

Alberta Conservation Association 2011/12 Project Summary Report

Project Name: *Hay Zama Wetland Monitoring*

Wildlife Program Manager: Doug Manzer

Project Leader: Ken Wright

Primary ACA staff on project:

Ken Wright and Mike Ranger

Partnerships

Hay-Zama Committee
NuVista Energy Ltd.

Key Findings

- Monitored waterfowl concentrations at 13 active well sites during spring and fall periods.
- Observed the highest numbers of staging waterfowl during the second survey week in spring and the third survey week in fall.
- Mallard was the most common duck species observed during both spring and fall.
- Observed six active bald eagle nests with a total of nine eaglets on the complex in 2011. Broods ranged from one to three eaglets in four of the active nests, and the other two nests each contained two eggs and a brooding adult.

Introduction

The Hay-Zama Lakes complex is a 48,000 ha collection of lakes, rivers and wetlands with oil and gas wellsites located within the complex boundaries. To mitigate the potential impact of this industrial activity, stakeholders devised a program to monitor waterfowl numbers near wellsites and suspend extraction activities when particularly high concentrations of waterfowl occur. The Alberta government defined the threshold as 600 individuals (ducks/geese) within 30 m of a wellsite. The role of Alberta Conservation Association (ACA) in this program is to monitor waterfowl numbers and advise the Energy Resources Conservation Board (ERCB) in the event this threshold limit occurs. ERCB has the regulatory role and the authority to initiate cessation of well production activities.

The main objectives of this project are to: 1) survey waterfowl concentrations at producing oil and gas wells within the complex during spring and fall migration periods and report waterfowl congregations to the ERCB if the thresholds are exceeded; 2) estimate the number of staging waterfowl within the complex during spring and fall migration periods, and; 3) conduct a one-day survey of bald eagle nests within the complex.

Methods

We flew aerial surveys weekly during spring and fall migration periods (April 28 – May 26 and September 2 – October 13) in a R44 helicopter at approximately 30 m altitude at 60 – 100 km/h over each wellsite and along established transects over the wetland complex. We counted waterfowl observed within a 30 m radius of wellsites and identified these to species, where possible. The protocol includes an immediate notification to the ERCB if the threshold concentration of waterfowl is observed. The ERCB would then determine whether well suspension procedures should be initiated. For staging waterfowl estimates we flew around the perimeter (approximately 200 m from the shoreline) of all the major wetlands in the HZLC to count the number of waterfowl for a cumulative number of waterfowl observed per survey.

We flew a one-day survey (7 June) searching for bald eagle nests by covering all areas of the complex presumed to have suitable eagle nesting habitat. We recorded the number of adults, young and eggs, as well as the status of the nest. We assessed status as brooding (eggs or brooding adults present), rearing (young in nest), empty (no evidence of current year use), or absent (nest not found at historic location).

Results

We monitored 13 wellsites in 2011, with 10 of the 13 having waterfowl within 30 m on at least one survey date. Waterfowl concentrations did not exceed threshold limits over the spring or fall period. The highest numbers recorded at a wellsite were 26 ducks during spring and 320 ducks during fall migration.

We observed the maximum number of staging waterfowl within the complex during the second spring survey date (May 5; n = 17,021 ducks and 7,446 geese) and the third fall survey date (September 15; n = 46,037 ducks and 1,379 geese).

Mallard (*Anas platyrhynchos*) was the most abundant species identified during spring and fall (Figure 1). Unidentified ducks accounted for 11% of ducks observed during spring flights and 8% during fall flights.

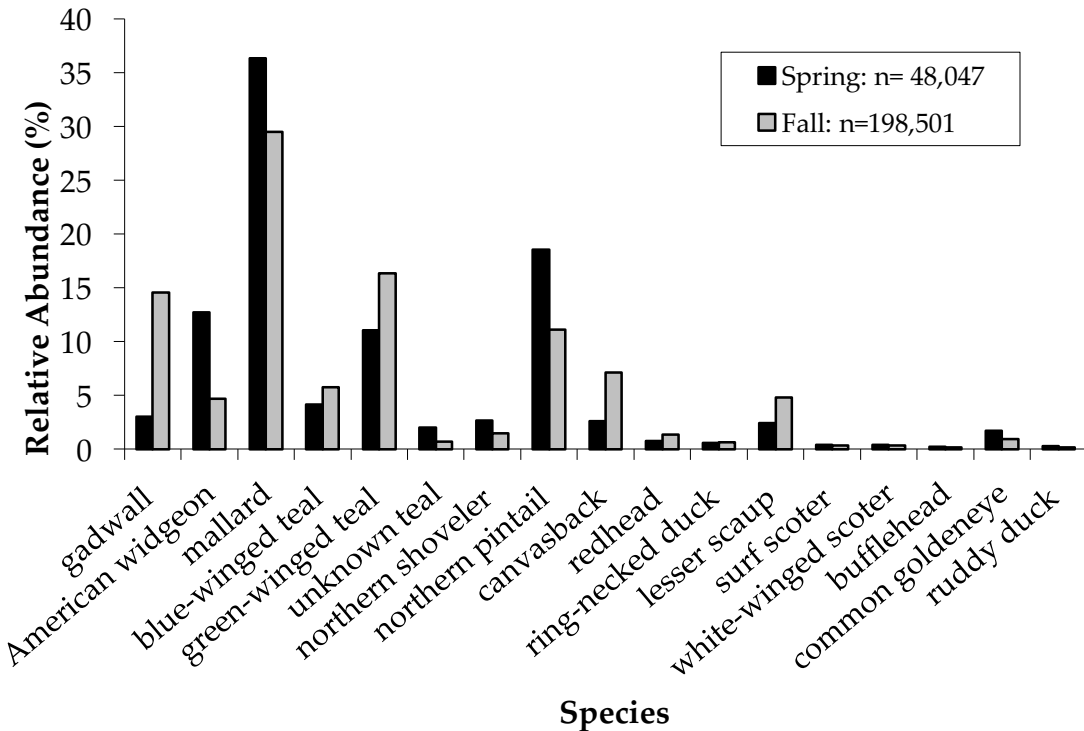


Figure 1. Relative abundance of identified duck species observed during the 2011 spring and fall migrations in the Hay-Zama Lakes complex. Unidentified duck species accounted for 11% of ducks observed during spring surveys and 8% during fall surveys.

We located six active bald eagle nests during the eagle nest survey. Brood size ranged from one to three eaglets on four of the six active nests, and two nests contained two eggs each with a brooding adult. We found that five nests commonly used by nesting pairs in past years were absent during this survey, but we located two additional nests not observed in past surveys.

Conclusions

Waterfowl densities at wellsites remained below threshold levels for 2011 migration periods. Consequently, ERCB did not require suspension of production of any wellsites in 2011. The number of active bald eagle nests observed was within the range of past observations (range = 3 – 7).

Communications

- Presentation to the Hay-Zama Committee at their annual meeting, October 19, 2011.
- Posted Hay-Zama Lakes Monitoring Program reports from 1995 – 2010 and a summary of 2011 results on the Hay-Zama Committee website (www.hay-zama.org).

Literature Cited

n/a

Photos



Photo 1.
Aerial survey crew approaching an offshore wellsite to tally waterfowl. (Photo: Lyle Fullerton)



Photo 2.
A group of ducks take flight from an offshore oil well on the Hay-Zama Lakes complex. (Photo: Ryan Hermanutz)



Photo 3.
Aerial view of an offshore well cluster on the Hay-Zama Lakes complex. (Photo: Lyle Fullerton)



Photo 4.
A small herd of wood bison graze on a levy separating Hay Lake and Omega River. (Photo: Lyle Fullerton)