part of the Coastal Master Plan, however we plan to take a programmatic approach to nonstructural projects in the 2023 plan. We will be modeling nonstructural projects as a means to identify where investing in nonstructural is more effective at reducing risk than structural projects. This modeling will also inform how much of the overall budget should be dedicated to nonstructural investments. The big difference from the 2017 plan is that CPRA will not be reporting out specific nonstructural projects/communities as 'in' or 'out' of the plan because the scale of this analysis is not consistent with the way these projects are implemented. Nonstructural projects are not implemented at the community level and CPRA does not want this analysis to preclude effective nonstructural projects.
- The master plan risk models produce a risk reduction value but use a different calculation than a traditional benefit cost analysis.

RESTORATION PROJECT MODELING RESULTS (ICM – FUTURE WITH ACTION)

Eric White provided an update of the landscape modeling and shared a few example restoration project outputs from the ICM.

The following items were discussed:

- It is important to keep in mind that the FWOA outputs (and therefore all of the FWA simulations) include both the Mid-Barataria and Mid-Breton sediment diversions on the landscape.
- Landbridge projects have two components: a higher containment dike along the bay side that is armored and assumed to have shoreline revetment throughout the 50-years, and a back portion put in as marsh creation. The landbridge marsh creation is built to the same elevation as all other master plan marsh creation projects except landbridge projects allow for deep water to be filled (whereas normal marsh creation projects do not).
  - The assumed marsh creation design elevations are set to be a given height above mean water level. As mean water levels increase over time, the marsh platform will be built to a delta above mean water level. The delta is set to be consistent with the marsh creation guidelines from CPRA's engineering department.
  - Landbridge projects are approximately 0.5 – 1 km wide.
- Landbridges are modeled in their entirety and are also segmented into east, west, and central components to assess the project cost of each reach as it is constructed.
- Marsh creation projects are put on the landscape in the model at the end of construction (e.g., if it takes 30 years to build, the project goes on the landscape at Year 30). The Planning Tool is able to tabulate the direct and indirect benefits of marsh creation projects by interpolating back in time to apply incremental benefits. However, indirect benefits are not applied until the whole project is built.
- Assumptions about constructability for different basins (e.g., underlying assumptions about soils) is accounted for by applying additional costs to a project in one basin vs. another.
  - The model does not change the subsidence assumptions as a function of a project going on the landscape; subsidence values are spatially varied using existing data.
- CAT member clarified that the objective of the Western Terrebonne Hydrologic Restoration project was to benefit TE-110 (Increase Atchafalaya) and lower the salinity in the area, a bit further south than where the Master Plan team put it. The team will look at the shifted location.
  - The Increase Atchafalaya project team has some recent results, it would be

interesting for them to see these slides and to compare.

- Note for the Union Freshwater Diversion project that the Reintroduction to Maurepas Diversion is included in FWOA; therefore, the model does not show the land loss that existed in the 2017 model.
  - The 2023 model no longer has the acute salinity collapse criteria which was a big component in the swamp forest conversion seen in 2017. In addition, improvements were made to the calibration of the hydro tidal signatures which is the primary driver in the vegetation model between areas being delineated as a fresh forest system vs. a fresh marsh.
- While the spatial resolution of the hydro model has increased substantially since 2017, near-field crevasse and hydrodynamic processes are not captured well in the ICM and is more appropriate for the feasibility and design modeling phases.
- The Cameron-Creole to the Gulf Hydrologic Restoration project is a 750 cfs pump that was sized based off of an acreage foot volume of water and a certain number of days that it needed to drain.
  - Currently the structures around the edge of Lake Calcasieu are not configured to only drain (which is the assumption the model makes for this project), they allow two-way flow and would have to be retrofitted as flap gates and adjusted to meet this project's needs.

RESTORATION PROJECT SELECTION – IMPLEMENTATION PERIOD 1 (IP1)

Denise Reed provided an overview of the process for selecting restoration projects as well as a review of the Planning Tool including how constraints are set.

The following items were discussed:

- The area under the curve is annualized; the current strategy is to compare the average annual calculation of the last 10 years to the average annual over 50 years.
- Most projects will not perform as well under the higher scenario compared to the lower scenario; a project only needs to do well or better than other projects it is being compared to in the higher scenario.
- The Master Plan team received a list of projects from Ducks Unlimited and did a desktop analysis of the structures in the Chenier Plain; there are challenges with controlled structures with how it is assumed those are operated in the future.
  - The structures are likely in the model but are most likely being modeled as some form of flap gate, control drainage without adjustments to the weir elevations.

CLOSING AND NEXT STEPS

- CPRA will provide a draft CAT #10 KOM to CAT members for review along with presentation slides and a copy of the CAT ground rules
- CAT Meeting #11 is TBD (anticipating late spring/early summer, in-person)
  - Plan to hold an intermediary webinar on Tableau before the next meeting

CAT MEETING #11 KOM

DATE: 2022-06-02

RE: COASTAL ADVISORY TEAM TABLEAU WEBINAR KEY OUTCOMES MEMO

MEETING PARTICIPANTS

Sam Bentley (LSU), Dwayne Bourgeois (NLLD), John Ettinger (RESTORE Council), Pat Forbes (OCD), Michelle Gonzales (Jefferson Parish), Craig Gothreaux (NMFS), Brad Inman (USACE), Greg Linscombe (LLA), Tim Matte (St. Mary Levee District), David Muth (NWF), George Ramseur (MDMR), Natalie Snider (EDF)

CAT MEMBERS NOT PRESENT

Susan Bergeron (BTNEP), Joey Breaux (LDAF), Mike Carloss (DU), Brady Carter (LDWF), Chett Chiasson (Greater Lafourche Port Commission), Tokesha Collins-Wright (LCA), David Cresson (CCA), Quenton Fontenot (Nicholls State University), Karen Gautreaux (TNC), Quin Kinler (USDA-NRCS), Scott Kirkpatrick (Coast Builders), Patrick Landry (DOTD), Lori Leblanc (LMOGA), Keith Lovell (DNR), Simone Maloz (ROR), Michael Miller (Associated Branch Pilots), Spencer Murphy (Canal Barge Co.), Sharon Osowski (EPA), Ronnie Paille (USFWS), Kimberly Reyher (CRCL), Brad Robin (Oyster Task Force), Robert Twilley (LA Sea Grant), Patrick Witty (LED)

ADDITIONAL PARTICIPANTS

Greg Grandy (CPRA), Brian Lezina (CPRA), Ann Hijuelos (USACE), Sara Krupa (DNR), Patty Taylor (EPA Region 6), Emily Vuxton (TNC)

ABOUT THIS KEY OUTCOMES MEMORANDUM

The Master Plan Team has prepared and distributed this Key Outcomes Memorandum (KOM) to all CAT members as a summary of the CAT Meeting #11 regarding Tableau. The purpose of the KOM is to outline key decisions and areas of emerging agreement, issues discussed and topics requiring future deliberation, and next steps. The KOM does not serve as a meeting transcript and will not typically attribute comments or suggestions to specific individuals.

While the Master Plan Team believes this is an accurate and complete summary, CAT members are asked to closely review the document. If you feel that essential points are misrepresented, **please respond to Forrest Town** (forrest.town@la.gov) **with your specific suggestions for revision of the KOM by July 22, 2022**. The Master Plan Team will review and integrate any proposed edits received and produce a final KOM, which will serve as the official summary.

MEETING SUMMARY

INTRODUCTION

Forrest Town welcomed everyone and provided an overview of master plan progress and schedule updates. It was requested that meeting materials not be shared widely outside of the CAT membership as information is still draft.

PLANNING TOOL OVERVIEW

Stuart Brown provided an overview of the Planning Tool (the master plan's decision support and optimization tool) and explained that the final master plan alternative will be developed using a robust project selection process. There are currently 24 alternatives included in the Tableau viewer. While the final plan alternative is not available yet, the alternatives shared will be informative to help think about selecting budgets and the use of constraints.

BUDGET TESTING

Stuart emphasized that while the master plan is not an accounting exercise (e.g., future budgets are unknown), a budget constraint is important in order to prioritize and focus resources on projects that will provide the greatest benefit. There are two budget testing takeaways: 1) the marginal benefit of each dollar spent decreases as the budget increases (e.g., the first $7.5 billion is approximately twice as effective as the next $7.5 billion), and 2) spending money in the first implementation period (IP1) is more effective than spending money later.

Stuart confirmed that for past plans, projections were made regarding anticipated and needed

budgets; however, projections beyond the near-term (approximately seven years) become extremely uncertain. While the master plan budget may be optimistic, it is a statement of priorities and drives the message that spending money earlier is more effective.

LAND SUSTAINABILITY TESTING

Stuart explained the index used to test land sustainability is a ratio of the project's average annual benefits for the last 10 years over the project's average annual benefits for the full 50 years.

PROJECT OUTCOMES

Stuart provided an overview of the project outputs for hydrologic restoration, landbridge, marsh creation, and diversion projects before exploring them in the Tableau workbook. He emphasized that the model outputs are intuitive and consistent with findings from other efforts, while highlighting the departure in messaging from previous master plans. For the 2023 plan, new diversions need to be thought of as complimentary to the mid diversions rather than as additional new land building diversions in the upper and mid basins.

Stuart confirmed that the Atchafalaya Diversion continues to perform well and is selected under several alternatives; the Increase Atchafalaya project performs well in the lower scenario but induces loss in the Verret Basin. Alternative operations are being looked into to mitigate some of the induced loss.

The following items were discussed:

- Clarified that the water levels are not necessarily deeper, but the consequences of high water levels in fresh marshes are different in the 2023 plan models.
- As the various modeling components are still being entered into the Planning Tool, preventing habitat (vegetation) switching has not yet been analyzed; however, it is not expected that there will be a large difference with the additional diversions.
- Previously in the 2017 plan, swamp and fresh herbaceous marsh would only be lost due to salinity, not inundation. In 2017 many fresh forested wetlands converted to marsh relatively quickly due to the model's ability to characterize water variability at that time. For the 2023 plan, improvements were made to the vegetation dynamics in the upper basins based on CRMS data and better calibrated hydrologic models that feed off of vegetation modeling (e.g., there is still a salinity threshold but it no longer goes from vegetated land directly to open water as in the 2017 plan).
- Confirmed that flotant is treated as a separate vegetation category. Floating marsh has a salinity threshold of 5.5 PPT at which point it will completely die off and convert to dead floating marsh. There are two mechanisms for flotant to die: either acute salinity stress or a long-term senescence from changing conditions.
  - If it starts as a thick floating mat it can transition through to thin floating mat, but if it starts as a thin floating mat it can only become open water

when it dies.

- Confirmed that the models assume that water quality constituents are uniformly mixed, whether it be temperature, salinity, or sediment, both in the water column and in the horizontal direction of the hydro compartment. Salinity within the marsh is also assumed to be equal to that of the open water.
    - Master Plan Team will revisit salinity thresholds with Jenneke Visser and follow up with CAT members.
- It will be an interesting case study example to see if flotant re-establishes on the western shore of Little Lake where it was sheared off due to Hurricane Ida (and not a salt kill, etc.). CPRA will continue to monitor this but confirmed it is not a mechanism that exists in the master plan modeling.
- Although PM-TAC advice was to not have single events result in complete transformations of the landscape, in the case of floating marshes single events do have a profound effect. For future plans CAT members suggested trying to figure out how long floating marsh can be relied on to hold when a storm will eventually roll it up and destroy it.
    - Confirmed that the master plan models do not capture a 'ripping up' dynamic for flotant but the models do incorporate an event stress signal by way of the two-week salinity threshold. It is not the same mechanism but it does mean that large storm events can have dramatic effects on flotant.
- CAT member concern that there will be no recruitment in the swamps and they will be lost if they do not get additional elevation.
- Although not under CPRA's purview and not a reason to select diversions for the master plan, the CAT member urged everyone to keep in mind that there may be other uses for diversions such as Mississippi River flood control and reducing the emergency operations of the Bonnet Carre.
- Diversion project output takeaways:
    - The three Mississippi River diversions in Future Without Action (FWOA) are effective at building and maintaining land; their location and sizing is intentional – they were designed to balance delivering sediment while not causing excessive flooding. Specific analysis to quantify this will be available in fall 2022.
    - In the initial testing of the Planning Tool, none of the Mississippi River diversions are selected in IP1.
    - Additional Mississippi River diversions could be an important part of the master plan's restoration strategy, but there are important lessons learned about sizing and how to operate those diversions in ways that are complementary to FWOA diversions:
        - Need to balance delivering sediment yet not cause excessive flooding
        - Adding more water to the upper basin areas may not result in benefits; modeling suggests that there are greater constraints on

the amount of water that can be put into the upper basins, particularly in light of the upper basins' relative stability under FWOA; some of the upper basin project concepts that have shown promise in previous studies may need to be reconfigured/re-examined in the context of having active diversions down-basin.

- Diversions may not be the best way to mimic periodic overbank flooding in the upper basins.

○ The potential of upper basin diversions for Mississippi River flood control continues to be evaluated.

- Mississippi River flood control or limiting the operations of the Bonnet Carre are important but from an ecological perspective there will be significant limitations or trade-offs in the volumes and frequency of operations.

- Going forward, CPRA will continue to evaluate the systematic operations of diversions but this will be a standalone effort from the project selection process due to the available capacity to perform the analysis before the next master plan. System-wide and basin-wide management of diversions will be very important.

- In the future, the Master Plan Team will need to think very critically about the types of projects and how they are evaluated as being complementary to the Mids and Maurepas diversions.

- For the 2023 plan, projects were proposed in a vacuum but there is a need to look at the basins more holistically given the projects that are in the FWOA condition.

- CAT member encouraged CPRA to do a one-off model run and try to develop a more simplistic alternative operations version vs. full systems operations to demonstrate the utility of the upper diversions (e.g., allow for flexibility of years: run Ama one year and Barataria the next, etc.).

- While the two Mids and Maurepas diversions are keystone projects with additional diversions meant to complement those projects (vs. not being entirely new land building diversions in the Upper Barataria or Upper Breton Basins), there is room for projects that will provide a great deal of benefit because there will be times when, for example, the Mid-Barataria Diversion cannot be operated and salinity issues in the upper basin might occur. During these times a smaller diversion could make quite a bit of difference in the area.

- The idea of freshwater, and then sediment diversions has come a long way in the past 30 years, where today it is clear that diversions are not a one-size fits all; CPRA and others need to think about what the ecosystem needs and not just what tools are available in the tool box, they need to be tailored.

INTRODUCTION TO THE TABLEAU WORKBOOK

Stuart introduced how to navigate the Tableau workbook and highlighted that the "Projects →" and "Alternatives →" tabs include self-guided tours that were put together for CAT members.

The following tips and items were discussed:

- Costs are calculated dynamically and are reported as a range.
- "Tool Tips" with more information pop up when an item is hovered over with the mouse.
- In the "Regional Project Benefits" tab, selections can be made by area, by region, by individual project, by different project types, and by scenario.
- The "Projects by Alternative" tab displays the budgets and alternatives projects are selected under, as well as noting the implementation period.
- For the "Alterative Comparison" tabs for the lower and higher scenario, if projects are selected in one tab, when switched to the other scenario tab the same projects will remain highlighted.
- The CAT Tableau link will expire in two weeks as it is draft data that is still going through QA/QC.
- Confirmed that landbridges are not built to last for 50 years; they are marsh features vs. high level levee-like features.
  - Landbridges are built to meet the intertidal threshold at Year 10 (this is different than CWPPRA's intertidal definition). It would be interesting to compare what the target elevations are compared to mean water level vs. what CPRA has done in terms of actual implementation of restoration projects.
- The benefits in the footprint of a landbridge project might be similar between the lower and higher environmental scenarios, but the indirect effects outside of the project footprint could be very different due to the varying environmental conditions. For example, the reason the Lower Barataria Landbridge project is selected in the higher scenario and not the lower is that the project has additional indirect benefits on the area's salinity dynamics in the higher scenario.

CLOSING AND NEXT STEPS

The next CAT meeting will be June 30, 2022.

CAT MEETING #12 KOM

DATE: 2022-06-30

RE: COASTAL ADVISORY TEAM MEETING #12 KEY OUTCOMES MEMO

MEETING PARTICIPANTS

Sam Bentley (LSU), Dwayne Bourgeois (NLLD), Brady Carter (LDWF), John Ettinger (RESTORE Council), Pat Forbes (OCD), Michelle Gonzales (Jefferson Parish), Craig Gothreaux (NMFS), Quin Kinler (USDA-NRCS), Cassidy Lejeune (DU), Greg Linscombe (LLA), Tim Matte (St. Mary Levee District), Spencer Murphy (Canal Barge Co.), David Muth (NWF), Sharon Osowski (EPA), Kimberly Reyher (CRCL), Natalie Snider (EDF)

CAT MEMBERS NOT PRESENT

Joey Breaux (LDAF), Chett Chiasson (Greater Lafourche Port Commission), Tokesha Collins-Wright (LCA), David Cresson (CCA), Quenton Fontenot (Nicholls State University), Karen Gautreaux (TNC), Brad Inman (USACE), Scott Kirkpatrick (Coast Builders), Patrick Landry (DOTD), Keith Lovell (LDNR), Simone Maloz (MRD), Michael Miller (Associated Branch Pilots), Ronnie Paille (USFWS), George Ramseur (MDMR), Brad Robin (Oyster Task Force), Robert Twilley (LSU CSS), Patrick Witty (LED)

ADDITIONAL PARTICIPANTS

Bren Haase (CPRA), Greg Grandy (CPRA), Charles Sutcliffe (GOCA), Travis Creel (USACE), Caitlin Joubert (LDAF), Sara Krupa (LDNR), Alisha Renfro (MRD), Jeff Varisco (USACE), Emily Vuxton (TNC)

ABOUT THIS KEY OUTCOMES MEMO

The Master Plan Team has prepared and distributed this Key Outcomes Memorandum (KOM) to all CAT members as a summary of Meeting #12. The purpose of the KOM is to outline key decisions and areas of emerging agreement, issues discussed and topics requiring future deliberation, and next steps. The KOM does not serve as a meeting transcript and will not typically attribute comments or suggestions to specific individuals.

While the Master Plan Team believes this is an accurate and complete summary, CAT members are asked to closely review the document. If you feel that essential points are misrepresented, please respond to Forrest Town (Forrest.Town@la.gov) with your specific suggestions for revision of the KOM by August 12, 2022. The Master Plan Team will review and integrate any proposed edits received and produce a final KOM, which will serve as the official summary of the CAT meeting.

MEETING SUMMARY

INTRODUCTION

Bren Haase welcomed everyone and thanked CAT members for their ongoing participation, critical feedback, and thoughtful input in the process of developing the master plan. Krista Jankowski reviewed the agenda and provided an overview of the master plan progress and schedule updates. It was requested that meeting materials not be shared widely outside of the CAT membership as information is still draft.

OUTREACH UPDATE

Krista Jankowski gave an update on the master plan's outreach activities including both community and official public meetings, plan documentation, and development of outreach materials. Forrest Town relayed updates to the beta version of the Master Plan Data Viewer in development. Once available, a link will be shared and CAT feedback is requested both on the user experience and improving what has already been developed. Forrest explained that there are two ways to interact with information in the viewer – a self-guided experience for those familiar with master plan data, and a new guided tour option to help explain the viewer functionality to first-time users.

The following items were discussed:

- The Master Plan Data Viewer beta version only includes the 2023 candidate project list. For the final version, only projects selected for the 2023 Coastal Master Plan will be displayed.
- In the viewer's final version, project information such as costs will be available and will link to project factsheets with the full project's details.
- In the 2017 Master Plan Data Viewer data to explain the reasoning behind how a dollar value was assigned to a project was not readily available and/or clear.

IMPLEMENTATION PERIOD 1 (IP1) RESTORATION PROJECT SELECTION

Stuart Brown reviewed the process for selecting restoration projects for the first implementation period (IP1). Stuart explained a few differences in project benefits that were made to the IP1 project selection since the Tableau workbook was shared at the last webinar. CAT members were encouraged to use the Tableau link to explore the projects selected.

The following items were discussed:

- Confirmed that for projects such as marsh creation with long construction timelines, it is assumed that the projects are built in sections and therefore a portion of the benefits accrue prior to the full project's completed construction year.
- Clarified that "optimized" only refers to project selection on land area.
- The coastwide IP1 projects map will be included in the slides in the meeting follow-up materials. Overall, the distribution of projects is coastwide (without having imposed constraints to dictate that outcome). It was noted that there are gaps in the following areas where projects are not present:
  - The Atchafalaya River influence area as the area is relatively healthy with less future land loss,
  - Barataria basin which is already influenced by the diversion in FWOA,
  - Biloxi Marsh area lacks any IP1 projects.
- Suggestion to show the future without action (FWOA) projects/programmatic map before sharing the IP1 projects map to help demonstrate that the areas that appear to have gaps are actually areas with lower future land loss.
  - The Master Plan Team will explore ways to combine FWOA and 2023 selected projects on one map to illustrate this coverage.
- Confirmed that Tableau is not intended to be made publicly available, it is only meant for the CAT.
- It was noted that most of the larger marsh creation projects can be selected in sections (termed 'elements'); therefore, projects with similar names will be listed

multiple times in Tableau due to multiple elements of the project being selected.

- ○ If project elements are not selected in IP1 they can be selected in IP2.
- Confirmed that IP2 projects could be selected because they perform better in later years, but they also might perform better due to the projects already selected in IP1 and how the projects synergistically interact.
- Confirmed the Charenton Diversion displays benefits in the Central Coast as freshwater is diverted westward. The decrease in freshwater going into Penchant Basin causes land loss. The negative impacts in the Penchant Basin may be able to be mitigated with another project, e.g., Atchafalaya Diversion.
- Confirmed that the HNC Lock in FWOA does not include specific operations for freshwater management; however the operation rules in the model close the lock when water levels outside the system are higher than inside, limiting salinity intrusion and storm surge-based flooding.
- Clarified that the Mid Basin diversions are assumed to begin running in initial conditions. The purpose is to see how the candidate projects perform with the diversions on the landscape; trying to figure out when the diversions would realistically come onto the landscape becomes overly complex.

FWA RISK OUTPUTS

Stuart reviewed the FWOA risk outputs and explained that the 2023 plan is projecting greater risk coastwide than previous plans due to the model improvements made which better reflect risk. Stuart described how the change in risk under the higher scenario is not uniform; some areas are projected to have very high hurricane storm surge-based flood risk that previously were considered to be at low risk. Stuart then walked through a few examples of the structural risk reduction maps by community.

The following items were discussed:

- Confirmed that blue on the color ramp signifies a decreased risk as it is related to population moving away and therefore there are less assets there.
    - ○ The scale of the gins might be unintentionally misleading; it seems to overstate negative risk reduction.
    - ○ If there is 1% uncertainty, then the blue areas means that there is 0 change. The Master Plan Team will explore showing this as a percentage instead to help communicate it to the general public.
- When people move into red areas there is a transfer of risk.
- Some polygons are large in rural and sparsely populated areas.
- Structural risk reduction in future with action (FWA) is related to storm surge flooding only.
- The Master Plan Team is working to obtain a Tableau that will help the CAT explore risk FWA more dynamically.

- Expected Annual Structure Damage (EASD) is the cumulative damage to structures; the structure value is not taken into consideration.
- Only 30% of Expected Annual Damage $ (EAD$) is related to structure damages. Other costs include those borne during repair and reconstruction (e.g., lost wages and rents, temporary displacement/temporary relocation costs).
- EASD includes multifamily structures; however, it is heavily weighted towards single family residences (which includes duplexes) as they make up 94% of the structure inventory. The analysis uses HAZUS and two proprietary data sources to arrive at a full data set for the master plan. The data sources have difficulty distinguishing between multifamily homes and commercial assets.
- The EASD metric treats multifamily structures as one structure, most of which are located in New Orleans. Due to the lack of storm surge-based flooding in the model in New Orleans, most of these structures are not projected to experience a great deal of risk.
- Confirmed that the population analysis includes historic trends and that asset values change as the population shifts.
    - In the analysis, the population is not responsive to projects being implemented. The Master Plan Team is interested in doing future exploratory analysis on this but the models will not be adjusted to be responsive to uncertain future population changes and will not be used for project selection.
- The next step for EAD$/EASD is to determine if using one metric vs. the other influences project selection or if the two metrics will be blended.
- The Lake Pontchartrain Barrier does not assume other candidate projects are in place. The team needs to think through the potential overlapping benefits of the Slidell Ring Levees and the St. James/Ascension Parishes Structural Protection project and how to treat those in project selection.
- For projects that induce flooding outside of the system such as Morganza to the Gulf, we will evaluate additional project costs for mitigating added risk with nonstructural measures.
- Confirmed that the analysis includes the total cost for Morganza to the Gulf, while it will have a federal component it is not separated out.
- Emphasized that there is still residual risk (e.g., levee fragility; overtopping from low probability events) with large structural risk reduction projects, they do not zero out risk within the levee system.
- Upper Barataria and Morganza to the Gulf are being modeled in isolation; however, it might be useful to do a model run with them together.
    - These types of runs are computationally complex and take a long time to run. They will not be able to be completed for the 2023 Coastal Master Plan but can be run after the master plan's release. However, a model run with all of the structural projects selected for the 2023 plan will be run together to show the collective effect.

- - The visualizations for Upper Barataria will be improved to avoid confusing the public as Gheens does not appear; will refine to show the tie-in of Morganza.
- A fairly significant portion of the master plan budget will be allocated to nonstructural risk reduction; further analysis needs to be done to dig into communities.
  - There are currently two variants (50% and 100%) for participation in the nonstructural analysis. Participation is never anticipated to be 100% but it is used as a maximum bounding condition.
  - How to use this in the Planning Tool requires more thought. Ultimately, the Master Plan Team needs to decide what are the different ways risk can be bought down and how much residual risk exists.
- The surge and risk modeling misses some higher frequency events
  - Have separate community specific High Tide Flooding analysis
  - Work is ongoing on drive time analysis coastwide changes – how long it will take to drive to hospital, school, etc.
- A Risk Tableau will be shared in the near future once it is available; the Risk Tableau will have the project cost information that was mentioned in the 2017 Master Plan Data Viewer feedback earlier.

DIVERSIONS DISCUSSION FOLLOW UP

Eric White provided a recap of the follow up diversion discussion that was requested by NGO members after the CAT Tableau webinar. Eric described the candidate Mississippi River diversions and distributaries candidate projects and walked through the changes that diversion projects are most sensitive to as a result of the model improvements made to the 2023 ICM.

The following items were discussed:

- The Mississippi River Hydrograph is built solely off of assumed projected precipitation from global climate change models so that it can be coupled with the master plan assumptions around sea level rise in the downstream boundary. This is not a forecast or true prediction; this is one realization of many scenarios being used for the project selection criteria.
- Acute salinity stress is the shortest timescale that land change processes are impacted by in the model and is defined as the maximum two week mean salinity in a given year.
- A storm could bring in and elevate salinity for two weeks which could be enough to kill the vegetation and the wetland will remain bareground in the model until the end of the year.
  - In the next year, the vegetation model can immediately populate it with species that favor those conditions.

- If no vegetation moves in and the area remains bareground, at the end of the next model year it will be compacted and the elevation will be reduced by 10 cm. This continues until it either becomes inundated or vegetation moves in.
    - For an herbaceous wetland to collapse, it has to be inundated for two years; annual inundation is calculated from mean water levels.
- There are two types of flotant: thick and thin mat.
    - If thin mat is stressed, it becomes bare floating mat and then goes to open water the following year.
    - If thick mat is stressed, it can become thin mat.
- The 2023 model improvements tried to develop relationships between inundation and organic accumulation rates to be able to say if a marsh is inundated by this much, the organic accretion will slow down by that much. However, good relationships that could be applied in the ICM did not exist in the data or studies available.
- There are no analogues for large diversions; the only instance of opening a gate and letting large volumes of water out is the Bonnet Carre openings which is open for weeks, not months like the planned diversions.
    - There is no data to support that the diversions will create true chronic flooding that will kill a forest.
- Suggestion to set inundation frequency to be every other year and then the threshold would not be met. The Master Plan Team will look into if there is enough data for this.
- It was noted that there is literature on trees tolerating flow/water which could explain why Cypress tree plantings have survived Bonnet Carre openings.
- Confirmed that inundation is not applied to trees in the model.
- It would be interesting to consider pulsing and duration of inundation events.

BUDGET DISCUSSION

Stuart introduced the budget discussion, explaining the budget for IP1 restoration is likely going to be $12.5 billion (B) and discussed the various options for a programmatic budget.

The following items were discussed:

- The 2017 programmatic budget was $1.5 B for barrier islands; for the 2023 plan, it is recommended to withhold $2.5 B for barrier islands, shoreline protection, and small-scale hydrologic restoration projects that are better evaluated in programs (e.g., CWPPRA) to be analyzed on a case by case basis.
- Clarified the budget is a control budget for modeling and planning purposes; the intent is to set aside money so that other projects are not selected and use the budget to ensure a focused plan.

- Confirmed that CPRA still sees value in the upper basin diversions even though they might not perform as well as they did in the 2017 model. This is an area CPRA will continue to evaluate as it has potential for restoration and flood risk reduction. The question is if more budget should be withheld to do this evaluation to explore alternatives and set aside money for large construction costs.
  - CAT member expressed the need to do something in the upper basin swamps which will only become less productive over time. There are better ways to mimic spring flooding in the upper basins than doing large diversions.
- Additional study outside of the master plan is necessary because the available modeling tools do not consider flood risk reduction benefits on the Mississippi River and are limited with how they represent some ecosystem dynamics.
  - The fundamental structure of the vegetation dynamics model focuses on herbaceous vegetation, not the behavior of a swamp system. The model tracks if there is a presence/absence, not the health of a system.
  - The DELFT model only works if there is a large amount of input data.
- Alternative operations are being evaluated for Increase Atchafalaya; it is anticipated that it will be presented in the master plan as an Atchafalaya diversion program while the master plan continues with its TE-110 process.

CLOSING AND NEXT STEPS

- CPRA will provide a draft CAT #12 KOM to CAT members for review along with presentation slides and a copy of the CAT ground rules
- Intend to hold a webinar on risk selection and another meeting/webinar on IP2 project selection.
- CAT Meeting #13 is TBD (anticipating fall 2022, in-person)

CAT MEETING #13 KOM

DATE: 2022-08-03

RE: COASTAL ADVISORY TEAM RISK TABLEAU KEY OUTCOMES MEMO

MEETING PARTICIPANTS

Joey Breaux (LDAF), Brady Carter (LDWF), Chett Chiasson (Greater Lafourche Port Commission), John Ettinger (RESTORE Council), Quenton Fontenot (Nicholls State University), Michelle Gonzales (Jefferson Parish), Craig Gothreaux (NMFS), Greg Linscombe (LLA), Simone Maloz (MRD), Spencer Murphy (Canal Barge Co.), Sharon Osowski (EPA), Kimberly Reyher (CRCL), Natalie Snider (EDF)

CAT MEMBERS NOT PRESENT

Sam Bentley (LSU), Dwayne Bourgeois (NLLD), Tokesha Collins-Wright (LCA), David Cresson (CCA), Pat Forbes (OCD), Karen Gautreaux (TNC), Brad Inman (USACE), Quin Kinler (USDA-NRCS), Scott Kirkpatrick (Coast Builders), Patrick Landry (DOTD), Lori Leblanc (LMOGA), Keith Lovell (DNR), Tim Matte (St. Mary Levee District), Michael Miller (Associated Branch Pilots), David Muth (NWF), Ronnie Paille (USFWS), George Ramseur (MDMR), Brad Robin (Oyster Task Force), Robert Twilley (LA Sea Grant), Patrick Witty (LED)

ADDITIONAL PARTICIPANTS

Bren Haase (CPRA), Greg Grandy (CPRA), Brian Lezina (CPRA), Charles Sutcliffe (GOCA), Sara Krupa (DNR), Emily Vuxton (TNC)

ABOUT THIS KEY OUTCOMES MEMORANDUM

The Master Plan Team has prepared and distributed this Key Outcomes Memorandum (KOM) to all CAT members as a summary of Meeting #13 regarding the Risk Tableau. The purpose of the KOM is to outline key decisions and areas of emerging agreement, issues discussed and topics requiring future deliberation, and next steps. The KOM does not serve as a meeting transcript and will not typically attribute comments or suggestions to specific individuals.

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MEETING SUMMARY

INTRODUCTION

Krista Jankowski welcomed everyone and provided an overview of master plan progress, schedule updates, and next steps. It was requested that meeting materials not be shared widely outside of the CAT membership as information is still draft.

PLANNING TOOL OVERVIEW

Stuart Brown provided an overview of the Planning Tool process (the master plan's decision support and optimization tool), focused on protection projects (restoration projects were the focus of the June 2nd webinar). Stuart noted that for structural protection projects, partial benefits are applied during the construction period to capture the incremental benefits projects provide while under construction.

NONSTRUCTURAL PROJECTS

While the process is slightly different for nonstructural projects, the Planning Tool similarly analyzes the net impact of the project compared to the Future Without Action (FWOA). The team identified 291 communities and defined a nonstructural project for each. Instead of nonstructural projects originating from a public solicitation or Regional Workgroups, nonstructural projects are defined by the projected flood depths in FWOA and the measures necessary to reduce damages for a given depth.

There are a variety of ways to define nonstructural protection, but for project selection the "initial variant" is defined by the 1% annual exceedance flood depths at the initial condition. Similar to the 2017 plan, the nonstructural mitigation thresholds for mitigation are: commercial structures exposed

to less than 3 ft of flooding are identified for floodproofing, residential structures exposed to between 3 and 14 ft of flooding are recommended for elevation, and voluntary acquisition is recommended for structures that are exposed to greater than 14 ft of flooding.

For Implementation Period 2 (IP2), a different nonstructural variant will be used that will be pinned to future year flood depths (vs. the initial condition). It is expected that there will be an increase in the number of structures recommended for nonstructural mitigation as well as a greater proportion of structures being recommended for voluntary acquisition, as a greater number of residential structures will be exposed to 14+ ft of flood depths. Similar to structural projects, benefits are interpolated to Year 0 to capture interim benefits of nonstructural projects. It is important to note that a participation rate of 50% is assumed; a range of additional participation rates will be tested.

PROJECT SELECTION - RISK REDUCTION

Stuart reiterated that while the goal is to maximize risk reduction over 50 years given the funding constraints for two implementation periods, this webinar focuses on IP1 project selection (Years 1-20). A few important notes:

- The master plan does not select individual nonstructural projects; it selects structural risk reduction projects where they provide the best way to reduce coastwide flood risk compared to the use of nonstructural approaches.
- The Planning Tool assumes benefits are additive unless other rules are imposed.
- Nonstructural and structural projects are treated as mutually exclusive; if nonstructural projects that overlap with areas impacted by structural projects are a better way to reduce coastwide risk, the structural projects will not be selected, and if a structural project is selected the effects of the overlapping nonstructural projects do not contribute to coastwide risk reduction.

PLANNING TOOL TESTING

Stuart described the budget, metric, and scenario testing performed to develop the alternatives for IP1.

- Budget Testing: When testing a $10 billion versus $17.5 billion budget, it is apparent that while the additional projects included in the $17.5 billion budget are a good investment, the 4-5 large structural projects included in the $10 billion budget are exceedingly good investments.
- Metric Testing: When comparing expected annual damage dollars (EADD) and expected annual structure damage (EASD) metrics across scenarios, there are slight differences in the projects selected; there are some projects that perform better under EADD versus EASD.
- Scenario Testing: In almost all testing, there is very little difference in the structural projects selected under a lower or higher scenario. Due to project costs remaining

the same regardless of scenario (this is different from restoration projects) and project benefits all move in the same direction as relative sea level rise increases, the robust project selection across scenarios that was applied in the restoration project selection process may not be necessary for selecting risk reduction projects.

- ○ IP2 will have different costs because nonstructural projects will be identified based on future projected flood depths.

The Planning Tool next steps include testing EADD and EASD in the objective function; testing alternative nonstructural participation rates; exploring demographic data to understand how projects affect certain populations; select the final IP1 alternative and begin the IP2 alternative selection.

TABLEAU WORKBOOK OVERVIEW

Stuart introduced how to navigate the Tableau workbook and highlighted that the risk tabs explore information about existing risk and future risk with no additional projects on the landscape (not project specific data).

The following tips and items were discussed:

- "Tool Tips" with more information pop up when the mouse hovers over an item.
- FWOA Risk results can be explored by environmental scenario, fragility scenario, pumping scenario, risk metric, asset type, and by parish or community.
- FWOA Risk Results "working coast" asset type includes commercial and industrial assets.
- Note that for FWOA Risk Results EASD, the legend's color ramp states the display is truncated (it only goes up to 200) – over the years there is a very wide range of numbers; instead of the map/legend resetting as the slider is moved through time, the color ramp stays constant in order to view of the entire coast.
  - ○ Often, a community displayed as dark green will have a value greater than 200. To see the exact value, hover over the community and the Tool Tips will display the community specific information.
- Community delineations will be updated for the public-facing materials; in some cases (e.g., Morganza to the Gulf) the visualization represents the damages together, but the data is calculated correctly with damages inside and outside the system.
- Note that sometimes there are unexpected signatures when selecting multiple projects due to the Planning Tool's additive assumption (this is the same assumption that is made when selecting restoration projects which are aggregated by ecoregion).
  - ○ If there is a real issue, the mutually exclusive rule can be applied in the Planning Tool (as done for nonstructural/structural and some restoration projects).
- Concern was expressed over the Lake Pontchartrain Barrier project being included

for consideration as it was screened out of USACE's St. Tammany study due to the magnitude of negative environmental impacts.

- Clarified that the risk reduction projects have not been modeled yet in the ICM for environmental/landscape impacts; any impacts/benefits currently displayed are only with respect to the flood predictions from the risk models.
  - Once IP1 projects are finalized, the ICM will model projects for environmental/landscape impacts, but always with other projects so it will be difficult to assess any environmental impacts solely attributed to this project.
- Further clarified that the master plan analysis will not have the same kind of evaluation that USACE used because ingress and egress are not reflected in the ICM modeling habitat units.
- CAT members were asked to continue to share these types of comments/concerns during the process.
- For the "ALT – Effects by Proj" tab, the EADD and EASD alternatives can be explored one at a time; when either metric is selected in the menu on the right, that is what the Planning Tool is trying to maximize.
  - E.g., when EADD is selected on the side, the EADD graphs are what is trying to be maximized and the EASD graphs display the structure damage consequences of trying to maximize on dollars. When EASD is selected on the side, the EASD graphs on the bottom are what is trying to be maximized, and the EADD graphs at the top are the results/benefits associated with trying to maximize for structures.
  - Some EASD and EADD alternatives can be directly compared, but others cannot.
- The EADD IP1 $12.5 billion alternative is now resolved and reflected in the current Tableau link. Please refresh the link in order to view the updated data.
- The "FWOA to ALT EADD Comparison" tab also has a truncated color ramp legend (e.g., in both the 'FWOA Map by Community' and 'Remaining Risk from FWOA' maps Slidell is dark green although quite a bit of risk was reduced. The exact amount can be viewed in the Tool Tips by hovering over Slidell in each map).

CLOSING AND NEXT STEPS

The next CAT meeting will be August 23, 2022 in-person in Baton Rouge.

CAT MEETING #14 KOM

DATE: 2022-08-23

RE: COASTAL ADVISORY TEAM MEETING #14 KEY OUTCOMES MEMO

MEETING PARTICIPANTS

Dwayne Bourgeois (NLLD), Joey Breaux (LDAF), Brady Carter (LDWF), Chett Chiasson (Greater Lafourche Port Commission), David Cresson (CCA), Pat Forbes (OCD), Craig Gothreaux (NMFS), Brad Inman (USACE), Quin Kinler (USDA-NRCS), Scott Kirkpatrick (Coast Builders),Greg Linscombe (LLA), Simone Maloz (MRD), Spencer Murphy (Canal Barge Co.), Sharon Osowski (EPA), Kimberly Reyher (CRCL), Natalie Snider (EDF)

CAT MEMBERS NOT PRESENT

Sam Bentley (LSU), Tokesha Collins-Wright (LCA), John Ettinger (RESTORE Council), Quenton Fontenot (Nicholls State University), Karen Gautreaux (TNC), Michelle Gonzales (Jefferson Parish), Patrick Landry (DOTD), Keith Lovell (DNR), Tim Matte (St. Mary Levee District), Michael Miller (Associated Branch Pilots), David Muth (NWF), Ronnie Paille (USFWS), George Ramseur (MDMR), Brad Robin (Oyster Task Force), Robert Twilley (LA Sea Grant), Patrick Witty (LED)

ADDITIONAL PARTICIPANTS

Bren Haase (CPRA), Greg Grandy (CPRA), Charles Sutcliffe (GOCA), Sara Krupa (LDNR), Alisha Renfro (MRD), Emily Vuxton (TNC)

ABOUT THIS KEY OUTCOMES MEMO

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areas of emerging agreement, issues discussed and topics requiring future deliberation, and next steps. The KOM does not serve as a meeting transcript and will not typically attribute comments or suggestions to specific individuals.

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MEETING SUMMARY

INTRODUCTION

Bren Haase welcomed everyone and thanked CAT members for their ongoing participation, critical feedback, and thoughtful input in the process of developing the master plan. Ashley Cobb reviewed the agenda and provided an update to the master plan progress and schedule. It was requested that meeting materials not be shared widely outside of the CAT membership as information is still draft.

Stuart Brown discussed Old Business regarding the two operations proposed for the Atchafalaya diversions (Increase Atchafalaya Flow into Terrebonne TE-110 and the Atchafalaya Diversion). These projects will both be represented in the master plan; the 2023 Coastal Master Plan will include TE-110, with the Atchafalaya Diversion as a viable alternative. If TE-110 runs into obstacles during feasibility, the Atchafalaya Diversion should be evaluated as an alternative.

The following items were discussed:

- The changes to Increase Atchafalaya Flow into Terrebonne project (TE-110) operation solves the flooding previously seen in Verret; the primary reason for reducing flooding is due to capping operations earlier in the flood stage.
- The master plan's flow rate for TE-110 is the latest operation tailored to Moffatt and Nichol's, approximately 30,000 cfs.
- Clarified that the goal of the Atchafalaya Diversion is to move water into Bayou Penchant area – water goes into Bayou Shaffer, then into Penchant. TE-110 moves water east, and then south, via the GIWW.
- Confirmed that the TE-110 structure on the GIWW would only be able to divert fine sediment.
- Reiterated that master plan projects are conceptual ideas for projects; TE-110 will not be designed to move sand into the GIWW. This is a known issue and the models show it happen. If the TE-110 were to move forward, it would go through feasibility and likely change.

FUTURE WITHOUT ACTION (FWOA) – FUTURE WITHOUT CURRENTLY FUNDED PROJECTS (FWOCFP) IMPACTS

Eric White described a new model simulation, the Future Without Currently Funded Projects (FWOCFP) and the types of projects included. Eric briefly reviewed what was shared at CAT Meeting #5 and explained the terminology of the future states which are distinguished by the varying levels of assumed future coastal restoration actions. Eric then walked through the land area outputs for FWOCFP, Future Without Action (FWOA), and FWIP1 for the lower and higher scenarios. Please note that as a result of CAT member discussion, the name of this section was changed (previously it was referred to as 'future without currently planned projects').

The following items were discussed:

- Clarified that the difference between FWIP2 and Future With Master Plan (FWMP) is that FWMP includes risk reduction projects (FWIP2 only includes restoration projects).
- Confirmed the FWOA projects included on the slides are only a subset.
- CPRA is continuing to QA/QC the FWOCFP analysis and plans to present more at the next meeting.
- The analysis of these different 'futures' is being used for storylines, not to assess projects; it is a way for CPRA to determine some of the "what if" answers and illustrate what the projects CPRA is planning to build in the very near future could achieve.
- Reminder that for FWIP1 restoration project construction is complete by Year 20; another bump in land area is expected when FWIP2 is included and the IP2 projects that are implemented after Year 21 are included.
- It appears that the FWOCFP and FWOA lines are very close on the Change in Coastwide Land Area graphs. The effect may seem small but they are effective in the areas they impact even if at the coastwide scale the effect seems limited.
- The model assumes that funds are allocated at the beginning of IP1; all of the projects receive funding and start the planning process (followed by engineering and design and construction) at the same time but they have varying timelines related to the complexity of the project to engineer, construct, etc.
- Marsh creation projects perform differently than they did in the 2017 plan because they are built differently for the 2023 plan.
  - The design elevations for marsh creation use the CPRA project's development curve, the construction elevation is set to reach the top of the tidal prism 10 years after construction. Once the surface is low enough for tidal inundation, the vegetation species present determines the accretion rate potentially allowing the project to thereafter keep up with sea level rise.
- The Master Plan Team will examine vegetation cover changes with the Maurepas Diversion on and off in Maurepas/Pontchartrain.

- The Spanish Pass and New Zydeco project do not appear in the lower scenario maps but are included in the higher scenario maps.

IMPLEMENTATION PERIOD 2 (IP2) RESTORATION OUTCOMES

Eric provided examples of IP2 restoration outcomes and compared them to FWIP1. Eric described projects and their individual performance (projects have not been modeled together as a suite yet) in the Chenier Plain and White Lake and Denise Reed described projects and their performance for Penchant and Breton areas.

The following items were discussed:

- IP1 assumes funding is available immediately, IP2 assumes funding is available at Year 21.
- The results show the interactions between individual IP2 restoration projects and the complete set of IP1 restoration projects.
- Clarified that as a general principle, the master plan only uses borrow sources from outside the system; a few places, e.g., Terrebonne, use interior borrow sources but only where restoration would otherwise be infeasible.
- Salinity change affects the floating marsh (at different levels dependent on species); thin mat has a slightly higher salinity tolerance (up to 3 ppt).
- Any candidate project not selected for IP1 will be remodeled for IP2.
- Confirmed that ridges are implemented so they remain on the landscape in the model through Year 50. It is assumed any major gaps in existing ridges are maintained.
- The Moffatt and Nichol model for TE-110 may not include the same ridges as included in FWIP1.
- Grand Bayou Hydrologic Restoration is not in IP1 due to causing additional land loss especially east of Bayou Lafourche. It does not significantly affect the 2-week maximum for salinity (salinity slightly increases but remains fairly low) but the project does have an impact on the vegetation distribution.
- Charenton Diversion is not selected for IP1 due to subtle salinity and water level changes that resulted in flotant loss in Penchant Basin.
- Landbridge projects are meant to modulate changes in a basin and are built in deep water. Initial outputs suggest that a landbridge may not be needed in South Breton as they hold back water coming from the diversion.
- Next steps are to look at the project interactions in the Planning Tool. Similar to IP1, projects that are robust, i.e., they perform well in both scenarios, will be selected for IP2.

RISK REDUCTION

Stuart discussed the risk reduction results from the Future With Implementation Period 1 (FWIP1) project selection and reviewed the budget and metrics testing discussed at the August 3rd webinar.

The following items were discussed:

- Challenges communicating Expected Annual Damage Dollars (EADD) vs. Expected Annual Structure Damage (EASD) – neither metric is perfect but there is value in both.
    - EASD sums the proportional structure damage within each community
    - EASD may underestimate damage to commercial structures
    - EASD does not capture temporary dislocation, etc. which is captured in EADD
- A nonstructural participation rate of 75% will be used to create a larger inventory of cost-effective nonstructural projects. This will be used to identify a budget for nonstructural in the 2023 plan (specific projects will not be included).
- Confirmed that the budget includes a risk project's entire costs (not just CPRA's cost-share portion).
    - CPRA cost estimates are calculated independently from USACE, though they are checked against engineering reports, and are consistent with how the master plan has calculated costs in the past.
    - The messaging for the public is that the master plan is a $50 billion investment in coastal Louisiana, it doesn't matter who's paying for it.
- Comparisons between the USACE South Central Coastal Study and master plan analysis were discussed. Some of the discrepancies are expected (the analyses use different methods) but CPRA and USACE will continue to work to identify/understand the differences in the approaches to be able to report out on them to parishes and in the master plan (not that one is better than the other).
    - Franklin and Morgan City are included in the USACE study.
    - CPRA confirmed USACE used 65% as the nonstructural participation rate for their study's benefit cost ratio.
- All remaining structural projects will be evaluated for IP2.
- Demographic data will be added to the Planning Tool to assess if selected projects provide benefit for vulnerable communities/demographic groups.
    - Confirmed renters are not included in the analysis' demographic factors.
    - IP1 flood depth interventions are defined at Year 0 flood depths; IP2 uses Year 30 flood depths for the lower scenario.

OUTREACH UPDATE

Krista Jankowski provided an update on the master plan's upcoming fall/winter 2022 meeting series and ongoing outreach activities.

The following items were discussed:

- The September meeting series information will be shared with the CAT as soon as details are confirmed.
- The team is considering developing a QR code to gather public feedback on the plan.
- Confirmed that the public comment period is active up until 30 days before the plan is submitted to the Legislature (~mid March).
- Suggestion to invite non- CPRA people who work on projects that have a local/regional impact to the particular public meeting location as residents will want to be able to ask and receive information about those projects.

CLOSING AND NEXT STEPS

- CPRA will provide a draft CAT Meeting #14 KOM for CAT members to review along with presentation slides and a copy of the CAT ground rules.
- Coastwide public facing meetings will begin in fall 2022.
- Upcoming CAT meeting/webinars will share information on restoration IP2 project selection, risk IP2 project selection, nonstructural analysis, and regional storylines.

CAT MEETING #15 KOM

DATE: 2022-11-07

RE: COASTAL ADVISORY TEAM MEETING #15 KEY OUTCOMES MEMO (VIA WEBINAR)

MEETING PARTICIPANTS

John Ettinger (RESTORE Council), Craig Gothreaux (NMFS), Brad Inman (USACE), Quin Kinler (USDA-NRCS), Cassidy Lejeune (DU), Greg Linscombe (LLA), Simone Maloz (MRD), Spencer Murphy (Canal Barge Co.), David Muth (NWF), Kimberly Reyher (CRCL), Natalie Snider (MS River Delta Coalition)

CAT MEMBERS NOT PRESENT

Sam Bentley (LSU), Dwayne Bourgeois (NLLD), Joey Breaux (LDAF), Brady Carter (LDWF), Chett Chiasson (Greater Lafourche Port Commission), Tokesha Collins-Wright (LCA), David Cresson (CCA), Quenton Fontenot (Nicholls State University), Pat Forbes (OCD), Karen Gautreaux (TNC), Michelle Gonzales (Jefferson Parish), Scott Kirkpatrick (Coast Builders), Patrick Landry (DOTD), Keith Lovell (DNR), Tim Matte (St. Mary Levee District), Michael Miller (Associated Branch Pilots), Sharon Osowski (EPA), Ronnie Paille (USFWS), Brad Robin (Oyster Task Force), Robert Twilley (LA Sea Grant), Patrick Witty (LED)

ADDITIONAL PARTICIPANTS

Kyle Cappotto (USDA-NRCS), Elizabeth Jarrell (USACE), Sara Krupa (DNR), Alisha Renfro (MRD), Charles Sutcliffe (GOCA), Emily Vuxton (TNC)

ABOUT THIS KEY OUTCOMES MEMORANDUM

The Master Plan Team has prepared and distributed this Key Outcomes Memorandum (KOM) to all CAT members as a summary of Meeting #15. The purpose of the KOM is to outline key decisions and areas of emerging agreement, issues discussed and topics requiring future deliberation, and next steps. The KOM does not serve as a meeting transcript and will not typically attribute comments or suggestions to specific individuals.

While the Master Plan Team believes this is an accurate and complete summary, CAT members are asked to closely review the document. If you feel that essential points are misrepresented, **please respond to Mady LeBlanc (Madeline.LeBlanc@la.gov) with your specific suggestions for revision of the KOM by December 19, 2022.** The Master Plan Team will review and integrate any proposed edits received and produce a final KOM, which will serve as the official summary of the CAT meeting.

MEETING SUMMARY

INTRODUCTION

Stuart Brown welcomed everyone and provided an overview of master plan progress, schedule updates, and next steps. It was requested that meeting materials not be shared widely outside of the CAT membership as information is still draft.

Eric White discussed old business beginning with review of Future Without Currently Funded Projects (FWOCFP). FWOA features all projects that are currently funded or under construction; FWOCFP only includes projects that are already completed. When comparing FWOA to FWOCFP, there are 24 fewer restoration projects in FWOCFP as those projects are currently funded but not yet built. Therefore, the difference map of FWOA-FWOCFP displays the impacts of those 24 projects.

Stuart clarified that there is a project signature mismatch between project construction and what was imposed on the landscape due to certain projects being largely completed at the time of modeling. These types of projects are not on the list featured and their costs are not included.

The following items were discussed:

- There is an offset of ~22 sq. miles between FWOCFP and FWOA from marsh creation projects. The difference expands over time to account for projects that do not directly build land, but change the dynamics of the system to provide change over time.
- In FWOA, diversions are turned on when the Mississippi River threshold is reached in alignment with permit applications currently under review. This results in land being maintained but also shoaling that does not break the surface to allow for vegetation. Various operation regime simulations are currently underway to mimic how the diversions would be adaptively managed to maximize land building and vegetation in

the outfall areas.

- Clarified that the analysis performed for the USACE environmental impact statement (EIS) and master plan are different. The master plan analysis is a reduced complexity model that makes landscape assumptions to support the master plan and project selection criteria. The main difference in the diversion results is that the master plan analysis assumes there will be a lot of shallow freshwater but not much emergent vegetation. However, although it is not currently shown explicitly in the graphics the master plan analysis does assume that there will be emergent marsh maintained by the diversion projects.

METRICS

Eric provided an overview of the metrics considered in the 2023 Coastal Master Plan and how they are used to summarize the model outputs.

In the 2023 plan, nonstructural risk reduction will not be represented as individual projects but rather analysis will be presented to provide information to the public and other state agencies about which nonstructural mitigation methods could be most effective. Due to this, risk reduction would look different if nonstructural programs are in place or not. It was clarified that the Master Plan Data Viewer will report out critical infrastructure impacts by community but the impacts will not be represented spatially. This information will be summarized on the Community Fact Sheets.

IMPLEMENTATION PERIOD 2 (IP2) RESTORATION PROJECT SELECTION

Stuart explained the IP2 project selection process and how the baseline for IP2 project selection is the future with implementation period 1 (FWIP1) landscape which includes the IP1 projects. The goal of the IP2 project selection is to select projects that work synergistically with IP1 projects and limiting negative interactions. Similar to the IP1 project selection process, the remaining candidate projects are modeled against FWIP1 over the Year 21-50 time frame to determine their benefits. These benefits are then tracked annually and the Planning Tool is used to assess the most beneficial suite of projects.

IP2 RISK REDUCTION PROJECT SELECTION

Stuart described how the formulation of nonstructural changed in IP2. Originally, nonstructural was based on present day flood risk. In IP2 project selection, nonstructural is based on the Year 30 flood risk. Areas that are protected by structural risk reduction projects are assumed to be exposed to less risk so their participation rate is lowered in the Planning Tool. The Planning Tool tested options to select the participation percentage and the type of risk reduction project that is most beneficial for an area. In IP2, nonstructural is seen to have a larger impact on risk reduction due to the higher elevation

standard.

CLOSING AND NEXT STEPS

- CPRA will provide a draft CAT Meeting #15 KOM for CAT members to review along with presentation slides and a copy of the CAT ground rules.
- Public facing Community Conversation meetings will continue through December. Please check CPRA's website for the most up to date information as dates are added.
- CAT Meeting #16 will be held on December 15th in-person in Baton Rouge.

CAT MEETING #16 KOM

DATE: 2022-12-15

RE: COASTAL ADVISORY TEAM MEETING #16 KEY OUTCOMES MEMO

MEETING PARTICIPANTS

Dwayne Bourgeois (NLLD), Ron Boustany (USDA-NRCS), John Ettinger (RESTORE Council), Craig Gothreaux (NMFS), Quin Kinler (USDA-NRCS), Scott Kirkpatrick (Coast Builders), Cassidy Lejeune (DU), Greg Linscombe (LLA), Simone Maloz (MRD), David Muth (NWF), Natalie Snider (EDF)

CAT MEMBERS NOT PRESENT

Sam Bentley (LSU), Joey Breaux (LDAF), Brady Carter (LDWF), Chett Chiasson (Greater Lafourche Port Commission), Tokesha Collins-Wright (LCA), David Cresson (CCA), Quenton Fontenot (Nicholls State University), Pat Forbes (OCD), Karen Gautreaux (TNC), Michelle Gonzales (Jefferson Parish), Brad Inman (USACE), Patrick Landry (DOTD), Keith Lovell (DNR), Tim Matte (St. Mary Levee District), Michael Miller (Associated Branch Pilots), Spencer Murphy (Canal Barge Co.), Sharon Osowski (EPA), Ronnie Paille (USFWS), Kimberly Reyher (CRCL), Brad Robin (Oyster Task Force), Robert Twilley (LA Sea Grant), Patrick Witty (LED)

ADDITIONAL PARTICIPANTS

Bren Haase (CPRA), Greg Grandy (CPRA), Charles Sutcliffe (GOCA), Russell Caffery (GOCA), Tyler Bosworth (CRCL), Alisha Renfro (MRD), Emily Vuxton (TNC)

ABOUT THIS KEY OUTCOMES MEMO

The Master Plan Team has prepared and distributed this Key Outcomes Memorandum (KOM) to all CAT members as a summary of Meeting #16. The purpose of the KOM is to outline key decisions and areas of emerging agreement, issues discussed and topics requiring future deliberation, and next steps. The KOM does not serve as a meeting transcript and will not typically attribute comments or

suggestions to specific individuals.

While the Master Plan Team believes this is an accurate and complete summary, CAT members are asked to closely review the document. If you feel that essential points are misrepresented, **please respond to Mady LeBlanc** (Madeline.LeBlanc@la.gov) **with your specific suggestions for revision of the KOM by February 24, 2023**. The Master Plan Team will review and integrate any proposed edits received and produce a final KOM, which will serve as the official summary of the CAT meeting.

MEETING SUMMARY

INTRODUCTION

Bren Haase welcomed everyone and reviewed the Master Plan progress as well as the timeline of the upcoming draft plan process. Bren recognized Quin Kinler for his service in coastal programs and his participation on the CAT throughout the master plan's history and congratulated him on his retirement.

Stuart Brown thanked CAT members for their ongoing participation, critical feedback, and thoughtful input in the process of developing the master plan. Stuart reviewed the agenda and requested that meeting materials not be shared widely outside of the CAT membership as information is still draft.

Eric White discussed Old Business providing an update on the diversions, future without currently funded projects (FWOCFP), and the Master Plan Data Viewer (MPDV). Eric confirmed the MPDV will likely be updated quarterly with data and new capabilities, so that all of the intended functionality for data download and interaction will be available by the end of 2023. Ashley Cobb provided a recap of the recent Community Conversation outreach and thanked MRD and the community partners for their role in making the meetings a success by notably bringing a new audience to participate in the master plan process.

The following items were discussed:

- The 8 community conversations, which welcomed 349 attendees in November and December, identified concerns that informed the regional section of the master plan document.
- Simone Maloz reviewed the community conversations from MRD's perspective, noting how much was learned on all sides, the detail of the notes taken, and that MRD will follow up with the attendees as the master plan process continues. She also remarked on the usefulness of the MPDV.

2023 COASTAL MASTER PLAN PREVIEW

Denise Reed previewed the 2023 Coastal Master Plan document and discussed the structure of the document and updates to graphics.

The following items were discussed:

- The location of photos included in the plan and how they relate to CPRA.
- Confirmed that the public hearings for the master plan and annual plan will occur at the same time; the Atchafalaya Basin Program may also be included.
- Fewer copies of the 2023 plan will be printed compared to 2017 and the PDF available online will be able to be printed and searchable.
- A separate executive summary will accompany the final draft and can be translated and used for outreach, both public and legislative.
- Most high level appendices will be released with the draft plan and more detailed attachments and supplemental material will be added over time. Fact sheets will be available in mid-January.
- Clarifications were made about which projects are included in FWOA and therefore are not included in the 2023 project map.
- Confirmed that Hurricane Ida is discussed in the plan's regional section.
- Confirmed that a funding write up is included.
- CAT members remarked that they liked the diagrams and graphics and that the timeline graphic is useful. Members suggested that the project type diagrams would be helpful in the executive summary.
- Clarified that IP1 and IP2 are distinguished in the project list but not in the project map. The MPDV lists when a project would go online.
- Project benefits in the coastwide map are due to the interactions of all projects but the project fact sheets will show the benefits of the individual projects.
- Russell Caffery reviewed the process for meeting with legislators to review the master plan. He will contact every member of the legislature before the committees meet; key members will get a preview and the committees will get a heads up.
  - The master plan and annual plan will be separate but concurrent meetings.
  - The master plan will go to the legislature at the end of April after the CPRA Board meeting and approval.

MASTER PLAN BY THE NUMBERS

RESTORATION

Stuart reviewed the highlights and outputs of the master plan analysis and the projects included in the 2023 Coastal Master Plan.

The following items were discussed:

- Discussed details of the number of projects by type, highlights of the upper basin diversion program, and the inclusion of dredging.
- Fewer ridge restoration projects were selected than in previous plans due to a change in the Planning Tool for robustness.

- A CAT member asked whether ridge restoration could be considered programmatic in the future. Stuart posited that this would open up the entire coast to restoration in ways we might not want.
- Programmatic projects (Barrier islands restoration, small-scale hydrologic restoration, oyster reefs, shoreline protection) are in the master plan.
- Review of the new landbridge project type – it is a larger feature with hydrologic control that involves building in deeper open water and includes costs of maintaining existing channels.
- Clarified that integrated projects include multiple project types – landbridges are a type of integrated project.
- Members suggested that the project type by the numbers graphic would be easier to evaluate if it was sequential.
- Restoration project benefits were discussed with FWA land change maps for each scenario and by decade. Projects that inform land gain in specific areas were discussed.
- Model improvements influence the effects projects have on the landscape and include improved assumptions and process changes.
  - 2017 and 2023 plans are not directly comparable due to the model updates and the inclusion of major restoration projects in the FWOA condition.
- Confirmed that many of the most effective projects from 2017 are being built.
- Land change numbers do not capture programmatic projects or the upper basin diversion program.

RISK

The master plan risk outcomes were discussed and flood depth and flood depth differences in the higher and lower scenarios at Year 20 and 50 were reviewed. Expected annual structural damage (EASD) and expected annual damage in dollars (EADD) maps were presented as well as difference maps for Year 50 for both scenarios.

The following items were discussed:

- The current configuration of Morganza to the Gulf is included in FWOA and benefits shown are just due to the increase in elevation associated with the final project.
- In the Chenier Plain we see risk reduction that is solely attributable to the restoration projects in that area. In the Lake Charles and Sulphur Areas EASD and EADD are reduced by 17-18% at Year 50, a reduction of tens of millions of dollars in EADD in the lower scenario (compared to FWOA, not current conditions) and a similar pattern is seen in the higher scenario.
- Levee costs in the master plan analysis account for the full cost of the project, not just the non-federal cost-share.
- Nonstructural risk reduction is considered programmatically in the 2023 plan due to

concern over potentially creating a situation where a community is excluded from funding if it is not specifically called out. CPRA does not want to preclude communities from having access to funding.

- CAT member question about alternative risk reduction project alignments and formulation:
    - USACE's South Central Study identified nonstructural as the preferred alternative, while the MP selected structural projects.
        - Stuart noted that nonstructural is still consistent with the Master Plan and CPRA plans to partner with USACE to implement these projects as they are likely the best near-term alternative to reduce risk in the area. However, we want to keep the structural projects in the plan because we do see that need increasing rapidly toward the out-years of the 50-year analysis.
    - In the MP process we are evaluating project concepts which can change as those projects move through feasibility studies and engineering and design. The goal is to reduce flood risk. Even with slight changes in project alignments benefits will be similar. The projects will still be consistent.

NONSTRUCTURAL

In 2017, nonstructural projects were defined, evaluated, and selected (or not selected) at the "Risk Region" scale. This approach potentially precluded areas not specifically named in the plan from having access to certain funding sources. For the 2023 plan, CPRA recognizes that nonstructural damage mitigation is often carried out at a highly localized level through a number of different state and federal programs, and that its effectiveness is highly dependent on local participation that may not be well characterized at the scale it is being evaluated in the predictive models. With this in mind, nonstructural projects are considered coastwide and are programmatically consistent. This means that the plan does not identify individual communities as 'selected' or not selected.

The following items were discussed:

- Clarified that the net values do not tell the regional story; numbers will be reported out on the regional, parish, and community fact sheets.
- Clarified that CPRA is not providing a cumulative dollar value for risk reduced (e.g., $x investment prevents $y in damages *over* the next 50 years) because such a calculation may be misleading due to assumptions about discount rates and inflation in our analysis
- A CAT member asked if CPRA has a record of money that has been put towards nonstructural already.
    - Greg Grandy confirmed that CPRA has a 35% cost share for Southwest Coastal with 28 houses lined up to participate.
    - CPRA is also partnering on a Jefferson Parish Nonstructural Pilot initiative,

where CPRA is providing the nonfederal cost share..

- 4-5 parishes are working towards initiating nonstructural efforts through the Louisiana Watershed Initiative (LWI), Calcasieu is one of the first parishes requesting money for different programs. LWI has a lot of money through the HUD CDBG program to parish level applicants with regional or state level input. A CAT member suggested LWI look into a state grant match program especially for underprivileged communities – this is a primary goal of HUD's CDBG program.
- A CAT member asked if nonstructural is being tracked for all programs; confirmed not yet but LWI is working on this.
- Bren Haase discussed the momentum gathering behind a conceptual levee in the southwestern portion of the state. This came up after all of the storms; the goal for the structure is not clear but CPRA has said we will work with them to look at it in the future.

EXPLORATORY ANALYSIS

Stuart Brown reviewed exploratory analyses that have been and will be conducted. Some results can currently be found in the regional sections of the master plan draft document. The following items were discussed:

- Wind fields from historic storms were modeled, using ADCIRC and CLARA, on the current landscape and 50-year lower scenario landscape were run. Examples of Hurricanes Rita and Ida were presented.
- Plan to use historic storms and flood depths observed to put return intervals/exceedance probabilities into context people can relate to for specific areas. E.g., Hurricane Ida may have produced 1% flood depths in one area and 10% for another area.
- Coastal forest analysis boundary condition comparison was discussed. Coastal forested swamp reduction would result in greater flood risk in Gonzales, Prairieville, and Sorrento areas. This shows the value of coastal forests for attenuating storm surge.
- Confirmed high tide flooding (HTF) analysis will be an attachment to the master plan. It uses the lower scenario sea level rise curve together with modeling results of water levels across the coast instead of NOAA bathtub options because those approaches do not accurately reflect water levels across the Louisiana coast. HTF is evaluated for 8-9 communities tells a compelling story under the lower scenario that would be exacerbated under the higher scenario for landmarks, drive time, etc. and shows how routes are effected looking at roadway elevations and high ground.
  - CAT feedback to look for a more straightforward way to list timing on fact sheets (not in weeks) that is still accurate.
  - A CAT member noted that the line shown makes it look like you would have water in the landmarks shown (the church for the Mandeville example).

- - Current elevation standards should not be included in the diagram.
    - A note was also made that flood zone does not necessarily mean tidal flooding and this could cause confusion.
- Environmental scenario uncertainty was discussed. The many factors involved in environmental scenarios can be correlated and connected. There are uncertainty scenarios across 32 different runs that hold variables constant to assess the sensitivity to certain environmental scenarios.
    - There is not sensitivity on the coastwide scale for precipitation but there is a small impact in predicted land area in the Chenier Plain. Evapotranspiration has similar results.
    - Can be put in map form to see areas in which we are confident in land results across variables and other areas where it is sensitive to different variables.
    - Further analysis is forthcoming.

2023 THEMES AND TALKING POINTS

Stuart discussed high level talking points for the 2023 Coastal Master Plan:

- The plan is about people.
- The master plan is a prioritization effort.
- The plan is built on world class science and engineering and the process ensures adaptive management.
- Illustrates how people and communities will experience a changing coast to allow preparation and adaptation into the future.
- A CAT member noted the advancement from 2017 in engagement with the public and focus on people.

What is new for 2023 was discussed:

- Regional approach.
- Illustrating how the coast is going to change with the data viewer and storylines.
- Robust plan.
- State-of-the-science tools and data.
- Nonstructural risk reduction strategies are considered coastwide.
- Master plan principles and examples of them within the document was skipped due to time constraints but can be found in the slides.

CLOSING AND NEXT STEPS

- CPRA will provide a draft CAT Meeting #16 KOM for CAT members to review along with presentation slides and a copy of the CAT ground rules.

- The Draft 2023 Coastal Master Plan will be released January 6th, 2023.
- Many supplemental materials available January 6th, more to be added throughout the spring.
- The Master Plan Data Viewer will go live on January 6th.
- MRD to send email with relevant dates to public meeting attendees.
- Master Plan/Annual Plan Public Hearings will begin late January 2023.

CAT MEETING #17 KOM

DATE: 2023-03-30

RE: COASTAL ADVISORY TEAM MEETING #17 KEY OUTCOMES MEMO

MEETING PARTICIPANTS

Jenny Byrd (EPA), Craig Gothreaux (NOAA), Elizabeth Jarrell (USACE), Sara Krupa (DNR), Greg Linscombe (LLA), Simone Maloz (MRD), David Muth (MRD), Theron Phillips (LDAF), Natalie Snider (EDF), Patty Taylor (EPA), John Walther (CCA).

CAT MEMBERS NOT PRESENT

Sam Bentley (LSU), Dwayne Bourgeois (NOAA), Ron Boustany (USDA-NRCS), Joey Breaux (LDAF), Brady Carter (LDWF), Chett Chiasson (Greater Lafourche Port Commission), Tokesha Collins-Wright (LCA), David Cresson (CCA), John Ettinger (RESTORE Council), Quenton Fontenot (Nicholls State University), Pat Forbes (OCD), Karen Gautreaux (TNC), Michelle Gonzales (Jefferson Parish), Brad Inman (USACE), Scott Kirkpatrick (Coast Builders), Patrick Landry (DOTD), Cassidy Lejeune (DU), Keith Lovell (DNR), Tim Matte (St. Mary Levee District), Michael Miller (Associated Branch Pilots), Spencer Murphy (Canal Barge Co.), Sharon Osowski (EPA), Ronnie Paille (USFWS), Kimberly Reyher (CRCL), Brad Robin (Oyster Task Force), Robert Twilley (LA Sea Grant), Patrick Witty (LED).

ADDITIONAL PARTICIPANTS

Greg Grandy (CPRA), Charles Sutcliffe (GOCA).

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MEETING SUMMARY

INTRODUCTION

Stu Brown welcomed everyone and went over the agenda.

LEGISLATIVE PROCESS

Greg Grandy reviewed the legislative process for the 2023 Master Plan.

The following items were discussed:

- Submission to legislature. The 2023 Coastal Master Plan and the Annual Plan will go to the following committees
    - Senate Natural Resources.
    - House Natural Resources
    - House Transportation Highways and Public Works
    - Senate Transportation Highways and Public Works
- The process will move relatively quickly. Russell Caffery will keep us up to date.
- Outreach efforts have been continuous since draft release. Meetings with officials were held before public meetings as well as individual meetings with those who weren't able to come and reached out for information.
- Outreach will also occur at Coastal Day.

PUBLIC COMMENT FEEDBACK

Stuart Brown reviewed feedback received on the draft master plan.

The following items were discussed:

- Official public comment period opened January 6th and went through March 25th. 4 public hearings were held as well as additional meetings and informal conversations with elected officials, stakeholder groups, and individuals. Over 500 printed plans were provided, 6,600 unique users accessed the online plan. The Master Plan Data Viewer (MPDV) received 1,800

unique views (60,000 total views) with an average engagement time of 4 minutes and 29 seconds.

- Received 209 public comments – 47 at public meetings and 162 via email web form or mail. The majority were supportive, and included critiques and feedback on revisions to the 2023 draft and improvements to the process as we look forward to 2029.
  - Comment length ranged from a few words to 9-10 pages.
- Common themes of comments:
  - Shoreline protection and risk reduction in the Chenier Plain – 40 comments on this. 100% of comments from Chenier Plain said they want rocks or shoreline protection. This was addressed in plan in the "About the Chenier Plain" section. CPRA is committed to working with the Chenier Plain on developing project concepts and using the master plan tools to evaluate. In the near-term, communities and residents need to take advantage of nonstructural programs.
  - Ridge Restoration – the Planning Tool prioritizes land area, so a ridge with a relatively low footprint and built on existing ridges isn't prioritized, but they are relatively cheap and popular and provide unique habitat benefits. Four Ridge Restoration projects were added to the plan between draft and final:
    - 232 – Pecan Island Ridge Restoration ($20M)
    - 231 – Cheniere au Tigre Ridge Restoration ($26M)
    - 340 – Lower Bayou Petit Caillou Ridge Restoration ($3.3M)
    - 054 – Bayou LaLoutre Ridge Restoration ($26M)
    - These are the only projects added between draft and final, which brings the project number to 65.
  - Managed retreat/smart planning – Louisiana Watershed Initiative (LWI). Added a section on managed retreat and a FAQ that CPRA is not going to tell you that you have to leave high risk areas. Does not answer all the managed retreat questions, but puts it in the context of nonstructural.
    - Multiple CAT members noted that the term "managed retreat" is not preferred. Consider other terms such as community-driven or community-assisted relocation.
      - The plan has gone to print so cannot be changed at this point but will be kept in mind for the future.
    - There is a LWI section in the plan. LWI is working to avoid offsetting benefits by building in risky areas. We are part of LWI, which was not clear in our communications. When LWI modeling is completed, we will be able to integrate with our storm surge modeling. LWI modeling is in the early stages of calibration.
  - Risk Rating 2.0 – This was not covered in the draft. A section has now been written with Dwayne Bourgeois.
  - Hypoxia – A section has been added as a result of a public hearing comment.
  - Additional revisions: technical fixes, photos, improvements for clarity.
  - Common Themes:

- Equity and environmental justice:
  - Expected annual structural damage (EASD) was developed toward that end.
  - Community demographic and characteristic data is available but proper use needs to be explored.
- Outreach and transparency of the master plan process
  - Goal is to meet with new people, saw broader coalitions than we have seen in the past, still need to push and improve in this area.
  - Reconsider timing of engagement. Don't want the public to feel they only have influence with submission of projects and public comment. Will discuss ways to improve. COVID limited this for the 2023 plan.
  - Many comments point toward using an LA SAFE consensus driven approach – not the direction the master plan will go.
  - A CAT member suggested posting updates of where we are with the Regional Workgroup (RW) and CAT process to keep the public informed. Could also have an outside consultant who monitors the meetings and puts out an approved summary.
  - Questions in emails about specific projects, etc. are answered by us regularly.
  - CPRA should do a better job of letting people know about better ways to consistently communicate – can ask anytime to meet with CPRA.
  - Greg brought up discussion of projects early in the process with people they effect: we did that with RWs. Stu and Simone thought that process worked well.
  - The RW process functioned well but it is important for the RWs to really understand the projects and discuss. Time to look at every project is a constraint.
    - We are thinking of doing a more scenario based FWOA analysis up front and bake that more into the framework of how we build the master plan. Could spend a lot more time with RWs going through that up front.
  - More can be done on the CPRA O&E end to have approachable discussions.
  - The Data Access Portal (DAP) is upcoming. Potentially could be used with RWs in 2029 for deep dives.
- Received comments that CPRA needs to address the causes of climate change. The plan has language about the need to reduce greenhouse gasses.
  - Some think CPRA should stop permits for emissions producing industry but this is not within CPRA's authority.

- Climate change is implicit in everything we do and all of our analyses. We are skipping that piece of assigning blame – that is the work of other organizations, not this document.

CONTINUED OUTREACH

Stuart and Krista Jankowski discussed communicating the 2023 plan.

The following items were discussed:

- Developing Executive Summary document – partnering with MRD to translate to Spanish, French, and Vietnamese.
- We are continuing to give presentations to groups.
- Partner with libraries to host master plan materials.
  - Simone Maloz and Charles Sutcliffe can help and can get the Climate Initiative involved as well.
- Provide trainings on MPDV for NGOs, other partners, the public.
  - MRD would like the MPDV post cards to put on tables for events.
- Present aspects of the plan at conferences: SOC, CERF
- The DAP will be used to facilitate data requests. Acts as a central location for data sets, provides select online data visualizations and image exports (by spatial units and variables), and allows for bulk data downloads.
  - Provide trainings on DAP for researchers, academics, and others who are interested.
  - Initial functionality will be read early summer 2023 and will continue to be built out with added functionality.
  - Only Future Without Action (FWOA) and Future With Master Plan (FWMP) will be available at first.
- CPRA still wants input even though the public comment period is over. If the CAT has additional comments or other ideas regarding outreach and engagement efforts as we look toward 2029, please submit them by email, phone, etc. We

CONTINUED ANALYSIS AND REPORTING

Eric White discussed ongoing modeling studies and reporting.

The following items were discussed:

- Lagniappe modeling analyses are still underway.
  - Exploratory analyses using risk reduction models:
    - Impacts of individual historical storms on FWOA and FWMP landscapes (Rita, Ike, Isaac, Barry, Ida)
      - Run from 2018 initial conditions – it is not the exact landscape of

storm, but a "Rita-like" storm, etc.
- Hurricane Katrina omitted due to fragility of levees/floodwalls being challenging to specifically reproduce.
    - Impacts of restoration projects on storm surge-based flooding.
    - Impacts of coastal forests on storm surge-based flooding.
    - Impacts of barrier islands on storm surge-based flooding.
  - Alternative environmental scenarios show what risk and landscape would look like if we realized a different sea level rise scenario.
    - Sensitivity/uncertainty under alternative environmental scenarios using "likelihood of land". Could be applied to the Planning Tool to evaluate benefits.
    - Around 30 scenarios being modeled (~10 have been processed thus far).
  - Uncertainty due to ICM model performance: performance statistics from model validation used to assess uncertainty over time (same approach used for the 2017 results).
  - Habitat suitability indices.
  - High tide flooding was paired to specific communities because data is needed to validate ICM. Goal is to expand the analysis but it is limited by the workload of analyzing elevations.
- Will be attachments to Appendix H.

2023 CAT RETROSPECTIVE/IMPROVEMENTS FOR 2029 DISCUSSION

Stuart opened the floor to discussion on the CAT process for 2023 and suggested improvements for 2029. Members were prompted to think about level of detail, meeting logistics, and approach.

The following items were discussed:

- A member noted that it would be important to also get this input from those not in attendance.
- Attendance could be easier with pre-planned meeting dates, although this can be difficult depending on the timeline of outputs.
- Suggestion to include a member of the Community Engagement Workgroup (CEW) on the CAT as a representative.
- There has been a gradual relaxation, people trust the process more and don't feel the need to attend every meeting.
- RWs changed the process, took from the CAT a bit.
  - CAT and then RW seems to be the right order of meetings for information flow.
  - RWs were set up for project development. Some were more engaged than others throughout the process.
  - Could have the RWs serve other purposes for the agency: meet with project managers with project updates – this could generate more interest in some areas.

> Would be a more general CPRA application of these meetings. O&E would need to be involved.

- Recommended to make a general calendar/outline of how long the 2023 process took and build out a CAT/RW calendar from there for the 2029 plan.
- MRD is available for outreach but needs content. Any diagram in the master plan can be sent as a standalone graphic for outreach. The executive summary will also be a helpful starting point.

CLOSING AND NEXT STEPS

- CPRA will provide a draft CAT Meeting #17 KOM for CAT members to review along with presentation slides and a copy of the CAT ground rules.
- The 2023 Coastal Master Plan will be submitted to the CPRA Board April 19th and then presented/submitted to Legislature following approval by CPRA Board.
- The final draft will be posted to the website on April 19th following board approval.