Pintail Action Group Annual Meeting – Draft Minutes
August 17, 2009
Delta Meadowvale Resort and Conference Center
Mississauga, Ontario, Canada
Room: Hazel McCallion B
8:30AM – 2:30PM
In association with the 5th North American Duck Symposium and Workshop

Attendees:

Bob Clark (EC), Dale Caswell (CWS), John Eadie (UC Davis), Mike Eicholtz (SIU), Scott Boomer (USFWS), Brad Bortner (USFWS), Barry Wilson (Gulf Coast JV/USFWS), Steven Rimer (USFS), Elizabeth Walsh, Kevin Kraai (TPWD), Mike Brasher (Gulf Coast JV), Luke Laborde (LSU), Brandon Reishus (Oregon Dept F&W), Dan Yparraguirre (Cal Fish & Game), Shawn Oldenburger (Cal Fish & Game), Bob McLandress (CWA), Jake Messerli (CWA), Chadd Santerre (CWA), Brian Olson (UC Davis), Greg Yarris (CWA), Greg Soulliere (USFWS- JV), Rob Holbrook (USFWS CVJV), Brady Mattsson (University of Georgia), Jim Sedinger (University of Nevada Reno), Mike Anderson (DUC), Bob Shaffer (Central Valley JV), Dave Koons (Utah State Univ), Letitia Reichart (Univ Nebraska Kearney), Aaron Pearse (USGS), Jennifer Kross (DUI), Terry Kowalchuk (LCC), Joe Fleskes (USGS), Jim Devries (DUC, PAG- Chair), Dave Haukos (USFWS PAG-Vice Chair), Karla Guyn (DUC-Minutes),

Welcome/Introductions/ Overview of Meeting Objectives

Chair report
Review progress on action items from last meeting
Task team updates
Reports of on-going pintail research & management
Transfer of PAG Chair and Election of incoming Vice-Chair
New Business
Set new action items
Set next meeting date

Chair Report (Devries)

PAG activities 2009

- Demographic Modeling to link habitat and harvest – discussed later in agenda. Post doc (Brady Mattsson) hired with 2 year funding.
- Banding Analysis: now complete – discussed later in agenda
- PAG Newsletter in June
- Replied to GCJV re: demographic modeling
- Web Page updates

Review Previous Action Items

- *Draft letter to USFWS emphasizing need to improve pintail banding*. A banding needs report is being drafted within USGS. There will be an opportunity to review it once it is complete, but early indications are that the report will not focus on pintails. See **AC*TION*** under New Business.
- Linking Habitat and Harvest Management for Pintails - Demographic Modeling: see agenda item under task team updates
- Pintail Band Recovery Analysis: see agenda item under task team updates. Final report available on request from Dave Haukos.
- Update Research and Conservation Priorities: Last meeting this was put on hold until getting further along with demographic modeling.
  ***ACTION*:** Jim to summarize research/conservation needs discussed at the 2007 PAG meeting. These will help formulate the primary working objectives for the PAG to address in the next 5 years. Target date – November 2009.
- CWA indicated interest in supporting additional banding effort: CWA has provided resources for this and effort and has been expanded.
- Misc: items posted on PAG website.

Task Team Updates

Task Team: Linking Habitat and Harvest Management for Pintails - Demographic Modeling

a) Work Plan (Devries)

- This effort was generated by a number of folks that felt there was enough information to tie habitat and harvest together.
- Objective: Account for habitat and harvest influences on pintail demography through a series of linked models.
- Work Plan:
  - construct a model framework of 2 breeding and 2 wintering areas (Dec 2010)
  - Develop submodels linking habitat at regional scales to recruitment and survival (tech dev workshops Oct 2009, Sept 2010)
  - Assembling existing pintail vital rate estimates from past and ongoing research
  - Construct a simplified working prototype life-cycle model (Dec 2009)
  - Consultation with stakeholders (ongoing) – show how information will fit into model.
  - Overall project completion date is April 2011
- Work Plan is available on the PAG website.

b) Model Framework (Boomer)

- Successful in getting funds to help support this for at least 2 years. Mike Runge is on sabbatical but we will be in close consultation with him. Brady Mattsson has been hired as the post-doc and the goal is to try and have a rapid prototype model done in time for AHM workshop in December. This will provide the raw material for additional work needed to parameterize this model. Once a prototype is complete, workshops will be held with folks on the ground to help inform the model components and parameters. One of the key uncertainties is the transition probabilities. Initial work will include broad sensitivity

analysis. Substantial coordination and logistical work will be needed for the consultations. But need to get the overall structure in place first to help frame the discussion.

c) Updating Vital Rates (Clark)

- Have been updating vital rate information from the pintail community
- Looking at rapid prototyping in the 4 regions (PPR, AK, CA and TX). The wintering areas were chosen based on their importance for pintails but also preliminary indications survival rates may differ from each other. Significant conservation effort expended in 3 of the 4 areas.
- Model structure: underlying each component is the need for data.
- What information is new in past 2 years? Annual survival, overwinter survival, movements and production.
- Annual Survival Rates: estimated for western, central and east for adult female, immature female, adult male, and immature male. Little evidence for trends in survival rates relative to harvest levels.
- Overwinter survival: some indication that Gulf Coast may have lower rates than California. Recent estimates from Texas coast are quite low (.30 - .40). California range .77 - .93. Assuming that there are no technique biases.
- Movements: Satellite studies from California indicate different movement patterns to breeding grounds. Texas: 28 – 76% to prairies, 0 – 8% to Alaska. Texas mainly prairie while CA may go to prairies or Alaska.
- Comment: may need to split SONEC from Central Valley because one is primarily staging versus wintering and habitat issues may also differ. Main stopover points are subsumed into larger areas to facilitate rapid prototyping. Once that is done however, either finer detail may be included or more specific questions could be asked. Q: how is spring survival included into this?
- Nesting Success: S. AB. – variation in success depending on landuse gradient. Dakotas – median NS is 16% in 82 site year combinations. CDN prairies (SpATS) – median is 9% which includes detailed land use.
- Summary: major advances in annual survival information from banding, overwinter survival – from radios, kill – from harvest surveys, movements – from banding and satellite information.
- "Fertility" – number of studies. Breeding probability: PPR 1 AK a
    - Renesting: PPR 2 AK 1
    - Clutch Size: PPR 8 AK2
    - Hatchability: 0.95a AK a
    - Nest Success: PPR 8 AK2
    - Brood Survival: PPR 2 AK1
    - Duckling Survival: PPR 2 AK1
    - (a = assumed)

- Q: is there a way to use banding data to check some of the telemetry estimates for over winter survival.

d) PPR Habitat Linked Model (Devries)

- Two concept models
- Model 1 – Pintail Productivity Model (PPM). Simulated productivity based on a suite of habitats similar to Mallard Model. Hatched nests is a function of local population, breeding probability, renesting, habitat preference, habitat availability and habitat specific NS.

- Model 2 – Grassland/Wetness (Grass-Wet) – NS Model: function of how wet and amount of grass.
- These models are applicable across the PPR from GIS inputs
- Spatially and temporally explicit
- Habitat preference data comes from a range of sources.
- Inputs: Annual Wetness from segment-specific pond counts. Use this as a deviation from median.
- Nest survival – specific to habitat and ecoregion. NS varies with % of landscape in grassland.
- Breeding probability and renesting fixed at .9 and .7 respectively. Nest survival varies with annual wetness.
- Habitat preference: based on 3 year DU pintail study. Fall crop, tame idle, hayland, and summerfallow used more than expected.
- Objective: link annual spatial congruence with annual drivers. "Thunderstorm" maps give spatial distribution (long-term average) but not temporal. But can create surfaces of annual deviations from LTA density.
- As a check: USFWS stratum total matches very closely with # generated from map giving some support that deviation map does a decent job of predicting number of birds spatially.
- Ag Census – only data that gives land use change over time in Canada.
- Can begin to layer pintail population, landuse etc
- Process: pintail pair inputs extracted in GIS, merge with AG Census, run model at county scale, output can be programmed but includes total pairs, initiated nests, hatched nests, population level.
- Estimated total hatched nests 1961 – 2004. Tracks population very closely. Grass-Wet model slightly higher but tracks PPM closely.
- Correlation with population fall age ratios (male) PPM: R^2 of .34 and Grass-Wet model .40
- This recruitment estimate would be used in the overall model to estimate recruitment from PPR Canada
- Think models capture primary spatial and temporal drivers of productivity across PPR given current data
- Will be exploring inclusion of US PPR with PPJV folks.

e) Next Steps – Devries/Clark/Boomer

- Consider inclusion of predictive ability to forecast precipitation patterns
- US PPR: advance discussion with PPJV on including US PPR into this process – need to work out difference between thunderstorm map predictions and USFWS estimates
- Engage folks from Alaska into the process

Task Team: Pintail Band-Recovery Data Assessment – Haukos/Rice

- A final report has been completed and is available from Dave. Publications submitted to JWM.
- Objectives: conduct analysis for continental pintails using band recovery data.
- Interested in how survival and recovery rates vary spatially
- Describe origin of harvest.
- Used data from 1970 – 2003. Only preseason banding included.
- 400,000 pintails banded – 27,000 recoveries.
- Used a multi-responses permutation procedure to identify banding locations of similar recovery distributions.
- 12 groups initially but pared down to 3.
- Temporal – included season length, bag limits (not based on AHM definitions) and over flight.

- Model building – analysis for > 3 regions did not converge. Used Brownie approach in MARK.
- 45 models, used AIC and delta AIC.
- Most recoveries came from central and western. Much less in eastern.
- Top model for pintail survival: recovery – age, sex, region and time. Survival – age*sex*region plus time. Survival rate over time – variation but flat estimate through time. Variance on estimates is pretty consistent through the time. Age*time: influenced by last few years but there may be a trend for immatures declining and adults increasing. Survival rate for the region*time – may be slight decline in western, central does not look like it is changing and neither does the eastern.
- Conclusion: Managers should look at age, sex and region interaction with additive time for managing pintails. Temporal periods do not seem to be driving survival. Pintails survival does not seem to have changed substantially.

Pintail Research and Management Updates

SONEC Studies (Fleskes)

- This area was originally identified in the satellite research study. 80% of pintails in California spend 2 or more months in this area. Includes Klamath basin but also a lot of privately owned lands.
- Pintails were also tagged with standard transmitters at the same time. Found that outside Klamath basin, spring flooded pastures were important habitat. Pintail peek in March here but may arrive before that period.
- LandSat imagery of the area has been collected to help inform conservation.
- Also tried to measure value of these habitats for waterfowl. Collected birds to ID food items and habitat sampling cores. Pintails were feeding on seeds primarily not invertebrates (but spring was cold)
- Body condition will be summarized shortly and will be compared to central valley.
- Availability of waste seeds in Klamath is underway.
- Body condition changes on white-fronted geese is also ongoing.
- Proposal in to look at climate change on water availability.

Pintail Body Condition in California (Eadie/Fleskes)

- Looking at age and sex specific body composition. Before and after conservation actions (CVJV) comparison – all species examined. Body condition has improved and birds maintain the condition through the winter and leave in good shape.

Pintail Nesting Research in Southern Alberta (Kowalchuk/Clark)

- Objectives to investigate pintail habitat selection and reproductive success across landscape gradient. Relate habitat selection to Fretwell-Lucas models.
- 2 – 41 km^2 study blocks in each of three landscapes (grassland, ecotone, cropland)
- Pair numbers higher in grassland areas and some indication that birds are filling grassland wetlands first then ecotone and cropland.
- Nest success – reproductive success higher in grassland. Lowest in cropland landscapes.
- Winter providence – does winter provenance affect landscape selection? Don't know because most birds captured were from California.
- Body mass – no difference between areas
- Reproductive Investment – pintails initiating earlier in grassland. Cropland landscape several days later.

- Clutch size and volume did not differ.
- Conclusions: differences in density, timing settlement, nest initiation. Pintails may be able to select quality.

Prairie Pintail Nesting Ecology (Devries)

- Tested management decisions and parameters in pintail productivity model.
- 3 years (2005 – 2007) in SK and AB; each year, 2 site replicates – high cropland, 2 – in grassland mix and 2 sites in native grassland.
- 1914 nests in total with 398 pintail nests.
- Significant proportion of pintail nests in spring and fall cropland; more than any of the other species.
- Overall pintail NS 12%. Nest survival by habitat – highest in native-idle and fall seeded crop, native grass pasture, and hayland declining to spring seeded and tame pasture.
- Nest survival by % grass – nest success positively related to % grass.
- Nest density by habitat – highest tame-idle, fall seeded crop, summerfallow etc. Fallcrop and tame-idle tend to be used more than available.
- Pintails use cropland habitats including summerfallow more readily than other ducks.
- Further analysis – landscape influence on pintail nest survival, habitat preference.
- Exploring the low nest success in tame pasture with additional nesting studies.

Pintail Duckling Survival Proposal (Devries)

- Looking at potential influences of winter wheat and landscape composition on duckling survival.
- Previous variance decomposition analysis indicated that ducking survival had an important impact. Limited work has been done on pintail duckling survival (2 studies on prairies and 1 in AK)
- Proposed study would link with the DUC's SpATS study, nest trap females goal of 50 broods/year, track brood movements, habitat use, survival, gather habitat and predator community characteristics.

Elect New Vice-Chair (Haukos)

- Nominations for the position of incoming Vice-Chair were solicited.
- Nomination of Bob Clark (CWS) as the incoming Vice-Chair of PAG was endorsed.
- Membership present voted unanimously to accept Bob as Vice-Chair.
- Dave Haukos assumed the position of Chair from Jim Devries.

New Business (All)

- Website: Mike E. will put a counter on the PAG website. It was noted that one older newsletter has loaded wrong. Comment: about list of all publications; compiled from newsletters.
  ACTIONS: Mike to reload newsletter**.** Send PDF's to Mike for webpage. Mike to add link to Flyways US page. Mike to check links to ensure they are not dead.

- Banding recommendations: some concern that pintails have fallen off the list of priority species for USFWS for banding (mallard, scaup and wood duck current species that are targeted report). So we may want to send comments in now. Given that USFWS is a supporter of the modeling – and one of the gaps is due to limited banding data; it seems that

pintails should be a priority. Banding needs doc – justify current banding effort and to justify additional resources. Draft letter from group expressing needs for pintails and desire to have pintails considered as part of the priority species.
ACTION: Dave will write a letter to USFWS highlighting pintail banding needs, but also offering the assistance of PAG in determining banding needs detail for pintails.

- PAG involvement on groups: the Chair sits on NSST. We need to ensure that we are involved with the NAWMP revision. Discussion about the need to keep the Flyways and pertinent JV's updated on PAG activities and more specifically the demographic modeling.
  ACTION: Need to ensure that we are updating JV's and Flyways on our activities. Flyways: Pacific – winter meeting likely best to introduce them to the demographic modeling; Central – second week of December; Mississippi – don't have a winter meeting just a March meeting. This would be presentation of very early stages – where we are at. Presentations to all pertinent JV's as well, perhaps through the NSST.

- Technical Development Workshops: some concern about a prototype being done by December 2009. Initial concept was to go to each of the four regions in the conceptual model.
  ACTION: smaller group (demographic modeling team) to flesh out workshop schedule and circulate.

- Need to ensure that long-term data sets are maintained in these tough economic times (banding, surveys). We may need to use our political capital to ensure that these are maintained. PAG may want to send letters of support for projects that we see as important.
  ACTION?? …ongoing as brought to the attention of PAG.

Review New Action Items (Haukos)

(Summarize & assign lead for each action item)

- Within notes.

Next Meeting (Haukos)

- Proposed for a year's time at a site to be determined in conjunction with one of the technical workshops.

2:30 Adjourn Haukos