Black Hills National Forest Timber Sustainability

Frequently Asked Questions (FAQ's)

Q: Why did the working group request the double-intensity sampling for 2017 and 2018?

A: The Forest Service, timber industry and Wyoming and South Dakota State Foresters' offices asked the Forest Service Research and Development Forest Inventory and Analysis scientists to conduct double-intensity sampling on the Black Hills National Forest in 2017 and 2018 and accelerated base-plot sampling in 2019 instead of the usual 10-year period sampling. Double-intensity sampling, combined with accelerated base-plot, establishes a more accurate picture of the forest to help make more well-informed decisions about the future of the commercial timber program.

Q: Where can people go to access the data?

A: The Collaborative Forest Inventory Analysis Data Summary is available in Microsoft Excel format and includes 15 tables, which address the questions posed by the 2017 working group.

Additionally, a customized version of the Evalidator tool is available for advanced queries of the Black Hills National Forest data.

The data summary, data access tool, and other documentation are available at https://usfs-public.box.com/v/BlackHillsFIAData.

Q: What are the benefits of the harvesting timber from the Black Hills National Forest?

A: Timber harvests on national forests and grasslands in Wyoming support approximately $14 million in labor income. Timber harvests on national forests and grasslands in South Dakota support approximately $58.5 million in labor income and $69.2 million to the gross domestic product.

Q: How is public input being considered for the Draft Black Hills Timber Growth and Yield General Technical Report?

A: Publication reviews, including blind, peer, technical, editorial, and in this case public, are essential for research organizations to discover and develop credible science that can be used to inform law, policy, and management. In addition to the normal technical and editorial reviews for publications, the USDA Forest Service (USFS) provided an opportunity for interested parties, the public, and tribes to review and provide written comment on this draft research publication from March 15 to May 1, 2020.

The draft general technical report, comment form, and peer review plan were all made available through the Rocky Mountain Research Station website. The Black Hills National Forest sent information and the website link to interested publics, stakeholders, and tribal representatives.

The USFS received over 325 comments. As each comment is considered, suggestions may be incorporated fully or in part into the final document, or may be deemed outside the scope. A reconciliation report will document how each comment was addressed in the final general technical report, which is expected by fall 2020.

Q: Will additional scenarios to timber be considered?

A: The scenarios used in the Draft Black Hills Timber Growth and Yield General Technical Report (GTR) were developed in consultation with the leadership of the USDA Forest Service Rocky Mountain Region and Black Hills National Forest. A range of scenarios were designed to address

current 2019 forest conditions, estimate sustainable harvest levels based on historic tree mortality and growth rates, and determine the standing volume necessary to produce a certain level of sawtimber. The six scenarios cover a wide range of possible harvest and mortality conditions. Scenarios may be modified, further explained, or otherwise reconciled in response to review comments and carried forward into the final GTR. The final GTR can provide the basis for developing additional scenarios, if the Black Hills National Forest, through future stakeholder discussions, determines additional scenarios would be useful.

Q: What answers are the Forest Service and stakeholders hoping to find?

The work performed by the agency answer the following questions about the forest:

1. What is the standing live volume estimate?

    a. Total volume on timberlands

    Ponderosa pine ≥ 5 inches dbh = 11,544,243 CCF
    Ponderosa pine ≥ 9 inches dbh = 8,648,666 CCF

    b. Total volume on timberlands suitable base

    Ponderosa pine ≥ 5 inches dbh = 7,958,314 CCF
    Ponderosa pine ≥ 9 inches dbh = 5,995,428 CCF

    c. Total volume on timberlands by diameter class

Ponderosa pine ≥ 5 inches dbh

5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9
387,682	1,147,496	1,589,743	1,755,853	1,671,683	1,664,142	1,260,366

19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0-30.9	31.0-32.9	All classes
978,167	648,681	206,894	74,733	78,106	35,350	45,347	11,544,243

Ponderosa pine ≥ 9 inches dbh

					Diameter class							
9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	29.0-30.9	31.0-32.9	All classes
1,172,387	1,429,661	1,447,730	1,497,293	1,159,779	913,582	610,813	195,746	70,877	74,146	33,574	43,077	8,648,666

d. Total volume on timberlands suitable base by diameter class

Ponderosa pine ≥ 5 inches dbh

					Diameter class							
5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	All classes
273,822	753,614	1,071,112	1,182,942	1,127,835	1,203,750	932,874	699,122	520,846	112,553	54,632	25,211	7,958,314

Ponderosa pine ≥ 9 inches dbh

				Diameter class						
9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	All classes
789,636	961,532	976,804	1,083,564	858,356	652,932	490,381	106,478	51,813	23,932	5,995,428

2. What is the annual gross growth estimate?

   a. **On timberlands**

      Ponderosa pine ≥ 5 inches dbh = 247,141 CCF
      Ponderosa pine ≥ 9 inches dbh = 201,145 CCF

   b. **Within the suitable base**

      Ponderosa pine ≥ 5 inches dbh = 185,049 CCF
      Ponderosa pine ≥ 9 inches dbh = 150,694 CCF

   c. **By diameter class on timberlands**

Ponderosa pine ≥ 5 inches dbh

						Diameter class						
5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	All classes
1,727	19,422	20,849	26,960	29,304	70,560	17,380	17,238	35,881	7,213	-17,483	18,090	247,141

Ponderosa pine ≥ 9 inches dbh

				Diameter class						
9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	All classes
16,714	22,077	24,928	63,725	16,203	16,253	33,824	6,827	-16,580	17,174	201,145

   d. **By diameter class in suitable base**

Ponderosa pine ≥ 5 inches dbh

						Diameter class						
5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	All classes
2,034	13,247	20,391	22,209	24,945	43,247	14,837	7,199	30,511	6,857	-8,140	7,712	185,049

Ponderosa pine ≥ 9 inches dbh

				Diameter class						
9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	All classes
16,327	18,114	21,519	39,207	13,828	6,841	28,762	6,489	-7,715	7,322	150,694

   e. **What is the annual gross growth projection (commercial) for the next decade?**

      See various scenarios in Graham, R. and Battaglia, M. 2020. Timber Growth and Yield Report in a Changing Forest. Forest Service, Rocky Mountain Research Station. Fort Collin, Colorado.

3.   What is the annual net growth estimate?

   a. On timberlands

   Ponderosa pine ≥ 5 inches dbh = -94,558 CCF
   Ponderosa pine ≥ 9 inches dbh = -54,328 CCF

   b. Within the suitable base

   Ponderosa pine ≥ 5 inches dbh = -59,654 CCF
   Ponderosa pine ≥ 9 inches dbh = -27,715 CCF

   c. By diameter class on timberlands

Ponderosa pine ≥ 5 inches dbh

Diameter class												
5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	All classes
-5,640	-15,866	-29,502	-38,428	-27,181	17,636	-13,094	-9,764	35,881	-2,614	-17,483	11,496	-94,558

Ponderosa pine ≥ 9 inches dbh

Diameter class										
9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	All classes
-20,505	-31,081	-23,802	16,169	-11,850	-8,946	33,824	-2,472	-16,580	10,915	-54,328

   d. By diameter class in suitable base

Ponderosa pine ≥ 5 inches dbh

Diameter class												
5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	All classes
-3,846	-15,629	-20,360	-28,131	-13,052	11,000	2,389	-12,544	30,511	-2,970	-8,140	1,118	-59,654

Ponderosa pine ≥ 9 inches dbh

Diameter class										
9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-22.9	23.0-24.9	25.0-26.9	27.0-28.9	All classes
-13,760	-22,848	-11,354	10,205	2,339	-11,597	28,762	-2,810	-7,715	1,063	-27,715

   e. What is the annual net growth projection (commercial) for the next decade?

   See various scenarios in Graham, R. and Battaglia, M. 2020. Timber Growth and Yield Report in a Changing Forest. USDA Forest Service, Rocky Mountain Research Station. Fort Collin, CO.

4.   What is the net growth to removal ratio?

Species & Diameter Limit	Inventory CCF	Net Growth CCF	Harvest Levels CCF	% Net Growth of Inventory	% Removal of Inventory	% Change in Inventory
a. Within the suitable base						
Ponderosa pine ≥ 5 inches dbh	7,958,314	-59,654	183,592	-0.7%	2.3%	-3.1%
Ponderosa pine ≥ 9 inches dbh	5,995,428	-27,715	153,534	-0.5%	2.6%	-3.0%
b. Within timberlands						
Ponderosa pine ≥ 5 inches dbh	11,544,243	-94,558	191,387	-0.8%	1.7%	-2.5%
Ponderosa pine ≥ 9 inches dbh	8,648,666	-54,328	159,713	-0.6%	1.8%	-2.5%

5.   **What is the ability to produce an available sustained yield on the Forest (timberlands/suitable base) for the next decade?**

Analysis indicates there are less than 6 million hundred cubic feet (CCF) of standing sawtimber volume on Black Hills National Forest suitable lands. Continued harvest at the recent level of 181 thousand CCF of sawtimber annually would deplete a significant portion of standing and projected sawtimber volume. The report suggests the harvest level may need to be adjusted because of growing stock depletion and a probable historic and long-term mortality rate of 1.0%. Depending on estimated growth and mortality rates, the report suggests a sustainable harvest would be in the range of 70 to 115 thousand CCF annually through the next several decades. Even at a lower harvest level, it would take over a century for the standing inventory to return to a level that would support a harvest of the current allowable sale quantity of 181 thousand CCF of sawtimber per year.

An open and transparent process with robust public involvement is critical to our success.

Forest Service representatives, timber industry representatives, Wyoming and South Dakota state foresters, environmental group representatives, retirees, National Forest Advisory Board members and other interest groups will discuss the data, report, and a collaborative path forward during a meeting on April 3.

a.   **What is the methodology for producing this estimate?**

A team of Forest Service scientists used an intensified Forest Inventory and Analysis sampling grid to assess the current trends in ponderosa pine standing volume, growth, and mortality over the past several years. A separate team of Forest Service scientists used the FIA data to develop a draft general technical report, which outlines a series of harvesting scenarios to provide estimates on timber harvests for the Black Hills National Forest.

Q: Was the analysis limited to parts of the forest or to the entire forest?

A: Scientists drew samples from across the entire forest, including South Dakota and Wyoming. Scientists targeted Black Hills National Forest-owned land. The sample area includes both the base samples and intensified samples.

Q: Was the double-intensity data specific to looking at ponderosa pine or other species?

A: Specific species are not targeted by the forest inventory and analysis work. Plot visits merely reflect sampling points on which a protocol is implemented at a specific point in time. Therefore, all recognized species are tallied, including any spruce species. The draft general technical report focuses on ponderosa pine sawtimber.

Q: Why are you releasing the Rocky Mountain Research Station draft general technical report before it is peer-reviewed and finalized?

A: There is significant interest in the draft document, and the Forest Service felt it was important to share the initial results of the data analysis rather than wait until the document is finalized. Sharing the draft allows for more dialogue with the timber industry, the states and others. The release also allows for public review and comment.

Q: What is the review process like for the Rocky Mountain Research Station and draft report?

A: Research conducted by federal agencies is subject to the Data Quality Act, also sometimes referred to as the Information Quality Act. The act requires agencies to have guidelines to ensure quality, objectivity, utility and integrity of scientific information. Blind peer review is one method of ensuring the rigor and validity of the scientific analysis. The authors do not know who the reviewers are to ensure the objectivity of the review. The draft document will use a five-pronged method of review:

o Rocky Mountain Region leadership and staff internally review and comment on the initial draft document. This step is complete.

o Three technical reviewers review the initial draft GTR and offer comments on the research supporting the findings. This step is complete.

o At least three external experts will review the draft in a blind peer review.

o Stakeholders were given an opportunity to review the draft document in advance of the April 3, 2020 Black Hills stakeholder meeting and asked questions during the session. The review period was extended following this meeting and further outreach was conducted. The draft was made available for public comment in mid-March through May 1, 2020.

o Stakeholders and the public were given the opportunity to provide written comments on the draft document, and reconciliation of comments will be posted in accordance with Data Quality Act reporting requirements.

Q: Concern about sustainability around timber harvest is not new. How is the Forest Service looking at the issue now?

A: The Forest Service remains committed to supporting the timber industry and local mill structure, as well as providing a long-term sustainable timber resource to assure continued ecological and economic sustainability. We will work collaboratively with key stakeholders to develop a course of action based on the 2019 Forest Inventory and Analysis data, scenarios outlined in the Rocky Mountain Research Station draft general technical report and collaborative discussions with stakeholders.

Q: Will the Black Hills National Forest amend or revise the Forest Plan when the Collaborative Forest Inventory and Analysis data summary is released?

A: We will determine how to proceed once we assess the existing economic, social and ecological conditions and trends, which include the inventory and analysis data.