Assignment

Provide data and recommendations in relation to stem density in areas where the Garry oaks are being overshadowed.

Observations

In July 2022 I sampled three plots in the proposed Vanier Garry oak forest to determine species composition, size and density. Three ten metre sized plots in the areas where canopy overshadowing of the oaks is present, were inventoried. See Picture 1.

Picture 1

A total of 68 trees were inventoried with the three areas representing 942 square meters of forest.

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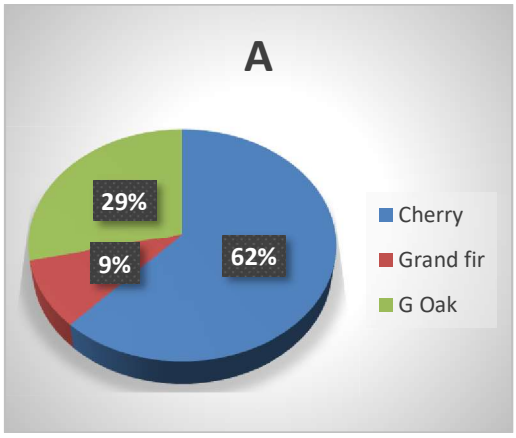
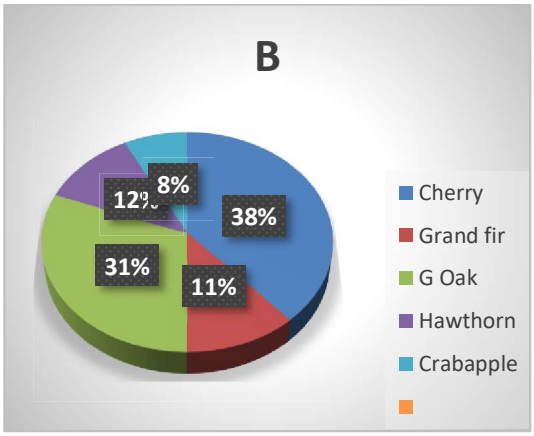
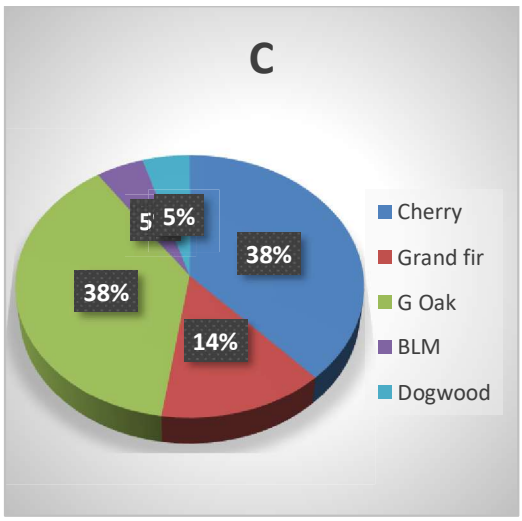
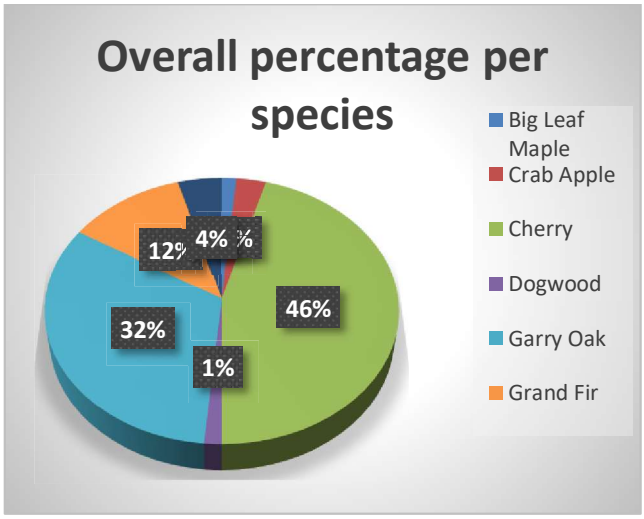
Number of tree types per Area A, B, and C. Precentages shown in pie charts.

Area	Cherry	Grand fir	G Oak	Hawthorn	Crab apple	BLM	Dogwood
A	13	2	6				
B	10	3	8	3	2		
C	8	3	8			1	1









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Average tree DIAMETER in centimeters (cm) per Area A, B, and C

Area	Cherry	Grand fir	G Oak	Hawthorn	crab-apple	BLM	Dogwood
A	17	38	61				
B	17	26	44	30	10.5		
C	18	35	56			10	18

Discussion

In these sample areas, the cherry trees are smaller in caliper however, higher in numbers. This results in a broader canopy cover reducing the amount of sunlight to the forest floor for any new oaks or other species to establish. The higher cherry tree density also reduces the health of the existing oaks by forcing them to grow upright and spindly which is not their natural growth pattern.

Reducing the number of cherry trees to increase sunlight penetration can be determined on a tree by tree basis. Those closer to a fish bearing creek could be retained whereas cherries further away from the riparian zones could be removed.

The Grand firs being taller and with wider canopies, also reduce the sunlight to the oaks or other tree species trying to get established. Selective removal or canopy pruning of the Grand firs would greatly enhance sunlight to the lower forest area and to the exisiting oaks.

Longevity of tree species is an important item to consider in forest density. Grand firs and cherries are among the shorter living tree species versus the Garrry oaks. Allowing the native dogwood and big leaf maple to establish in the forest is important to the survivability of a mixed woods forest. The data shows a very low rate of establishment for dogwood and maple.

If the goal is to enhance this forest to be a Garry oak forest, the stem density data concludes that some cherry tree removal and fir tree management would not impact the overall forest density but provide the needed area for the Garry oaks and other tree species to thrive in.

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Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist or seek additional advice. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed. Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, landlord-tenant matters, etc. Arborists cannot take such issues into account unless complete and accurate information is given to the arborist. The person hiring the arborist accepts full responsibility for authorizing the recommended treatment or remedial measures. Trees can be managed, but they cannot be controlled. To live near a tree is to accept some degree of risk.

The only way to eliminate all risks is to eliminate all trees. I further certify that I am a member in good standing of the American Society of Consulting Arborists and the International Society of Arboriculture. I have been involved in the field of Arboriculture in a full-time capacity for a period of more than twenty years.

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