**Charge for Cook Inlet Modeling Working Groups**

The chart below was the result of the brainstorming session and discussion from Day 2. This chart lays out three model-focused working groups (the 2D and 3D circulation will be combined)

The team leads (listed at the bottom of the chart) are responsible for:

1. Selecting working group members and convening sessions or calls as necessary with assistance from AOOS staff.
2. Filling out the table below, including:
   1. What tasks are necessary to move models to operational status?
   2. What can we use for validation or “filtering”
   3. What value-added products could be produced
   4. What are the specific user needs
   5. What observations are needed to meet user needs and strengthen models
3. Discussing how existing models overlap, whether new models need to be produced, and how collaboration or complementary work can be accomplished.
4. Reporting back to the full working group during the May conference call

**Brainstorm Chart from Group Discussion**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Meteorological** | **Wave** | **2D Circulation** | **3D Circulation** |
| **Models** | UAA | TAMU-SWAN | ADCIRC -USACE | POM-WAD |
|  | NWS/ANC | NWS/NCEP - WWIII | EFDC- TAMU | ROMS-JPL |
|  | NWS/NCEP |  | Tide: TPX 6.0 | ROMS - UAF/PMEL/Rutgers |
|  | UAF |  | EnPAC 2003/UNC | CIOFS- ROMS |
|  |  |  | IOS/Foreman | FVCOM |
|  |  |  |  | NCOM, HYCOM |
| **Data Exchange** |  | Wind | HF Radar | |
|  |  | Satellite Sea level Ht | ADCP | |
|  |  | CDIP |  | |
| **Validation** |  | Buoy | Selected Hindcast Exp. | |
|  |  | Ship reports |  | |
| **Value-added Products** |  |  |  | |
|  |  |  |  | |
| **User Needs** | Delivery |  | Oil spill trajectory | |
|  |  |  | Larval transport | |
|  |  |  | Beluga locations | |
|  |  |  | Search & rescue | |
|  |  |  | Pollutant transport | |
| **Observational Data Needed** | Model improvement validation | Upper Inlet info |  | |
|  | Precipitation |  | Precipitation | |
| **Working Group Leads** | Peter Olsson/Jim Nelson | Vijay Panchang/Carl Schoch | Yi Chao/Kris Holderied/Carter Ohlmann/David Oliver/Dave Musgrave | |

(Note: thank you to Yi Chao for providing the conceptual framework of this chart for purposes of discussion)

**Collecting Ancillary Data Sets and Other Tasks**

The following data and information needs were identified in discussion, and were tasked to the teams below. These teams will work together to collect the information described.

1. **Bathymetry**: Compile existing bathymetry in Cook Inlet to come up with highest resolution and most up to date data set (Carl Schoch/Kris Holderied)
2. **Climatology**: Gather information on climatology for the region, noting what exists and what is missing (Rich Patchen and Changsheng Chen)
3. **Historical Database**: Gather a list of rich oceanographic data sets for Cook Inlet, including what it is, where its housed, the format it’s in, and the data steward, and how to access it (Darcy Dugan/Scott Pegau/Carter Ohlmann)
4. **Hydrology**: Find out existing information on hydrological models (line sources) and river gauges (point sources) from USGS (Darcy Dugan/Rich Patchen/Jim Nelson/Yi Chao)
5. **Satellite Data**: Can we get remote sensing information on to help us with waves? Contact GINA or other satellite Gurus to figure out what is available. (Steve Okkonen/Yi Chao/Gary Hufford/also Rachel Potter at UAF)
6. **Biogeochemistry Ecosystem Models and HABS Models**: assess what exists and how oceanographic models could be linked? (Kris Holderied)
7. **Ice** – what information is available on ice thickness and density? (Kathleen Cole, Vinny Catalan - CIRCAC)
8. **Sediment transport**: Compile existing and past work. What is the ability to model sediment transport assuming accurate current profiles are available? (Tom Ravens/Orson Smith)
9. **Framework and system for a Cook Inlet data exchange**: Facilitate the development of a web interface, data base, and data providers to populate the system. The system will also store data that would otherwise disappear. (Molly McCammon, David Oliver, Yi Chao)
10. **User/Stakeholder Input**: Identify the top 3 to 5 “super users” for meteorological, wave, and circulation modeling and forecasting. Acquire input on their specific observing and modeling needs, and what type of information products would be most useful. (Megan Murphy/Sue Saupe/Amy Holman)
11. **Brochures**: Create and distribute outreach materials on Cook Inlet and the modeling/forecasting/observing efforts. (Molly McCammon and Darcy Dugan)
12. “**State of Cook Inlet” annual report** (Carl Schoch, Molly McCammon and Darcy Dugan)
13. **Publications**: Develop a science plan, and coordinate the writing of scientific articles (Molly McCammon and Darcy Dugan)
14. **Process Study Suggestion Box** – *we anticipate* *the necessary process studies will surface subsequent to working group reports* (Carter Ohlmann)