Climate Change and Water Working Group Science to Engineering Applications in Watersheds Workshop, Seattle, WA, 2015
Summary comments from Group 3 across all natural theme areas

Group 3 included representatives from Federal water management agencies, EPA, and native tribes in the Pacific Northwest. The common discussion points from this group over all the targeted breakout sessions were these:

- **Translating science:** This was the most frequently addressed point. The group was impressed with the range of products and progress made by CCAWWG agencies in the time since the 2011 LT Doc and emphasized that many of those products could have a wider penetration in the community with added science transfer and translation. The group also emphasized that the transfer and translation was in each direction: the users/managers communicating their decisions needing climate science and climate change information, and the developers/producers communicating what science is available and planned for the new future which could inform those decisions.
- **Integrating modeled outputs and other information for analysis of effects in the intersection of riverine and murine/coastal areas**: CCAWWG seems particularly well placed to lead at least the communication of this substantial gap in knowledge and in implementation techniques. One example was inland riverine flooding from persistence of storms following a coastal storm.
- **Evaluating and communicating model performance along the entire model chain:** Practitioners repeated expressed the need to know more about the confidence and limits to models in the chain from GCM to impacts, how uncertainties interact along that chain, and how evaluation of all models in that chain can best be done and communicated.
- **Preserving and expanding observation networks**: Models are absolutely essential to describing the problems and forming and testing possible solutions, but progress is only made when the model and the observations both develop over time.
- **Integrating ecological (really all non-hydrologic) modeling and analysis with the hydrologic modeling and analysis CCAWWG has emphasized since the 2011 LT Doc:** Group 3 attendees were impressed with the scale and variety of progress on questions related to physical hydrologic models and processes, and thought now is time for a push to better integrate with the more biological and ecological impacts work where those models and processes are needed. Some representatives noted that this emphasizes the need for improving the community understanding of ecological responses and thresholds under current and projected changed future climates. This common point related closely to both the translating science and the evaluating along the entire model chain points above.