

Genetic Conservation Technical Advisory Committee

Meeting minutes – February 10, 2017

MINUTES

Genetic Conservation Technical Advisory Committee

Budget Meeting Febr. 10, 2017, Meeting held online from 11 am – 1 pm.

Attending:

GCTAC members: Pia Smets (Chair), Tongli Wang, Charlie Cartwright, Dave Kolotelo, Sally Aitken, Michael Murray, Alan Vyse

Others attending: Jack Woods, Brian Barber

Not present: Alvin Yanchuk, Tory Stevens, Andreas Hamann, Jun-Jun Liu

Process followed: before the meeting, funding proposals were solicited from inside the GCTAC with the request to explicitly state the FGC goals they address and how they fit in the GCTAC strategic plan 2015-2020. Four proponents sent in budget proposals: Dave Kolotelo TSC; Charlie Cartwright TIB; Sally Aitken CFCG; Michael Murray - Ministry PATHologist. All attendants agreed on the following A, B and C scenarios (without vote):

	approved 2016-17	<u>Strategic</u> annual	<u>Plan</u> 2015-2020	option A requested 2017-2018	option B requested 2017-2018	option C requested 2017-2018
			ex-situ collXns +			
TSC	\$ 38,000	\$ 40,000	seed bank mgt.	\$ 45,000	\$ 40,000	\$ 38,000
TIB	\$ 40,000	\$ 40,000	TIB program work	\$ 43,500	\$ 42,500	\$ 37,500
Path	\$ 19,450	\$ 30,000	TIB program work	\$ 32,000	\$ 29,000	\$ 24,000
CFCG	\$ 91,250	\$ 110,000	CFCG	\$ 146,158	\$ 126,158	\$ 108,658
		\$ 30,000	other			
total	\$ 188,700	\$ 250,000		\$ 266,658	\$ 237,658	\$ 208,158

Some notes to the proposed budget

- Conform our (GCTAC) strategic plan
- Most of the work is ongoing projects, limited scope for new projects
- “Large” request for WBP (whitebark pine) is both justified and temporary.
- Two large ongoing WBP projects are not overlapping:
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Brian Barber requested that the itemized budget be re-sorted by activity instead of by proponent.

Action item: Pia will do this.

Meeting closed at 1 pm.

Minutes by Pia Smets.

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Activity	(A)	(B)	(C)
Genetic Conservation catalogue	\$ 74,063	\$ 74,063	\$ 59,063
1. Update of Catalogue (new dB)	\$ 59,063	\$ 59,063	\$ 59,063
2. Evaluation of modelling approach	\$ 15,000	\$ 15,000	\$ -
Ex Situ Conservation	\$ 46,000	\$ 40,000	\$ 38,000
3. Contract for Field Collections of seed. Non-timber species for ex situ conservation in the seed bank.	\$ 30,000	\$ 27,000	\$ 25,000
4. Seed Bank management: labour for nondestructive Sample Testing of moisture content and Drying	\$ 15,000	\$ 13,000	\$ 13,000
5. Maintenance of ex-situ reserve at Cowichan.	\$ 1,000	\$ -	\$ -
Research	\$ 59,595	\$ 39,595	\$ 9,595
6. Evaluate whitebark pine assisted migration trial	\$ 30,000	\$ 30,000	\$ -
7. Seaside juniper genecology	\$ 20,000	\$ -	\$ -
8. Garry Oak Genecology trial (maint.)	\$ 2,095	\$ 2,095	\$ 2,095
9. Adaptive diversity in seed orchard lots (AdapTree)	\$ 7,500	\$ 7,500	\$ 7,500
Extension / General CFCG	\$ 12,500	\$ 12,500	\$ 10,000
10. Extension	\$ 2,500	\$ 2,500	\$ 1,250
11. Minor supplies	\$ 2,500	\$ 2,500	\$ 2,500
12. Data management, website updating	\$ 7,500	\$ 7,500	\$ 6,250
Conservation of species at risk	\$ 74,500	\$ 80,500	\$ 61,500
13. Identifying Disease-resistance for Whitebark Pine (year 4 of 6)	\$ 32,000	\$ 29,000	\$ 24,000
a. Seed Extraction & Stratification, Propagate	\$ 9,000	\$ 9,000	\$ 9,000
b. Nursery (labeling, transplanting, maintenance, health assessments)	\$ 16,000	\$ 15,000	\$ 10,000
c. Travel	\$ 1,000	\$ 1,000	\$ 1,000
d. Supplies	\$ 2,000	\$ 1,000	\$ 1,000
e. Field trial assessments (Sale Mtn, Idoha Pk, Puddingburn Mtn)	\$ 3,000	\$ 3,000	\$ 3,000
f. Verbenone treatment of parents	\$ 1,000	\$ -	\$ -
14. Field Testing of Whitebark Pine (year 5 of 9-year project)	\$ 42,500	\$ 42,500	\$ 37,500
a. nursery contract for second year of 2-0 seedlings	\$ 12,700	\$ 12,700	\$ 12,700
b. Plant seedlings in 4 field tests and 1 LT nursery trial	\$ 24,800	\$ 24,800	\$ 24,800
c. Whitebark parent tree marking and stand rust hazard assessment	\$ 5,000	\$ 5,000	\$ -

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At the request of Brian Barber, Pia re-sorted budget lines grouping them by Activity. The resulting budget was sent out on Febr.24. Voting by e-mail closed Mar.3, 2017. In favour: 9. Abstained: 2.

Notes to budget:

1. Ongoing. Species distribution maps for 42 tree species in BC; assessment of current and future in situ genetic conservation. Mainly involves incorporating new, updated versions of 3 databases: BEC zones; BEC plot and VRI data; and protected area coverage. Not updating genetic conservation status and progress indicator leads to using outdated information. Maintain continuity for CFCG (Assoc.Dir.)
 2. New. Salary for Research assistant/technician to validate modelling approach outcomes for rare species and consult local experts. (Focusing on those cells of the grid where it matters most!)
 3. Ongoing. Ex situ seed collections by contract. Gradually filling the matrix of BEC zones * species for non-timber species (~112 cells), as a back-up for in situ conservation. ~13 collections annually, as opportunity and seed years allow. Target: at least one and up to 3 collections per cell to ensure maintenance of adaptive variation in case of catastrophic decline.
 4. Ongoing. By contract. To ensure successful long-term storage of previously made conservation collections. Nondestructive testing of small samples has a backlog, which can now be addressed thanks to recently acquired equipment.
 5. Maintenance item. Brushing of yew ex-situ reserve.
 6. "new" One-year only. These trials established in 2007-2008, last visited in 2010. This is a follow-up visit to evaluate survival and growth. Sites are remote. Time-sensitive: Markers and tags risk being lost over time. Will also observe for any symptoms of blister rust. Results (survival observations) will feed in to CBST guidelines for whitebark pine, which is also at risk due to climate change.
 7. New. CFCG has not started a new conservation genetics project since 2010. Sample populations for common garden; MSc student for 7 months
 8. Maintenance. Must pay land rental or destroy trial.
 9. Ongoing, but FINISHING. Compare class A/B seedlots re. climate adaptation and genetic diversity (I. MacLachlan 3 months). Need to complete recommendations and publications from long-term project.
 10. Ongoing: travel to meetings, outreach.
 11. Ongoing: office, lab and computing.
 12. Ongoing: large website needs periodic updating
- Sadly, all UBC items seem expensive because they include the 25% overhead charged by UBC. We have TWO whitebark pine projects that are long-term and ongoing:
- 13: Michael Murray (ongoing) (year 4 of 6)
- Priority: providing disease-resistant planting material in the near future. 20 families overlap with WBP field testing trial (item14), potential to include more in inoculation tests.
- a. Seed collections from putatively resistant trees provided by collaborators. Intake 40 new families per year. Excess families stored at TSC. Grow 2-0 seedlings - commercial contract.
 - b. Artificial inoculations and follow-up health assessments for up to 5 years by specialized personnel. Labour intensive.
 - c. to field sites, nursery
 - d. -
 - e. check whether results from inoculation trials hold up in the field: trials were established with the same families but non-inoculated seedlings.
 - f. preserving parent trees as seed sources saves years on establishing a seed orchard (which will still be needed in the long term)
14. Charlie Cartwright : ONGOING (year 5 of 9) complementary with 13 but not a repetition of it!

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Evaluate long-term resistance to blister rust in the field and evaluate GxE / impact of climate change / develop Climate Based Seed Transfer Guidelines. 20 families overlap with WBP inoculation trial (4).

However, more families from a much larger region in these field trials. No artificial inoculations here.

a. if not paid, investment in seedlings is lost. uncertain germination of WBP leads to excess stock if job well done: we ask other agencies to pay for establishment of extra trials (eg, Alberta, Parks) and/or sell excess stock to recover costs.

b. This is the second and last of 2 series of test sites. 25 families overlap between the two series.

Collaboration with several other agencies. In the next 4 years, costs will be focused on site maintenance and health assessments on site (lower costs).

c. re-mark original seed trees to enable later seed collections from desirable parents (save time on seed orchard). Time-sensitive: prefer to use same contactor who did seed harvest for efficiency. 1/3 of this total marking work done last year (for 5K).

Summary of activities:

ONGOING: ex-situ collections; catalogue work; extension through the CFCG website

Even within the WBP projects, 2 of 3 are ongoing efforts where previously approved projects should be completed (plants grown should now be planted).

JUSTIFIED (amount and timing):

1. The largest part of the range of WBP occurs in BC.
2. once federal funding for this species at risk becomes available, any action will depend on the availability of rust-resistant planting material
3. supporting rust resistance testing is pivotal and the testing takes several years.

TEMPORARY:

1. WBP field trial will finish installation of the second test series and future costs will be reduced to maintenance and observation
2. Revisiting the “assisted migration” trial is a one-season-only effort. Yet we consider it ‘urgent’ because we risk losing the markers if we wait longer...

Catalogue: this work was returned from ministry to CFCG where it was originally developed.