

FINAL
CRCIP AMT Quarterly Meeting Notes
January 11, 2012

The CRCIP Adaptive Management Team held its quarterly scheduled meeting from 9:30 am – 3:30 pm on January 11, 2012 at the Robert Duncan Plaza. The following AMT members, technical support personnel, and invited guests participated in person:

Jessica Stokke, USACE	Rick Mraz, WDOE	Gretchen Smith, USACE
Greg Smith, USACE	Robert Anderson, NMFS	Steve Bartell, Cardno
Agnes Lut, ODEQ	Kathy Roberts, FWS	ENTRIX
Shyam Nair, E2 Consulting Engineers		

* By teleconference

The following topics were addressed by the AMT participants during the January 2012 quarterly meeting:

July and October 2011 AMT Meeting Notes

Revised July 2011 meeting notes and draft October 2011 meeting notes were provided to the AMT prior to the January 2012 meeting. The AMT approved both the July and October 2011 meeting notes. The final versions for July and October will be uploaded to the E2 CRCIP web site.

O&M and Project Mitigation Update

Jessica Stokke reported that navigation restrictions have been in place on the Columbia River since July 2011. Dredging required to address the restrictions are scheduled to be completed by the end of January 2012. Approximately 7.5 million cubic yards of materials were removed during 2011 O&M activities. This volume is less than the amount previously estimated for 2011 O&M. Dredging activities to address shoaling were principally focused in the Kalama area.

Mitigation activities continue at Webb. These mitigation actions include wetland restoration and the establishment of two extensive fields to support foraging by waterfowl. Maintenance mowing of the fields at Webb was completed for 2011.

Mitigation on Cottonwood Island has progressed with planting occurring in December 2011. GIS technologies were used to map the planting locations. In addition, a couple of years ago the Cowlitz Tribe introduced about 15 deer to the Island. Many were killed on the road however, with approximately seven still alive. Many of those seven have swam off the Island. The Julia Butler Hansen Refuge is planning to reintroduce deer to the Island, but in the meantime they are planning to test forage plots on the Island to see

which forage would best grow and appear most important in sustaining a local population. The USACE has provided \$250,000 for the 5-year project and Mark Dasso is the USACE project contact. The lead for the Refuge is Paul Meyers. The AMT expressed concerns that deer inhabiting the island would negatively impact the success of the December plantings. Greg Smith indicated that there should be a clause in the contract that holds the contractor responsible for ensuring the protection of the planting as a performance measure for the overall project. Kathy Roberts asked about the possibility of the AMT touring Cottonwood Island in relation to the mitigation activities. Greg Smith volunteered to look into this.

AEM Workbook 4th Quarter Review for 2011

The relevant components of the CRCIP AEM Workbook were discussed at the January 2012 quarterly meeting.

MA-1 CORIE Analyses

Additional CORIE data had become available since the 3rd quarter MA-1 analysis and presentation prepared for the October 2011 AMT. However, data gaps remain and the following describes the available CORIE data analyzed for the January 2012 meeting:

- cbnc3: temperature and salinity – not available August through October
- grays: temperature and salinity – available August through October
- tansy: temperature and salinity – available through August only
- woody: temperature – available August through October

The available data reflect the previous and current status of the CORIE stations required for the MA-1 analyses:

- cbnc3: redeployed as a buoy in July 2011; located 50 m from original; sample depth is 9 m relative to surface; not telemetered, data downloaded in October
- grays: operational
- tansy: not reporting since September (recording internally)
- woody: data gaps in October; not reporting since early November (recording internally)
- dsdma: not operating, not reporting (possibly recording internally, but nearing internal storage capacity)

The Desdemona (dsdma) station will likely remain out of commission, indefinitely, so a replacement station should be identified. Shyam Nair and Steve Bartell will examine opportunities to replace the dsdma station to support continued MA-1 analysis for the AEM Program.

Temperature

Daily median temperature values reported for the tansy station were near the 80th percentile decision criteria for the months of July and August, although values were more variable throughout August. None of the daily values exceeded the 95th percentile decision criteria. Daily median temperatures for the grays station were very near the 20th percentile decision criteria during July and early August; temperatures were slightly elevated but generally between the 20th and 60th percentile values through October.

Limited data were available for the woody station. Normalized temperature plots were developed for the tansy and grays stations based on these limited data. The additional data points determined for 2011 are well within the cluster of variability in the normalized data based on the pre-Project construction period for the tansy and grays stations. The data for the normalized grays station suggests some possible outlier values at lower temperatures. These values occurred during colder than previous January in both 2008 and 2009.

The monthly summary of the additional August 2011 temperature data confirmed that monthly values were within the 20 – 80 percentile decision criteria for the tansy station. Monthly summaries for grays through October 2012 also showed values that were within the 20 – 80 percentile criteria. The July monthly average value was equal to the 20th percentile decision value (18.0 C).

The post-Project construction CORIE data available through 2011 continue to suggest that the channel improvements did not have any measurable impact on water temperatures recorded at the MA-1 stations.

Salinity

Available salinity data for the 4th quarter assessment were similarly limited to the end of August 2011 for the tansy station and through October 2011 for the grays station. The daily median values through July and August for tansy indicated somewhat lower salinities with values mainly between the 5th and 20th percentile. Salinity values were somewhat higher towards the end of August, but well within the range defined by the 20th – 60th decision criteria. Daily salinity values during July – October 2011 analyzed for the grays station were highly variable, but within 20th – 60th decision criteria.

The monthly average salinity values for tansy for July (2.8 psu) and August (8.1 psu) 2011 were within the 5th – 20th percentile decision criteria of 1.6 – 3.8 (July) and 3.5 – 8.7 (August). The monthly average value for grays was essentially zero for July, between the 5th – 20th percentile values for August, and within the 20th – 80th percentiles for September and October.

The absence of data for the dsdma station did not permit the construction of normalized salinity plots for the individual CORIE stations.

The post-Project construction CORIE data available through 2011 continue to suggest that the channel improvements did not result in any significant saltwater intrusions at the MA-1 stations.

Depth

Depth data were available for the grays station through October 2011. Daily median depths were well within the previously established AMT decision criteria. The monthly average values calculated for July through October were within the corresponding 20th and 80th percentile decision values.

Extended Time-Series Plots

At the request of the AMT, Shyam Nair (E2) generated multi-year time series plots of temperature, salinity, and depth for stations the CORIE stations. These plots were presented at the January 2012 meeting and generally approved by the AMT. Future MA-1 presentations will include these kinds of plots depending on the availability of data.

The results of the January 2012 MA-1 analysis will be posted in the MA-1 folder of the AEM Workbook on the E2 CRCIP web site.

MA-2 Construction and Disposal of Dredged Materials

Final CRCIP construction volumes have been provided under MA-2 and presented in the 2010 Annual CRCIP AEM Report. Future reporting of volumes and placement of dredged materials will be in accordance with regular annual O&M procedures.

MA-3 Crossline Surveys

MA-3 activities were not scheduled for the January 2012 AMT meeting. No new information concerning MA-3 was presented.

MA-4 Habitat Analyses

Discussion of completing the MA-4 requirements during the January 2012 AMT meeting focused on developing a consensus approach to resolution of MA-4 activities given the inability to conduct the work as described in the original BiOp. Previous AMT discussion of MA-4 considered a series of increasingly detailed analyses and modeling in relation to possible Project impacts on salmonid habitat. Bartell had previously prepared a “strawman proposal” that attempted to capture the main points of previous MA-4 discussions. The AMT renewed the discussion of the proposal at the January 2012

meeting. The AMT agreed to solicit a proposal from Dr. Antonio Baptista to repeat the physical modeling of salmonid habitat capacity using updated information (e.g., comprehensive bathymetry survey results, juvenile salmonids habitat requirements). It was also requested that such an effort would include the literature surveys and data analysis described in the draft strawman proposal.

Bartell will re-draft the MA-4 proposal for discussion at the April 2012 AMT meeting.

MA-5 Sediment Contaminants

No new information for MA-5 was presented at the January 2012 AMT meeting. Testing of navigation channel sediments for contaminants is next scheduled for 2018.

MA-6 Fish Stranding

Discussions of fish stranding at the January 2012 AMT meeting addressed two separate but related MA-6 topics, which emanated from the October 2011 meeting: (1) initial results of internal USACE analysis of possible locations where beach nourishment or shallow-water habitat construction might reduce risks of fish stranding, and (2) external peer review of the Walt Pearson's statistical analysis of fish stranding. Jessica Stokke presented some initial analysis of river segments which might be locations where the potential for fish stranding could be reduced through shoreline or in-water placement of ongoing (i.e., navigation funded) O&M dredged materials. Locations with shallow slopes or submerged berms can be identified using several existing sources of information. In addition, shaping or removal of berms could also be explored for reducing fish stranding, but would require identification of separate funding sources. Stokke's analysis also identified other factors to be considered in identifying possible sites for placing dredged materials to reduce the potential for stranding, including proximity of dredged shoal, nature of the shoal in relation to dredge type, risk of re-shoaling into the navigation channel, and availability of alternative placement sites. Sources of data and information to address these factors are available. Stokke also pointed out potential environmental consequences of actions undertaken to reduce potential fish stranding through placement of dredged materials. These effects include impacts on benthic communities, creation or loss of shallow water habitat, impacts on riparian areas, and impacts on fish use of modified areas. Actions undertaken to reduce fish stranding might create habitat for piscivorous terns or the streaked horned lark. As a result of these initial analyses and discussion, the AMT suggested that Regional Sediment Management program might address beach nourishment as a means to reduce fish stranding.

Stokke will continue these kinds of stranding analyses for other selected river locations and report the results at the April 2012 AMT meeting. Information that summarizes the approach used in the initial analysis was provided in outline form via a handout provided to the AMT at the January meeting. An electronic version of the handout will be uploaded to the E2 web site as supporting information for MA-6.

The second component of the MA-6 discussions of fish stranding focused on obtaining external peer review of the statistical model and analysis provided by Dr. Pearson, which have been reported and documented in previous AMT meetings during 2011. The AMT addressed the requirements of such an external review, potential reviewers, and the nature of the review product. Discussion of the external review identified the following topic areas to be included in a draft request for proposal: model derivation and structure, underlying assumptions, supporting data and model parameter estimation, navigation scenarios addressed by Dr. Pearson, accuracy of inferences and conclusions concerning required sampling and statistical power described in Pearson's report, and recommendations for future studies or analysis of fish stranding. The proposal will be communicated as an official letter originated by the USACE on behalf of the CRCIP Adaptive Management Team. Bartell was tasked with drafting a request for proposal to be examined by the AMT prior to the April 2012 AMT meeting. Bartell will incorporate changes and modifications and produce a revised RFP for discussion at the April meeting. Meantime, the USACE will explore possible contracting mechanisms in anticipation of identifying a qualified reviewer and executing the review. Once awarded, the AMT suggested such a review might be completed within 1-2 months. As discussed previously by the AMT, the results of the external review will help guide the completion of MA-6 activities in relation to the CRCIP AEM Program.

April 2012 Agenda Items

The following were identified as items for the April 11, 2012 AMT meeting:

- Continued discussion of post-construction MA-4 activities
- Progress report on continuing USACE internal analyses of potential river locations for beach nourishment in relation to MA-6

The January 2012 AMT meeting adjourned at 3:30 pm