

2014

Silviculture Field Report



On behalf of the Forestry
Futures Committee



INTRODUCTION

The Forestry Futures Trust (FFT) has distributed over 180 million dollars in support of eligible silviculture projects on Ontario's Crown forest lands since it was established in 1995. Although Forestry Futures Committee (FFC) members have visited a number of the projects from inception through to completion on an ad-hoc basis, there has been no formal field evaluation. Initiated in 2013, a structured field inspection plan was designed to:

1. Document the success or failure of a funded project.
2. Provide an opportunity to discuss challenges encountered in completing the project with the proponent or forest manager.
3. Identify lessons learned from implementing the planned treatments.
4. Evaluate opportunities to implement similar projects under similar conditions.
5. Produce a summary report of funded FFC silviculture project accomplishments.

The sampling design was focus-based, not random, in order to meet the following requirements:

- address projects where project objectives are linked to concerns raised in an Independent Forest Audit
- capture projects funded under the Job Stimulus program (Round 29).
- capture older projects (visit the early projects from the 1990's and 2000's),
- represent the three Ministry of Natural Resources and Forestry Regions (NW, NE, S),
- inspect projects that received large investments of capital, and,
- represent three broad treatment types: disturbance renewal, spacing treatments, and stand conversions

Year 2 of the program targeted a field visit to six projects. The original project applicants and/or current forest managers were contacted to participate in the field visits and to provide background information to supplement the information documented in the FFT Final Project Work Reports. Sarah Bros carried out the site visits and provided photographs, accompanied on occasion by one of the FFC members and/or Tracey Bradley. Anastasia Frisby provided editorial review and final document formatting. Thanks are extended to all of those individuals who provided background documentation, logistical support, and editorial review for this project.

Summaries of the site visit field notes are provided in the following section.



FIELD NOTE SUMMARIES

Job Stimulus Projects

1. Project 721-2-R29: *Planting areas originally scheduled for aerial seeding, Spanish Forest, Domtar Inc., 2010 (\$300,000 invested)*

As part of the 2010 Silviculture Job Stimulus Program funding made available, this 1.2M tree, 600 ha project was planted to jack pine in lieu of aerial seeding and is nearing free-to-grow status. Future thinning may be required due to high densities from natural ingress.



Photo 1: Planted jack pine showing high densities due to natural ingress.

Based on observations in the field and a brief assessment of stocking, this project has achieved silvicultural success (T. Bradley, R.P.F.).

2. Project 736-2-R29: *Washagami budworm salvage renewal, Sudbury Forest, Vermillion Forest Management Company Inc., 2010 (\$138,884 invested)*

This project's renewal is thriving with densities in the 2500 -3000 trees/ha range, covering 234 ha. Jack, red and some white pine was planted and tending was applied where required as an applicant contribution, to ensure success. Natural white pine ingress was also noted. Discussions surrounding tending and monitoring for tending provided good insight and confidence that Forestry Futures projects on this license are monitored extensively and treated post-project as needed.



Photo 2: Planted seedlings through the cutover

Based on observations in the field and an assessment of stocking, this project has achieved silvicultural success in most areas and those areas requiring tending are being monitored appropriately (T. Bradley, R.P.F.).

3. Project 755-1-R29: Incremental softwood regeneration, Trout Lake Forest, Domtar Inc., 2010 (\$229,000 invested)

This project involved two types of “intensification” treatments as part of the 2010 Silviculture Job Stimulus Program funding. One block was originally intended for seeding treatment, and the second was to be left for natural regeneration towards a mixed wood condition. A field visit by Domtar’s silviculturalist revealed that the site was better suited to planting, and as a result the treatment was revised and both blocks were planted to jack pine with targeted areas of black spruce and red pine. Over 513,000 current crop stock were planted on 466 ha of site and non-site prepared areas.



Photo 3: Planted red pine



Photo 4: Planted black spruce



Both survival and growth of the over-wintered and current crop seedlings planted on the site is good. Based on observations in the field and an ocular assessment of stocking, this project has achieved silvicultural success. (S. Bros, R.P.F.)

4. Project 760- 2-R29: Ottawa Valley Forest- Silviculture Job Stimulus, Ottawa Valley Forest, Ottawa Valley Forest Management Inc. 2010 (\$156,608 invested)

This project site prepared and tree planted to increase the representation of desirable species (white pine, red pine and red oak) in the future forest. A fall tree plant was completed on sites that were subjected to natural disturbance and subsequent salvage. A fall tree plant was also served to intensify silvicultural efforts on sites originally designated for natural regeneration.



Photo 5: Planted red and white pine in the foreground

During the site visit we completed a few stocking plots. The informal data were compared with FTG and regeneration assessment results included in the site visit booklet. Based on this information the plantations are tracking towards a conifer forest unit as defined in the current FMP for the Ottawa Valley Forest. (S. Bros, R.P.F.)



Stand Conversion Projects

5. Project 298-1-R8: *White pine ecosystem restoration, Ottawa Valley Forest, Ottawa Valley Forest Management, 1999-2001, (\$ 216,116 invested)*

This project continues an ongoing effort to restore white pine forest ecosystems in the Ottawa Valley Forest to historical levels through the rehabilitation of 531 ha of backlog Not Satisfactorily Regenerated (NSR) areas. Company representatives explained that more residual conifer, if left standing, may have lessened the weevil and blister rust problems. The areas during the site visit did not display extensive blister rust or weevil damage



Photo 6: Observed lack of seed trees in canopy and mid-canopy

The Ottawa Valley Forest is comprised of difficult terrain and there are many sites that present operational challenges for harvesting but more so for silviculture. There is a historic harvest legacy resulting in many stands that cannot be operated under the normal shelterwood system. In spite of that, reality coupled with the social issues and Species at Risk, the company has managed to improve the conifer component on the Forest. Based on field observations this project is a success. (S. Bros, R.P.F.)



**6. Project 299-1-R8 :*Offsite hardwood stand conversion to white pine and white spruce*
French Severn Forest , Westwind Forest Stewardship Inc., 1999-2002 (\$54,340
invested)**

This project converted historically high graded sites that lacked silvicultural activities in past decades. This project targets stands that once grew quality white spruce and white pine now supporting only scattered white pine and white spruce with balsam fir and poor quality hardwoods dominating the stands. It is bringing back the white spruce and white pine and restoring the quality wood producing potential and thus increase the availability of these forest types.



Photo 7: Barry Davidson among the red pine, white pine and white spruce regeneration

Not all of the sites visited were planted to a species mix. Some areas were planted to pure species as site and stock warranted. At all of the stops, regeneration was successful with the exception of one site that was infected with sawfly two years ago to the extent that much of the planted red pine has died.

Informal stocking plots done at each stop indicate that silvicultural success in every area with the exception of 2 plots was in the range 80% stocked to the desired species; white pine, red pine, white spruce and red oak. The project is growing what probably grew on site 200 years ago and will contribute positively to the forest economy and the wildlife habitat. From that perspective the project is a success (S. Bros R.P.F.)



SUMMARY

The site visits provided an opportunity for both the FFC and the SFL and/or MNR forest managers to return to past projects to view the response of the Silviculture Job Stimulus Program funded projects and other projects that targeted degraded forests. The projects used current crop seedlings and this provided opportunity to evaluate the success of these seedlings. The degraded stand improvements provided an opportunity to view the successes and/or failures and lessons learned. The site visits provide a valuable step in assessing a project from planning through to treatment response. The FFT Site Visit Project was well received by both SFL and MNR project proponents. The FFC has decided to continue these site visits in 2015 as part of their due-diligence in administering the FFT Silviculture Component.