

To: Craig O'Connor

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From: Jeep Rice

Subject: Evolutionary Relationship between Science, Integration, and Management in EVOS

As a research science manager from the beginning, I have observed the evolution of science, integration of that science, quality of science, and management in the EVOS Trustee process. From chaotic beginnings to the highest quality of science, over a long period of time. Now it would seem, that a potential regression in science quality, integration and management for the final ten year period is possible if the management and operation budgets are not passed at the next EVOS Trustee meeting.

Chaotic beginning: In the damage assessment process in March 1989, each agency recognized their natural resource interest and initiated as best they could a specific species oriented study to assess the short term damages. Lots of stress as no agency was prepared for such a catastrophic event. As you remember, it was a litigative sensitive event, and studies were not permitted to have communications; maybe some logistical co-operations, but not results. At least at a formal level. Management of a study was focused at the agency level, and there was no integration between studies.

As time marched on, there was an evolution of the science, and of the quality of science through review panels, with feedback to modify some studies. Budget control and management was centralized in the EVOS office. Around the 10 year mark, SEA and APEX programs had started, with a beginning of some integration within those mini-programs; population studies of injured species continued, but there was an evolution away from species specific studies.

By the 10 year mark: Recovery of some species was slow, and the unexpected findings were appearing; slow recovery in Killer Whales, sea otters, Harlequin ducks; herring crash and lack of recovery were an enigma; and anecdotal reports of lingering oil. There was a need for more integration across studies and disciplines from different agencies to aid in the understanding of problems- from lingering oil surveys, to disease studies, to embryo toxicity studies with ocean releases, to detailed sea otter biology studies using depth recorders and field observations of feeding habits. Fewer studies survived, but the quality and integration was enhanced considerably.

About the 20 year mark: More changes occurred in integration and management. Basically, the responsibility of proposing and managing the integrated Gulf Watch and Herring programs was turned over to a management team within the program, responsible for budgets, implementation, and products, from multiple agency/university PI's. The integration and coordination of these various studies, through warm and cold years, across several different habitats, through 10 years, has allowed the capture of disease events, warm year effects on herring and killer whale recovery, while still monitoring the recovery of several injured species like herring, killer whales, sea otters, sea birds.

Point is, this does not happen without integration, and that does not happen without management. Without an active management team, the integration will slide to a lower level, product production will slide to a lower level, cooperation and multiple use of field platforms will slide to a lower level. The quality of the science will slide to a lower level. The synthesis products will take a major hit.

To some, the cancellation of the operations and management budgets could like a cost savings. While some direct costs might be less, there will be major hits on getting the final products and synthesis out,

including the status of the injured species at the end of the next ten year cycle. That would be a major failing of the Trustee process if that were to occur. Some individual manuscripts will leak out over time, but several major synthesis of long time lines across multiple studies will never see the light of day. And that is a major loss to the science of Alaska. No where else in the US, or the world, has there been an ecosystem studied in response to different perturbations (oil, warm years) for as long (over 30 years), involving a wide suite of studies from oceanography to prey species to target species.

I strongly recommend funding of the management and operation budgets.

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