## TO RUN ALLELE FREQUENCY ANALYSIS USING CERVUS

1. Create a genotype file containing ALL GENOTYPES (Offspring, Mothers, and Fathers). This data can be found in 'XX\_FINAL\_GENOTYPES\_2007-2014'

Change HMSC\_ID to ID and place in directory labeled for the corresponding 'offspring' year (e.g. 2015) at D:\Box Sync\N Santiam Chinook\analyses\2016\jar10\cervus

Save as a csv file and title all.genotypes\_NS16jar10

2. 'Run Cervus' and select the allele frequency analysis

3. Designate 'input' file as 'All genotypes' file and save output in same directory

5. Tick 'read locus names and 'header row', designate ID as second column, first allele as third column, and 12 loci

###### TO SIMULATE PARENTAGE ANALYSIS

1. Designate input allele freq file (from previous step) [default]

2. List the number of offspring for this year 523

3. List the number of Mothers for the year range (e.g. 2007-2009) 1030

4. Estimate the proportion of Mothers sampled 0.95

5. List the number of Fathers for the year range (e.g. 2007-2009) 1376

6. Estimate the proportion of Fathers sampled 0.95

7. Prop. loci typed = 1

8. Prop. loci mistyped = 0.01 [default]

9. Specify '7’ typed loci

10. Specify 'LOD' confidence

11. Keep the confidence levels the same

######## TO RUN A PARENTAGE ANALYSIS

1. Create a csv file listing ONLY sample IDs for:

1. 20XX\_Offspring\_IDs

2. 20XX\_Fathers\_IDs

3. 20XX\_Mothers\_IDs

## CHECK TO MAKE SURE THE NUMBER OF ROWS IN THESE FILES MATCH WITH THE SIMULATION PARAMETERS (NUMBER OF INDIVIDUALS)

2. Designate these three files after selecting the 'parentage analysis with known sexes'

2. Follow the prompts and make sure to designate candidate ID's in column (NOT ROWS)

3. Designate the 'All genotypes' file

3. Select 'All parents with positive LOD scores'

4. Select 'Joint LOD'

######CONFIRMING/REJECTING ASSIGNED INDIVIDUALS OR PAIRS

1. Scroll through offspring row one sample at a time

2. If a mother or father or pair are mismatched at more than 2 loci, this is a misassignment

3. If a mother and father (BUT NOT TRIO) match at the same number of loci, this is a misassignment for both

4. If an offspring was only typed at 7 loci, they must ALL match

5. For Trios, make sure the the parents years MATCH