

Review of the Design and Implementation of an Economic Analysis to Support Marine Spatial Planning in Washington, Proposed Scope of Work. The review was based on the document from Cascade Economics dated October 15, 2014, and a conference call with Cascade Economics on October 17, 2014.

Reviewer:

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For this review, the scope of the project and the economic effects chosen for analysis were not assessed as they were determined by the State of Washington and WCMAC. The review focuses on the underlying scientific methods proposed in the document, and how the results may be used to address specific issues or questions. The review findings are given below, in no particular order.

- The proposal contains three major types of analysis: documenting current conditions, trends in the coastal and tribal communities, and regional economic impact estimation. The proposal covers the major important sectors of the coastal economies. Thus, results from the analysis should provide a useful understanding of the coastal communities and their economies.
- The proposal uses standard and established methods to estimate regional economic impacts. There are three levels of possible analysis that increase in the complexity of the economic modeling and the effort placed on data collection. These levels are broken out in a logical way based on the resources required to do each level. Level I is a basic analysis using primarily existing information, models and data. Level II uses purpose built models in IMPLAN with a finer spatial resolution and a modest amount of primary data collection. The data collection would inform both the economic impact model and the discussion of existing conditions. Level III develops a more complex regional economic impact model, and has a significant amount of primary data collection. As in Level II, the data collection in Level III informs both the regional economic impact model and the description of the existing conditions.
- It would be beneficial for the proposal to include a discussion of what is gained by moving from Level I to Level II, and from Level II to Level III. The current proposal details the differences in the types of analysis and data that would be used, but does not fully explain how or whether the different levels map to better models in terms of the scope or accuracy of the analysis. This type of information would likely benefit non-specialists who may not be familiar with what is gained in a practical sense by moving up from one level to another. It is cautioned that more detail and a more complex analysis effort may not necessarily lead to a better decision making document. Some factors include: 1) whether the results more accurate; 2) would the additional detail or complexity affect decisions; and 3) the cost versus reward. As a reviewer of the document it is difficult to provide this guidance since the proposal does not contain information specific enough to address these issues. There are a few exceptions to this as noted below.
- The analysis will use 20-year forecasts. The final report should carefully explain the uncertainty associated with such forecasts and detail the major sources of likely error. Where possible it would be useful for the analysts to provide ranges of forecasts. For instance, some of the base forecasts will likely be from published sources and include population trends, climate change and economic growth. If forecast ranges or measures of uncertainty are available, that

information should be carried through the analysis to provide a greater sense of the variability in the final economic impact estimates. In other cases the uncertainty should be discussed in the text.

- If primary data collections are selected as part of the scope of the project, standard and documented methods should be used. For instance, if key informant interviews are undertaken to adjust RPCs, the documentation should include how key informants were selected, the number of interviews attempted, the number of interviews completed, how the data were summarized, and measures of variability. The document should also include the survey instruments that were used.
- As the information and data gathered as part of the work could be used in subsequent analyses at a later date, it would be useful if that data were made available to the State of Washington and fully documented.
- At this point in the formation of the analysis it is not known what spatial resolution will be used to define separate regional economies. For decision making it may be useful to have a relatively fine resolution such as a county or a zip code. However, supporting a resolution at a relatively fine level may be challenging since much of the baseline data and forecasts are at a higher level. The analysts should clearly articulate when finer resolution is meaningful in terms of better estimates versus somewhat artificial (i.e., more detailed but not more accurate).
- Under the Level III approach information will be collection about the proportion of recreational participants who are local residents. Such information is important for the accurate assignment of economic impacts since expenditures from local residents may simply shift between alternative local activities.
- The final report should clearly explain which of the economic effects would change at the local level versus the state level. Although the focus of the study is the estimation of local economic impacts, some, or perhaps many, of the impacts may not be relevant or as large when the study area is expanded to the state as a whole. This is because as the study area expands geographically, increasing more of the substitute activities are captured, especially in regard to recreational activities. For example, if coastal recreational opportunities are decreased by some action, individuals will likely decrease their expenditures on coastal recreation. The question then is what the individuals do with those expenditures instead. Some fraction will be spent on alternative activities within the coastal economies, some another fraction may be spent in non-coastal economies within the state. From an economic impact perspective the coastal economy would be worse off, but the state level economic impacts may not be affected as much. It is important that policy makers understand this when reviewing the results of the study.
- The proposal's scope does not include a cost-benefit analysis that examines the net benefits to individual living in the coastal communities or other residents of the state. If an additional level of analysis were to be included in the proposal this would be a logical inclusion since it is a preferred measure of whether and to what degree alternative policies would make individuals better-off or worse-off.
- The final report from the analysis should explain the strengths and weakness of the analysis. It should also include an assessment of next steps that would strengthen the analysis.