

Beetle survival success varies within, across regions

Central Alberta

Survey results show slightly lower beetle success compared to last year, primarily due to a large area around Lesser Slave Lake where beetle success was low, indicating a decreasing population. However, there were several patches of highly and moderately successful beetle populations in the region, and one pocket of extreme beetle success northwest of Edson. Population success is still moderate to high over a significant portion of the region, indicating a static to increasing population. There is a moderate risk of beetles flying in from British Columbia or from infestations in the Grande Prairie area this summer. Central Alberta remains a high priority for control work in 2014-2015 due to the region's large volume of pine and potential for the infestation to spread.

Northwest Alberta

Beetle survival was moderate to high in the region, indicative of a static to increasing population. However, there are some small patches of extremely successful beetle survival south of Grande Prairie and west of Manning and mature pine trees are at a high risk of attack from locally-reproducing populations. There is moderate risk of inflights of beetles into northwest Alberta from adjacent infested areas in British Columbia this year, and portions of the region remain a high priority for control work in 2014-15.

Southern Alberta

No surveys were conducted in this area this year, due to the low number of beetle-attacked trees in the region. Local beetle populations plummeted in 2010, thanks to aggressive control efforts and cold winter temperatures. However, there is a continued high to moderate risk of inflights from British Columbia for the next few years and the region has a large volume of susceptible pine. Southwest Alberta remains a high priority for detection surveys and control work during 2014-15.

Mortality surveys help set program priorities

- Infestations began in west-central Alberta in 2006, following a wind-assisted in-flight of insects from British Columbia, and in southwest Alberta in 2002. Alberta's beetle control program was effective in reducing the number of beetle-attacked trees in the region until a second large in-flight in 2009.
- Objectives of the beetle management program are to prevent infestations spreading north and south along the eastern slopes, and further eastward in the boreal forest.
- Current control efforts are aimed at local resident beetle populations.
- Alberta's spring mountain pine beetle mortality survey operations took place this year from mid-May to mid-June. Surveys were conducted at 100 sites across the province's pine forests.
- Surveys measure the proportion of live larvae and adults compared to the number of beetles that attacked the tree in July and August of the previous calendar year.
- Survey sites were selected based on geographic distribution, pine susceptibility and access. Samples collected during the surveys were processed in laboratories and a population forecast was calculated for each site.
- The forecast indicates how successfully beetle populations will grow following beetle flights this July and August. The population forecast survey does not account for any potential in-flights of beetles from British Columbia, federal mountain parks or heavily infested areas of Alberta.
- Survey results will be used to help set the beetle control priorities for the coming year. Other factors that are taken into consideration when setting program priorities are:
 - susceptibility of the stand;
 - connectivity of the stand in relation to other pine stands;
 - number of infested trees;
 - location of the trees relative to the potential spread south along the eastern slopes and east through the boreal forest; and
 - in-flights from other jurisdictions.
- Significantly cold winter ambient temperatures of minus 40 and below, at the right stage in the beetle life cycle, can cause significant levels of mortality.