2015

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 3 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. Aaron Dorland and Sarah Bros carried out the site visits on behalf of FFC and provided photographs and were accompanied on occasion by FFC members. 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.



Job Stimulus-Projects

1. Project 762-2-R29: *Dungannon/Mayo Blowdown Rehabilitation,* Bancroft Minden Forest, Bancroft Minden Forest Company Inc., 2009-10 (\$123,500 invested)

As part of the 2010 Silviculture Job Stimulus Program funding made available this 78ha, 155,000 tree project was planted to white and red pine. The area was salvaged and mechanically and partially chemically site prepared following a 2009 tornado.



Photo 1: Red pine regeneration.

Based on observations in the field and a cursory assessment of stocking, the current crop illustrates successful regeneration but there are signs of a current red pine sawfly infestation (S Bros RPF)₇



Stand Improvement Projects

2. Project 284-1-R8:-*Martel thinning project,* previous J.E. Martel Forest, Domtar Inc., 1999-2001, (\$ 197,247 invested)

This project proposed to carry out thinning on jack pine regeneration in selected areas. The field visits revealed successful release of the now 30-35 year old trees. The thinning of the stand occurred prior to 2001. The stand is a pine/spruce mix. Some areas of the project were actually plantations, while others were aerially seeded. During the site visit it was noted that the project may have had a manual tending component based on stumps of hardwood species of the same age as thinned trees. The forest has changed licensee since the project was closed, so there was no staff from the original project available to discuss further details of the project.



Photo 2: Site photo of successful release of the now 30-35 year old trees.

Based on field observations this project is a success but it is recommended that future reports include before and after photographs. (S. Bros, R.P.F.)



3. Project 549-1-R20: *Pre-commercial thinning of jack pine,* formerly Superior Forest, Tembec Industries Inc., 2005 (\$231,497 invested)

This project manually pre commercial thinned 10 year old jack pine. Initial densities were as high as 11,000 stems/ha thinned to a range of 1,800 – 2,400 stems/ha. A total of 654 hectares were thinned using brush saws. Based on the positive growth response of crop trees, the thinning treatment has had a positive effect on stand volume.



Photo 3: Thinning occurred 10 years ago



Photo 4: The impact of the timing of the year 10 thinning is clearly illustrated by increase in tree diameter. The remaining trees have more than quadrupled in diameter compared to pre-thinning

Based on field observations this project is a success and funds well invested. (S. Bros, R.P.F.)



Remediation Projects

4. 495-2-R18: *Rehabilitation Project: Sioux Lookout Fire SL48,* Lac Seul Forest, Mackenzie Forest Products Inc., 2003-2006 (\$1,089,048 invested)

This project rehabilitated the area spanning over 25,000 ha of stands, cutovers and plantations. Satellite imagery was used to aid in the navigation and application of aerial seed. The majority of the project was regenerated to pure jack pine stands. This projects has been declared Free-to-Grow.



Photo 5: Presents a panorama of the project looking east to west from the midpoint of the project



Photo 6: The density of the seeded areas typically observed throughout the project

Based on field observations of seeding and planting efforts, this project is a silviculture success. (S. Bros, R.P.F.)



5. 564-2-R21: *Blowdown Salvage Area Renewal,* Lakehead Forest, Greenmantle Forest Inc., 2005-2006 (\$152,057 invested)

This project regenerated blowdown salvage areas through mechanical site preparation and tree planting for the purpose of rapid forest establishment and contribution to the future conifer wood supply. Regeneration surveys of the area (including free-to-grow data) was made available to Forestry Futures for this project.



Photo 6: Red pine plantation with white birch ingress



Photo 7: Red pine plantation

Based on field observations of this was a successful project. All areas visited were well stocked with healthy trees. Monitoring and application of tending treatments by the company was beneficial to this project. This wind storm damaged area is expected to return to a productive forest as a result of this project. (A. Dorland, R.P.F.)



6. 640-2-R24 : *Renewal of 2002 Poplar Decline Area,* Abitibi River Forest (formerly Cochrane-Moose River Forest), Tembec Industries Inc., 2006-2011 (\$47,129 invested)

This project renewed 40ha of intolerant hardwood dominated stands that had been repeatedly decimated by tent caterpillar infestations. The area was site prepared, herbicide applied and a predominantly white spruce plantation established.



Photo 8: Predominantly conifer mix stand with evidence of poplar, white birch, white spruce and balsam fir residuals

Based on observations in the field and a cursory assessment of stocking, it appears all of the trees planted have survived and are growing well. The project was initiated as a stand conversion to conifer. This project will achieve regeneration success but it is not clear whether silviculture success will be achieved (S Bros, R.P.F.)

The FFC is planning to continue the site visits in 2016/17 with both current and closed project.