# Deciding which plots to include / exclude

Mean? Random? First? Last?

**Plots that had rapid surveys conducted multiple times in the same year**

-plots with 2 observations: timing doesn’t appear to matter all that much if I look at the number of birds observed within each region. Seems like randomly selecting one of the observation would be the best approach because it then I wouldn’t end up with non-discrete numbers, especially 0.5 which is confusing if I do presence/absence

-For the Alert plots, I wondered if the ones that were surveyed by 2 people might be better (1 might be missing birds, 3+ might be getting into weird methods that differ from later years). However, some only ever have 1, some have 2 more than once

-Are the Alert plots merged as described somewhere or separate segments of plots by habitat type, in which case, appropriate action would be to add them together? Looked at the one plot that was surveyed 7 times and the proportions don’t add up to 100%

-I read one comment about some intensive plots being converted to rapid plots because they didn’t have time to finish the intensive protocol

* Intensive plots surveyed using rapid methods
  + 53 plots. Why are they only in regions 3,4,8,10,12?
* Industry plots
  + 2008, Kiggarvik Mine Project, 1 plot x 2 surveys
* NOT SURE WHY – could they be intensive plots? There didn’t appear to have any rows with final decisions associated with these plots. The fact that most of them were surveyed twice suggests that they could have been
* 1995, Rasmussen Lowlands: 6 plots x 2 surveys each
* 1997, Prince Charles Island: 2 plot x 2 surveys each
* 2001, Alert: 1 x 7, 1 x 6, 3 x 4, 3 x 3, 7 x 2
* 2001, Somerset Island, 3 x 2
* 2003, Dewey Soper: 4 x 2
* 2003, Southampton, 1 x 2
* 2008, Mackenzie, 4 x 2

**Plots that had rapid surveys conducted in multiple years**

-re-surveyed plots: would it be better for me to have them as early ones to align with the population estimates, or would it better to use the new ones where survey methods might be more reliable?

-same question as above. My thought is to use a random one (but restrained by region so that they are all done in the same year). Laurent might want to use the mean

* Intensive plots
  + 25 plots, 2-6 years (Mackenzie Gas, Igloolik?)
* Industry plots
  + 178 plots, 2–10 years (Meadowbank, Hope Bay, Kiggavik, Mackenzie Gas)
* Re-surveyed in 2019
  + 66 plots, Prince Charles Island and Rasmussen Lowlands
* Prince Charles Island 1996/1997 (but not 2019): 1996 was flooded, use 1997
  + 11 plots
* Rasmussen Lowlands 1994/1995
  + 10 plots

**Plots that were field selected**

* Intensive plots
  + 68 plots, Regions 4,5,6,8,9,10,12
* Industry plots: 533 plots. What were the methods used for field selection?
  + Amaruq & Meadowbank Mine Project: 85 plots
  + Gahcho Kué Mine Project: 25 plots
  + Hope Bay Mine Project: 111 plots
  + Izok Mine Project: 82 plots
  + Kiggavik Mine Project: 44 plots
  + Mackenzie Gas Project Affected Areas: 84 plots
  + Mary River Project: 97 plots
  + Meliadine Mine Project: 16 plots
  + Tahera Mine Project: 9 plots
* NOT SURE WHY – might be worth checking the comments on these ones
  + Eastern Foxe Basin: 89 plots (1996, 1997, 2003, 2019) 1996 due to weather – exclude?
  + Mackenzie: 83 plots (2005, 2006, 2007, 2008, 2009)
  + North Archipelago: 66 plots (2001, 2007, 2011)
  + Northwest Hudson Barrens: 2 plots (2016)
  + Queen Maud Gulf: 8 plots (2010)
  + South Archipelago: 9 plots (2001, 2011)
  + Southampton: 6 plots (2004)
  + Southwest Hudson Barrens: 15 plots (2008, 2015)

*Examples:*

* SOI-0082C, 2001, North Archipelago
  + Plot\_Comment\_1: “Replacement for 715 which we couldn't reach due to fog.”
  + Comment\_1: “ Four of us walked in different directions for 20min. looking for shorebirds in the best places we could find.”
* ALE-2529,
  + Comment\_1: surveyed by skidoo
* 14 plots containing or adjacent to human developments

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| KWI-0012 |
| MDW-0099A |
| ALE-1670 |
| ALE-1670 |
| ALE-1670 |
| ALE-1670 |
| ALE-1670 |
| ALE-1670 |
| ALE-7140 |
| CLGT-92020 |
| CLGT-92021 |
| CLGT-92022 |
| RAS-0072 |
| RAS-0030 |

**Plots that were GIS selected, field modified**

* Intensive plots
  + 1 plot, 2006, Southampton region, Coats Island, COI-IntB
* NOT SURE WHY – might be worth checking the comments on these ones
  + Eastern Foxe Basin: 4 plots (2003, 2004)
  + Mackenzie: 7 plots (2005, 2006)
  + North Archipelago: 3 plots (2001, 2007)
  + Northwest Hudson Barrens: 55 plots (1994, 1995, 2015, 2019)
  + Queen Maud Gulf: 20 plots (2006, 2010)
  + South Archipelago: 67 plots (1994, 1995, 2001, 2012, 2019)
  + Southampton: 1 plot (2003)
  + Baffin: 1 plot (2018)
  + Quebec: 2 plots (2002)

*Examples:*

Seems OK

* Couldn’t cross a river, adjusted accordingly
* Changed orientation

Not sure

* Moved due to high shrub, large lakes, mudflat, snow cover – how were they modified?

\*\*Alert, Rasmussen Lowlands seem questionable

**Plots with a weird areas, shapes, proportion surveyed**

Nest questions: what is the difference between being very conservative and very liberal with inclusion?

* Keep all, exclude all, remove based on weird comments, remove specific regions/intensives/industry, remove plots that have multiple red flags (? Are there even any?)
* Two-sample T-tests

-sample size

-number of birds observed

-habitat type