

## Atlantic Flyway Council Comments on NAWMP Objectives

The Atlantic Flyway through the duck harvest management, environmental issues, and human dimensions committees discussed the objectives in the current NAWMP Revision. The Flyway has always endorsed the approach offered by the Joint Task Group, the integration of habitat and harvest management objectives in the form of a harvest policy on the yield curve. We feel that population objectives in the currency of equilibrium BPOP numbers provide a non-subjective method of elucidating constituent desires (human dimensions) with the realities of habitat delivery in an integrated decision framework.

The duck harvest management committee feels that numeric population objectives are necessary and should all be in the context of a yield curve. These numeric objectives should represent the equilibrium population size at a specified harvest policy on that yield curve. This approach would not rely upon an arbitrary time period and would reflect the desires of hunters and the realities of habitat delivery. We feel that the harvest policies (point on the yield curve) and corresponding equilibrium BPOPs (population objective) should be negotiated with input from human dimensions and the JV's as to where the desired equilibrium BPOP should be.

The duck harvest committee also discussed a total duck population objective in lieu of species specific objectives. This approach might certainly be an easier way to go, as long as individual populations were tracked to ensure their sustainability. This type of aggregated approach is likely the form that multi-stock management in the Atlantic Flyway will take. The pursuit of a multi-stock decision framework is one IIC work plan project that needs to get high priority moving forward.

From the habitat management perspective, after some lengthy and challenging discussion, the focus on habitat was directed to its relationship with the new "leg of the stool" –human dimensions and how to consider potentially differing habitat objectives for waterfowl supporters, hunters and others. While habitat objectives will be also driven by waterfowl population levels, it was widely agreed that the human dimension aspect was lagging behind in baseline information and clarity. In particular, an understanding of what "support" means (funding or buy-in or both?) is needed as well as clarification of the drivers for habitat goals in the different groups. Significant efforts should be supported in the work plan to obtain this information before habitat components can be advanced.

Habitat objectives need to be based on a multi-species approach to accommodate the overlap of single species requirements on breeding, migrating and wintering habitats, which ties in well with the multi-species approach being suggested for population and human dimensions goals. Once these population and human dimension objectives are determined, joint ventures need to be quickly engaged to determine whether the amounts of habitat being desired are currently available and if they are available in both the type and location that these two objectives desire. If not, JVs will need to identify what level of habitat conservation is actually feasible. One of the greatest advantages to aggregating species and related habitats is the reality of how we manage habitat. For instance, when a manager manipulates an impoundment, that habitat benefits a suite of species, not just one specific one. To try and track, by species, how habitat on the ground equates to increasing equilibrium BPOP's would be extremely difficult.

The human dimensions objectives addressed relevant stakeholders associated with waterfowl and habitat. However, the objectives related to hunters and viewers, while measurable, do not at the moment explicitly link to population or habitat objectives. This linkage is noted in the assumptions provided in the work plan document, yet not adequately addressed in proposed objectives. Would incorporating aspects of stakeholder satisfaction (which can be influenced by waterfowl populations and habitat) into these objectives be useful? Objective(s) related to increasing financial support for waterfowl and wetlands conservation are useful but don't necessarily reflect stakeholder support or direct impact to habitat/waterfowl. It might be useful, for instance, to express a financial support objective in terms of kcal secured per conservation dollar invested, which would link support to habitat and, through a bioenergetic approach, to waterfowl populations. An objective related to increasing participation/membership in conservation organizations is likely also warranted. Measuring support from the general public for waterfowl and/or their habitats is problematic. The promotion of ecological goods and services is a good approach but difficult to measure at a large scale. Potential alternatives to provide a measure of the value of EGS and waterfowl habitat might include measuring the monetary value of carbon sequestration credits through time and/or the land value of wetlands through time.

In summary, the Atlantic Flyway feels that developing measureable objectives for all three legs of the stool; harvest, habitat, and human dimensions are necessary as they are ultimately a measure of success, serve to inspire conservation actions, and provide constituents with a tangible measure. We feel that we can use human dimensions to inform and negotiate harvest management and habitat management objectives through the use of yield curves as outlined by the JTG. We, however, are still unsure as to how to formally incorporate human dimension objectives. Perhaps it may be as easy as developing appropriate metrics that we can monitor as a result of our integrated harvest and habitat management decision framework instead of trying to formally model and incorporate these people objectives.