

Independent Economic Analysis Board Meeting Notes

December 17, 2013

Members Present	Members Absent	Guests
Roger Mann		Tony Grover
Bill Jaeger		
Noelwah Netusil		
JunJie Wu		
Dan Huppert		

1. *Greetings and Introductions.*

Chair Roger Mann welcomed everyone to today's meeting of the Independent Economic Analysis Board, held December 17, 2013. This was a face-to-face meeting. The following is a summary (not a verbatim transcript) of the topics discussed and decisions made at this meeting. Anyone with questions or comments about these notes should contact Tony Grover at 503-222-5161.

2. *Discussion of IEAB Membership/Upcoming Vacancy.*

Grover said the IEAB has an upcoming vacancy, with Dan Huppert tendering his resignation from the group. He asked the members to discuss balancing their workload over the next several years, as well as the skill-set they're looking for in a new member. I would then like to take that recommendation to the Council, he said, and we can then recruit for that. We can also discuss the right way to vet that person, he said – whether we should ask an outside group to vet them, or allow the IEAB to vet them.

3. *Discussion of Future IEAB Tasks.*

The group devoted the majority of today's meeting to a discussion of upcoming issues and potential IEAB tasks. Grover mentioned that a relatively simple tagging study has been proposed; basically, the question is, does it make more sense to PIT-tag more fish, or to install more detectors? That will presumably take into account the latest discussions about PIT tags, Grover added — I would say it is quite likely to be tasked to the IEAB in the near future.

The Council has also discussed the notion of ecosystem services, Grover continued — that's something the ISAB is very interested in looking at, but it won't be easy for them to do so without the services of this group. What is the focus of that study? Jaeger asked. Essentially, what it boils down to is, what is the societal value attached to valuing ecosystem services, Grover replied.

The group devoted a few minutes of discussion to the first study Grover had mentioned; in response to a question from Mann, Grover said he sees the PIT tag study as a non-linear, rather than linear, analysis. Geographic efficacy is one question; biological efficacy is another — are detection rates high enough, and mortality low enough, to provide valid, useful results. It's actually quite interesting, and more complicated than it might first appear, Jaeger said. For juveniles, detection probability is the key. I actually started to look at the question of how best to increase detection probability during the fish tagging study through sensitivity analysis; what I found was significant variation from location to location. When I ran the sensitivity analyses, I changed the detection probability, and what I found was that it will be very expensive to increase detection probability. As it turned out, for many of the fish, adding detectors and reducing the number of fish tagged didn't save anything because you had already tagged more than enough fish to ensure an adequate number of detections when the fish returned as adults. In other words, increasing detection probability was not a binding constraint, so you didn't gain much, Jaeger said. Where that approach might yield more useful results is for specific species, on specific tributaries or reaches. It's very location- and species-specific.

There are also a number of other emerging complicating factors, Grover said — for example, a recent Corps study that found that 30 percent of the tags that pass through the gullet of an avian predator become non-functional. What does that do to your statistical validity, if you're trying to determine where your predation or dam passage mortality occurs? he asked. Another complicating factor is how many fish are spilled, because those fish go around detectors, Grover said. There are some proposals to increase spill dramatically, which could undermine the entire PIT-tagging infrastructure. Spillbay detectors have been a will-o'-the-wisp for many years, he added — the installation of spillway detectors would have to be done perfectly in order to avoid turbulence and increased erosion of those concrete structures, which makes the Corps incredibly nervous.

The real point is to look for the bottlenecks, as Bill was suggesting, in order to maximize detection efficiency, Grover said. Is there a specific example of a case where they're debating whether to tag more fish, or install more detectors? Mann asked. One pretty good example would be Snake River sockeye from the point of release to the first dam they encounter, Grover replied — that's a 700-mile reach, from point of release to Lower Granite dam. That's the first place they can be detected by a PIT-tag detector. There is mortality occurring before they reach the dam, and additional detection might shed some light on where and how that mortality is occurring.

What other issues are we going to be asked to look at? Mann asked. There are many, many recommendations we're going to be asked to look at in this Fish & Wildlife Program, Grover replied. One is to update and modernize the entire monitoring and evaluation system for the Columbia Basin. Another is to set very clear objectives for many different species and ecosystem functions — to identify what our priorities need to be. That's certainly a place where economics will play a much bigger role than it has in the past. That relates to the ecosystem services question, Wu observed — it gets to the question of, how do we measure ecosystem services accurately? How do we make decisions under uncertainty? I agree, Grover said — it will help us to define which ecosystem services are most important.

Mann noted that the Council's own MERR process addressed many questions related to monitoring and evaluation. The MERR process is ongoing, Grover said; it has planted a number of seeds throughout the region with respect to the evaluation of investment or degree of effort vs. risk. What we've found is that the vast majority of the RM&E investment in the basin falls into the low-risk, low-expense category — there is some resistance to shelling out the money that

will tell us what's really going on in the basin. The question is, are we putting enough money into the high-risk, potentially high-reward category? The classic case is quagga mussels — if they get established in the basin, that's a huge risk to everything we're doing, but we're not putting a lot of money into the prevention effort.

The group discussed the feasibility of developing an analysis that would assess which species or reaches have now received enough attention — in other words, are there reaches or populations for which enough data has been collected to provide a relatively complete picture of survival, mortality etc. That would be immensely helpful in terms of providing direction for future RM&E efforts, one participant observed. I think that, coming from an authoritative body such as the IEAB, that type of analysis could be incredibly useful, Grover said. We have a ton of Hanford Reach chinook and Snake River fall chinook coming back, for example, yet there is a very intensive RM&E program still ongoing on Snake River and not Hanford Reach populations. We all understand that there are also political considerations, with the tribes and other entities, Grover said; however, what it really boils down to is, are there places in the basin where we could reduce the intensity of our RM&E efforts, and devote those resources to other areas where less is known, or the populations aren't doing as well? We desperately need that kind of perspective, Grover said — the only voices the Council currently hears are from people who have a stake in the outcome. You don't, and if you were interested in taking that on, I would certainly push that task hard with the Council.

The discussion then turned to the question of how the region might establish priorities, in the general absence of hard data on the performance of specific measures, such as habitat restoration. Ultimately, Grover asked the IEAB to rough out a task looking at what it would take to provide useful information to the Council on the priorities question over the next three to four months, in time to help inform the draft F&W Program, which is expected to be ready some time in April. Sort of a review of the proposed Program, Grover said — are we focused on the right questions? Are there economic valuation considerations we should be looking at? Are there significant gaps? Are there areas of risk or opportunity that we're overlooking? I think that would be really useful, if the IEAB is interested, Grover said.

We would need to do some review and research, looking at the MERR program and other resources, in order to assess what we might be able to tell the Council with any validity, Mann said. It's obvious to me that the Fish & Wildlife Program has done an excellent job of encouraging recovery for some species, and a lesser job of encouraging recovery for others, he observed. It should be possible for us to say, let's reduce our focus on the populations that are doing well, and focus our efforts and resources more intensely on the populations that need more help. Wu suggested that some well-targeted case studies might be one approach to such an analysis. Netusil noted that economists work best when they have a list of objectives and priorities to evaluate — are we perhaps too early in the process? I think we may need the IEAB's help in order to develop such a list of priorities, Grover replied.

Mann observed that it should be possible to suggest some economic principles that would help to inform a discussion of priorities. He asked whether there are any other areas of research Grover had in mind for the IEAB. There are a thousand potential areas, but nothing has crystallized yet, Grover replied.

How much is climate change and global warming entering the Council's thinking? Mann asked. Hugely, but more to do with storage — the need for additional storage, Grover replied. If more precipitation falls as rainfall, rather than as snowpack, that is a potentially huge problem. Jaeger noted that the NSF has initiated a very large modeling project for the Willamette basin, looking

at snowpack, vegetation, climate change and other factors. That could potentially be very useful, Grover said. It would also be helpful to know what the ISAB has done recently on the topic of climate change, Netusil said.

Grover departed to attend another meeting.

Ultimately, Mann said he would ask Council staff to provide a list of specific issues and questions for the IEAB to respond to, as a way to focus and refine this potential task. Jaeger noted that understanding causality is the black hole in any sort of analysis of this sweeping Fish & Wildlife Program. We have bits and pieces of information about how measures such as spill or habitat improvements affect survival, but even after decades of research, there are still huge holes in the causality puzzle, and the question of why some stocks are doing better than others.

Netusil recalled that, some years ago, the IEAB received a presentation from researchers who were attempting to quantify some of these causality questions, through an undertaking called the CBFWA Collaborative Systemwide Monitoring & Evaluation Project from 2007. She suggested that the IEAB contact CBFWA to see whether or not this research has borne fruit that might be useful to the IEAB's efforts. It might also be useful to confer with the ISAB on this topic, she said.

Mann suggested that the IEAB's response to Grover's request should be that they are receptive to such a task, and would very much like the opportunity to participate in the development of priorities for the draft Fish & Wildlife program. However, we need more background information to work from, as well as a list of specific issues and questions to which the IEAB can respond.

Jaeger noted that Grover had asked the IEAB to help the Council set priorities. For maximum effectiveness, he said, that analysis needs to go beyond cost effectiveness — the least-expensive way to achieve a given outcome — into the realm of benefits. What are the benefits of a course of action, and how can they be quantified? What's the payoff? Which actions will be most valuable in terms of making the whole program more successful? Jaeger asked. The question then becomes, how will those benefits be distributed, and, benefits to whom? Huppert observed — we understand that, but we would need to make it clear to the Council that it will be up to them to make those kinds of judgment calls.

The discussion then turned to the potential ecosystem services task; Netusil described a recent workshop she had attended on the topic of ecosystem valuation. She noted that a group of workshop participants had then gone to Washington, D.C. to brief federal agencies such as NOAA, the U.S. Forest Service, the Department of the Interior, USGS and other entities, on the workshop's findings, and to encourage uniformity in the federal approach to this issue. Mann suggested that the IEAB may want to brief the Council on what this might mean for water resource investments in the basin. We could draft a task about the fact that federal agencies are drafting ecosystem services/valuation principals, and write a white paper outlining some of those basic principals, where the federal agencies are headed, and how this might affect the Fish & Wildlife Program, Netusil suggested.

The group discussed the distinction between avoided costs and alternative costs, and replacement cost vs. measure of benefit, as well as the potential utility of the ongoing water supply/levy work Mann has been involved with recently in California. The real question is how the Council can best leverage available federal funding into the greatest benefit for fish and wildlife in the basin, Mann observed. Jaeger observed that the term "ecosystem services" is primarily a re-branding of the term "environment." After a few minutes of discussion, Jaeger

suggested that it may make sense for the IEAB to target the summer of 2014 for the ecosystem services/valuation task.

Mann said he is willing to take the lead on the Fish & Wildlife Program task, to be completed in April. He added that he will produce a one-page summary of the ecosystem valuation workshop's findings/recommendations, and how they might impact the Council's new F&W Program.

The discussion then returned to the topic of potential candidates to fill the upcoming IEAB vacancy. My preference would be to identify someone who is very familiar with the value of information in assessing risk and uncertainty, Mann said. In response to a question from Wu, Mann said he has identified and made initial contact with a potential candidate, John Yoder of WSU. He said Yoder is very interested in serving on the IEAB. Yoder is an agricultural economist, primarily, with experience in climate change and water rights.

Netusil noted that, the last time the group had a vacancy, she posted an announcement on the University of Kentucky's Resource Economics listserve; the group also used their personal connections to solicit potential applicants. After a few minutes of further discussion, Netusil said she will be glad to post another announcement on the UK's Resource Economics listserve; she forwarded the last posting to the other members. Mann said he will help her draft the announcement, and will circulate proposed language for IEAB review.

One other item, Mann said — I will be working for the State of Washington, evaluating proposals, and I will be getting to know many economists in Washington universities. There might be some good candidates there, and I will be in a position to talk about it in more detail in a couple of weeks.

Grover returned.

The group thanked Huppert, the last original member of the IEAB, for his 16 years of service to the group. He expressed his appreciation for their professional expertise and personal warmth, saying that it has been a pleasure to serve with such a collegial group. We'll miss you, Dan, said Netusil.

Next, the IEAB discussed the significant backlog of O&M expenditures the Council will be grappling with during the upcoming Program amendment process. Many of the facilities and much of the equipment we have invested in over the years is aging, and maintenance costs are increasing, Grover said — the question facing the Council is, what is the best strategy in terms of funding maintenance projects vs. investing in new equipment. There are many potential options, he said, and they could use some help in sorting through them. It's a potential new task for the IEAB, he explained.

The group devoted a few minutes of discussion to this potential analysis; they debated the potential to use a trust fund, which would set aside a portion of the annual budget for O&M costs; replacement costs and other potential approaches.

The discussion returned to the upcoming IEAB vacancy; Grover said he agrees with the idea of placing an announcement on the UK Resource Economics listserve. The group noted that, if possible, it would be a good idea to recruit an economist from Montana, Idaho, or potentially, Washington, if possible. It was also agreed to post the announcement to the PNWREC website

and to contact the administration of all of the major Columbia Basin universities as well, to be sure the announcement is distributed as widely as possible.

Mann said he will circulate a draft description for the 2014 Fish & Wildlife Program Priorities/Economic Considerations task for review by the other IEAB members. Grover said he will arrange a conference call with Mann to discuss a potential project addressing long-term management and O&M associated with in-basin assets.

The group revisited the feasibility of the IEAB incorporating an assessment of benefits, rather than simply cost effectiveness, in its analysis. Mann said that, in his view, simply having the ability to compare benefits across species and runs would be immensely useful. Wu observed that both efficiency and equity are key factors in that objective function. Netusil agreed, but said it is her understanding that the IEAB is restricted to cost effectiveness by its existing charter. Grover said he strongly supports the idea of the IEAB attempting to quantify the benefits of actions or tradeoffs; he said he will investigate the language in the IEAB charter and change it, if necessary. The charter does say that we can do other things, at the Council's direction, so we're not necessarily restricted to looking only at cost effectiveness, Mann observed.

Jaeger observed that the IEAB is an independent board. If we feel it's important to be able to analyze benefits in developing recommended alternatives, we should be able to do so, he said. What I'm hearing is that you're not necessarily looking for a revised charter that adds authorities, you're looking for a charter that removes restrictions, Grover said. That's correct, Jaeger replied — we all understand the need to be cautious in assessing benefits, particularly when it comes to recommending non-market values for things like fish. Grover suggested that the logical approach would be to normalize the IEAB charter with the ISRP and ISAB charters. There was general agreement that this approach makes sense. Netusil added that the current IEAB charter is very specific about the nomination process for new members; rewriting the IEAB charter would also provide an opportunity to streamline that process, she said.

The group devoted a few minutes of discussion to the potential political sensitivities associated with expanding the IEAB's charter to allow benefit-based analysis. The discussion then turned to the Council's habitat investment and land acquisition programs; Grover said he will set up a conference call with F&W Committee Chair Phil Rockefeller to discuss these issues; he said any IEAB member who wishes to participate is welcome to do so. Mann said he will review the draft staff recommendations for the 2014 F&W Program prior to the call.

One proposed analytical task we haven't discussed in much detail is the potential monitoring and evaluation task, said Mann. To me, it makes sense to defer that until we finish developing recommendations on the 2014 Fish & Wildlife Program. There was no disagreement with Mann's suggestion. We also didn't discuss the more PIT tags vs. additional detection capability task in a lot of detail, said Mann; that's a task Bill Jaeger will probably be asked to take the lead on, and again, we probably won't get to it until the summer of 2014. That's fine, said Grover.

The group briefly discussed follow-up to the fish tagging evaluation Jaeger participated in during the past year. I know there was a report, Jaeger said, but where did that wind up? The Council supported the development of a model as a proof of concept through the IEAB, Grover replied. Both the committee and the Council asked BPA to create an RFP to develop such a model. BPA has not agreed to do that, Grover said. Those discussions are ongoing, but unresolved. In the interim, Phil Rockefeller has said he would like to postpone any further discussion of the fish tagging recommendations until the Council's March meeting, he added.

4. *Election of IEAB Officers.*

Mann said that, in his view, it is not in the IEAB's or the Council's best interest if he simply continues to serve as IEAB Chair year after year. Other than that, he said, I'm OK with it, but I would prefer if someone else were to step up.

Huppert noted that he is retiring from the Board; Netusil said her on-campus commitments preclude her from serving as Chair; Wu said he has recently committed to the co-editorship of an economic journal; Jaeger said his additional commitments also preclude him from taking on the role of Chair. For these reasons, Mann was reconfirmed as IEAB Chair for one more year, with Jaeger as Vice-Chair.

5. *Report on September Council Meeting.*

Mann said he attended the September Council meeting; we talked about the IEAB annual report, as well as the mussel report update. Both presentations went very well, he said, and the Council asked a number of good questions. Mann added that he had also provided the IEAB's invasive mussels presentation at a recent meeting of the Hundredth Meridian Society.

6. *Next IEAB Meeting Date.*

Mann thanked Huppert once again for his many years of service to the IEAB. Grover echoed those sentiments on the Council's behalf, and offered a strong vote of thanks for Huppert's service. I've enjoyed it, said Huppert — it's been interesting and enjoyable, and I strongly support expanding the IEAB's scope to include the benefits side. He added that he is willing to help out in the future if the IEAB has need of his services.

The next meeting of the Independent Economics Analysis Board was set for March 6, from 9:30 a.m. to 3 p.m. (an in-person meeting). Meeting summary prepared by Jeff Kuechle, NWPPC contractor.

Certified by: _____
Roger Mann, Chair