STANDARD 3

Reforestation and Afforestation

Landowner completes timely restocking of **desired species** of trees on a r**egeneration harvest** site and nonstocked areas where tree growing is consistent with land use practices and the **landowner's objectives**.

PERFORMANCE MEASURE 3.1

Reforestation or afforestation shall be achieved by a suitable process that ensures adequate stocking levels.

Indicator 3.1.1

Reforestation or afforestation shall achieve adequate stocking of **desired species** reflecting the **landowner's objectives**, within five years after **regeneration harvest**, or an appropriate time frame for local conditions, or within a time interval as specified by applicable regulation

GUIDANCE

The **landowner** or **designated representative** should ask his or her **qualified natural resource professional** or check with the state agency responsible for forestry assistance to find out if there is a reforestation law in place, and if so, to ensure compliance with it.

Federal and state reforestation programs may provide guidance regarding adequate stocking levels that **landowners** may utilize as a reference to support management. However, certain wildlife habitat management regimes may favor lower stocking rates than the cost-share program or silvicultural guidelines do. Therefore, it is important to make sure the chosen guidelines fit the forest conditions and are consistent with **landowner objectives**.

Natural regeneration stocking assessments should account for both softwood and hardwood regeneration and should take place within the normally accepted time frame for local conditions.

For reforestation and afforestation, use of native and **naturalized** species and local provenances that are well-adapted to site conditions is preferred, where appropriate. A **plantation** may be established to add economic value and/or **ecosystem services**. If nonnative species are selected, **landowner** should consult or seek guidance from **qualified natural resource professionals**, such as agencies, academic institutions or professional associations, to ensure that potential negative impacts on the ecosystem and on the genetic integrity of native species and local provenances have been evaluated, and to determine whether negative impacts can be avoided or minimized. **Landowners** should avoid use of **invasive species** in **reforestation** and **afforestation** efforts.

Afforestation within an ecologically important non-forest ecosystem, such as a peatland, is likely to be extremely low. A landowner should consult a **qualified natural resource professional** to ensure that **conversion** of non-forested ecosystems to forest does not have a long term negative impact on the ecology.

The potential use of biotechnology and genetically modified trees is an evolving issue in US regulations and the field of forestry in United States. Genetic engineering may offer new opportunities for the restoration of species, such as the American chestnut, and other potential benefits for the resilience of forests. AFF recognizes that much research is still being conducted to study the ecological cost and benefits of genetically engineered trees and regulations concerning forest biotechnology continue to evolve. Research is ongoing and AFF will continue to monitor emerging scientific developments in this area, adjusting guidance for the ATFS Standards, where appropriate.

Use of **genetically modified trees** is limited to very specific applications of species restoration, in accordance with federal regulations. As such, use of **genetically modified trees** by family landowners in the US is likely to be extremely low during the implementation period of ATFS 2021 Standards. However, use of genetically modified trees is not supported under these standards, reflecting conformance with PEFC requirements, which endorses the ATFS certification program. Most tree farmer collaborators with The American Chestnut Foundation deploy stock that was developed using traditional backcross hybrids that are not considered genetically modified trees and are acceptable.