Waterfowl Regulatory Process

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Waterfowl regulatory process

- Wildlife biologists would like to have the ability to manage populations at a fine scale...but usually we “Measure things with a micrometer, mark it with chalk, cut it with an axe”...which means, we can often make very specific recommendations on harvest but we often cannot survey populations or habitats at fine enough scale to detect changes or effects...especially with migratory species like waterfowl.

Prairie Pothole Region
Ducks – Population/Habitat Monitoring/Harvest

- Breeding ducks/ May ponds: Each May and June the CWS and the USFWS survey breeding waterfowl from the north-central U.S. throughout Canada and Alaska. Biologists estimate numbers and species, as well as the numbers of flooded ponds (potholes), from airplanes flown along transects. A portion of the transects are then surveyed from the ground by biologists who census all waterfowl. The ground census corrects for birds not counted by the aerial team. This survey is the most extensive wildlife survey in the world, and its results are a major factor used in setting annual duck-hunting regulations. These data are used in the Adaptive Harvest Management model that sets season frameworks.

- Status of WF report

Fall Flight Forecast

- July Duck Production Survey: In July a portion of the lines surveyed in May during the Breeding Waterfowl Survey are surveyed to obtain information on duck production. These counts yield measures of duck production and give an idea of the timing of nesting chronology for the year, assess waterbody abundance, and result in a qualitative assessment of July habitat conditions. The July brood counts are not adjusted for visibility bias and thus provide only a relative index rather than a direct estimate. The July Duck Production Survey is helpful in predicting the number of ducks to be expected during the Fall hunting season.
Surveys

- Harvest Information Program
  - Collects data from hunters to determine annual harvest
- Parts Collection Survey
  - Determine age and sex ratios
- Bird banding
  - Survival data, migration information

Why do we collect all this data?

- To set waterfowl harvest regulations.
- HOW?
- Adaptive Harvest Management
  - Adaptive Harvest Management (AHM) is the process the USFWS/CWS and States use to set waterfowl seasons. AHM took waterfowl harvest decision making from the smoke-filled back rooms of the "Old days" to a data based model which incorporates wetland conditions and breeding WF population size to set a season/harvest framework.

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Table 9. Optimal regulatory strategy for hunting waterfowl for the 2007 hunting season. This strategy is based on current regulatory alternatives, including the closure season constraint, on-water and off-water managed stocks and weights, and on the dual objectives of maximizing long-term sustainable harvest and achieving population goals and/or hunting standards. The shaded cell indicates the regulatory prescription for 2007.
Compensatory vs. Additive Mortality

- Studies based on decades of banding data showed that hunting, at the levels allowed under AHM, was compensatory for most species and predicted that more liberal bag limits could be allowed without harming the populations.
- The Bag Limit for Hen Mallards was 1 for many years and was raised to 2 per day 11 years ago with the advent of AHM.
- Results indicate that:
  - Breeding ground sex ratios have remained constant both before and after AHM.
  - Mallard populations have fluctuated with wetland conditions on the breeding grounds.
  - Increased harvest allowed under AHM has shown no negative effects to WF species.
- Hunting is a small percentage (about 8% for hen mallards) of mortality. Harvest reduces the population but an increase in survival of the remaining individuals compensates for harvest. Compensatory vs additive, general harvest theory.
- Reduced death rate (increased survival rates), and increased birth rates
- Wetland conditions drive Waterfowl populations, not hunting.
- Politics gets in the way of biology sometimes.

Putting It all Together:
The Regulatory Process

- The Players:
  - USFWS and CWS
  - The States and Canadian Provinces
  - The Flyway Councils (and technical sections)
  - Non-profits
  - The Politicians
  - The Public/Hunters
Federal Agencies and Flyways

- CWS
- USFWS – DMBM, SRC
- 4 Flyways (Councils, Technical Sections)
  - Flyway Tech sections
  - Study new issues, legislation, evaluate data and processes, disease, captive WF
  - Evaluate AHM each year
  - Evaluate various non-mallard frameworks
  - Make recommendations on non-mallard limits/season frameworks to the council and their SRC
  - Councils – vote

Bag Limits

- Non-Mallard Bag limits can be difficult to set.
- Various species management plans dictate individual bags.
  - Scaup
  - Canvasbacks and Redheads
  - 6-duck species
  - Wood Ducks
  - Mergansers

Seasonal Timelines

- May/June
  - May Ponds
  - Breeding Waterfowl Survey
- July
  - Waterfowl Production Survey
  - Flyways meet
  - SRC Releases Final Frameworks
- August
  - States set waterfowl seasons
State Process For Setting Seasons

- Agency makes initial recommendations
- Input from Public and Regions
- Final Agency recommendations go to TWR Commission and Public for comment.
- I present recommendations to the TWRC
- They may change the recommendations, then vote for a final hunting package.
  - They are more likely to consider socio/political factors in their decisions.
  - More likely to consider personal opinions over biological data (i.e., hen mallards, spinning wing decoys)
- Hunting guide is prepared
- Go hunting.

Geese

- **Canada Geese**
  - Interior (migratory) and Giants (resident)
  - Various Mig. Populations here
  - SJBP
  - MVP
  - LPP
  - Resident(Giants)
- History of goose migrations
  - SJBP wintering areas
  - MVP wintering areas
- Hunting heritage in TN, KY, IL; mostly gone
- Why migrate at all any longer?
  - mild winters
  - changed ag practices
  - Resident goose lure migrants
“The Goose Wars”

- History of goose Regulations, “Goose Wars”
  - how the quotas worked
  - 2-way trade
  - Sections and byway
- Changes in migratory patterns changed the way quotas were set
- Lack of geese ended the wars
- Traditional breeding areas in Canada are surveyed
  - Surveys yield population estimates
  - Various Sub-population Management Plans have harvest strategies based on actual relative harvest
- New holistic approach to migratory mgt.
  - Set standard weights
  - Plants will buffer the effects on migrants
- Politics still play a part
- The AF vetoed our SJBP plan even though they are a minor player… politics

Giant Canada Geese

- Resident geese – about 60,000 spring breeders in state
- Not really Giants… cannot tell the difference morphologically
- Now make up >90% of harvest
- Considered a valuable resource
- Spring survey
  - Helicopter plot survey used by most states
  - One of the things that makes it fun to be a wildlife biologist
  - About 160 plots statewide of about 45,000 total
  - High, med, low density strata
  - SAS program sets stratified sampling regimes
  - 2 square mile circle, and count
  - Small sample size but cannot afford more, and results are good enough for what we do.

Nuisance geese

- Only a small number a nuisance but can be a problem in certain places
- Gotten much better at dealing with the problem
  - Landowners becoming more tolerant (giving up)
  - Biologists developing better strategies
- Can be controlled several ways
  - Nest and egg program
  - Landowner permit in “take” approved number
  - USDA WS relocation program
  - Landowner must pay to have them moved
  - Release sites must meet certain criteria
  - Results show increase harvest rate (vulnerability)
  - Allows hunters to solve nuisance problem.
Canada Goose EIS

- August take
- Added methods in Sept.
- Must meet criteria before either is allowed.
- Not likely to use in TN...don't meet criteria.

Snow Geese (Ross’s Geese)

- Lesser snow geese and Ross’ geese flock together on the breeding grounds, wintering grounds, and on stops along the migratory route. They are very difficult to distinguish when they mix together.
- Scientists and managers from across North America agree that some populations of light geese have become so numerous that their Arctic and sub-Arctic nesting habitats cannot adequately support them. In other words, light geese are literally eating themselves out of house and home.
- Larger lesser snow geese constitute the majority of the birds causing habitat degradation in the Arctic due to their aggressive feeding strategies. Lesser snow geese graze, grub (overturn the soil in search of roots), and pull and break off shoots of grass.
Snow Goose Conservation Order

- Populations have recently been reduced by the Light Goose Conservation order
- Allows
  - unplugged guns,
  - electronic calls,
  - shooting late,
  - no possession limits,
  - hunting in March/April
- Seems to be working to reduce SG numbers.

Wood Ducks

- Surveys
- Banding
- Difficulties in Managing
- Pop Models
- Special Season

Hot Off the Press

- “I think the time is coming when these men will insist on more and better answers than have yet been given by the Wildlife Service or Ducks Unlimited to the question “What has happened to our Waterfowl?”
- “…it has resulted in mallards remaining longer in the Midwest during their migration…Mallards now winter north of their former wintering areas”
- Wildfowling in the Mississippi Flyway, 1949
- Waterfowl hunters are never happy.