

User Guide to the RPA – LMP Data Catalog

The RPA – LMP Data Catalog is a tool that helps planners identify, locate, and use nationally consistent trend and projection data from the RPA Assessment for land management planning.

Land Management Plan (LMP) revisions should rely on the best available scientific information relevant to conditions in the planning area and its affected environment. The 2012 Planning Rule and associated directives specifically recommend the Resources Planning Act (RPA) Assessment as a key source of information to support LMP activities. The RPA-LMP Data Catalog provides information to help users identify, locate, and use RPA datasets to address relevant planning directives. This catalog introduces 40 RPA datasets as well as several other non-RPA information sources, and addresses (fully or partially) more than 50 different planning directives.

What is the RPA Assessment?

The Forest and Rangeland Renewable Resources Planning Act of 1974 mandates a national report (RPA Assessment) on the conditions and trends of renewable resources on all forests and rangelands, across all ownerships, every ten years. The RPA Assessment focuses on how the interaction of economic, social, and biophysical factors affects the productivity of forest and rangeland ecosystems and their ability to meet increasing demands for goods and services. The RPA Assessment provides a snapshot of current U.S. forest and rangeland conditions and trends and projects renewable resources 50 years into the future using multiple future scenarios that assume different levels of economic growth, population change, and changes in climate. RPA Assessment interim updates are produced every five years to provide more recent information and new analyses about resource conditions and trends. The *2010 RPA Assessment* and the *Update to the 2010 RPA Assessment* are available on the [RPA Assessment website](#); the 2020 RPA Assessment is currently in process.

How can the RPA Assessment help inform Land Management Plan assessments?

- **Broader landscape context:** The RPA Assessment evaluates all U.S. forests and rangelands, enabling planning teams to characterize the role of their renewable resources within the larger landscape. The RPA Assessment summarizes resource trends and projections at multiple scales, from the county level (for some resources) to regional, national, or global scales; this can reduce the work needed to conduct broader-scale evaluations and analyses.
- **Consistency across units and ownerships:** The RPA Assessment uses consistent data and models across the United States, which can result in improved comparisons across National Forest System units and beyond National Forest System boundaries. This consistent, all-lands data can strengthen partnerships in multi-forest and multi-organizational planning efforts.
- **Long-term trends.** The RPA Assessment evaluates long-term trends spanning the past several decades; if new information is available, the trends are updated on a five-year cycle. Planning teams can use this information to understand how resource conditions and human populations have changed over time and at multiple scales.
- **Future projections:** The RPA Assessment uses multiple scenarios of future climate, land use, population, and economic growth to project U.S. resources 50 years in the future. Projections can help units anticipate and plan for future changes not currently observed or that may differ from past trends.

- **Multiple resources:** Topics covered in the RPA Assessment are wide-ranging, touching on at least 10 of the topic areas required under the 2012 Planning Rule, including carbon, climate change impacts on resources, ecosystem services, forest product markets, rangelands, wildlife, recreation, and water resources.

Spatial scales for using RPA Assessment information

While the RPA Assessment generally summarizes information in [four broad regions](#) (Pacific, Rocky Mountain, North, and South), most of the underlying data, past trends, and future projections are available at finer spatial resolutions, from 30-by-30 meter pixels to the county or watershed scale. RPA Assessment scientists have provided recommendations regarding the finest scale to which each data set should be summarized, because accuracy of the data may be questionable beyond this threshold.

The RPA Assessment Catalog for Planning

The RPA-LMP Data Catalog (hereafter, the “Catalog”) was developed to help planners identify, locate, and use data and information from the RPA Assessment to address requirements of the 2012 Planning Rule. The Catalog highlights connections between the Planning Rule assessment topic areas/directives and relevant datasets, tools, reports, maps, and other information from the RPA Assessment. Specifically, the 2010 RPA Assessment, the more recent Update to the 2010 RPA Assessment, and available information from the upcoming 2020 RPA Assessment are included in the Catalog. Additions to the Catalog will be made as new information from the 2020 RPA Assessment becomes available.

*The Catalog contains multiple entries for many RPA data sets, because RPA data sets are relisted for each relevant LMP topic area. This replication assists planners searching for data by topic or directive of interest, and we therefore recommend following the provided navigation advice.

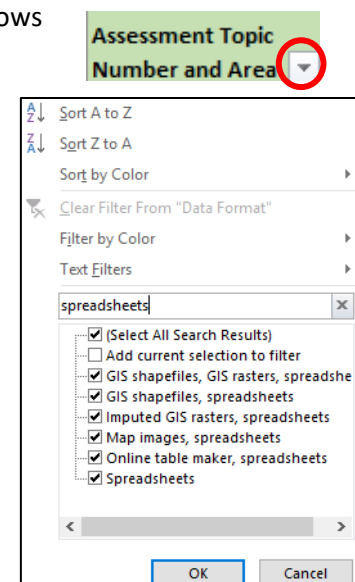
Navigating the Catalog

The Catalog is designed for users to filter by topic or directive of interest, enabling a quick view of the RPA Assessment datasets that may meet a specific need. The catalog can also be filtered by data product to identify where a specific RPA product may apply to other topic areas and directives and potentially offer an integrated analysis across resources or topics.

The Catalog has been saved with filtering capability turned “on.” Use the arrows at the right end of the cells in the header row to open a pick-list of topics, directives, or RPA products (see example) and place check-marks next to those you would like to explore. Columns that were developed to allow easy filtering include: Topic Number and Area, Data Title, Spatial Data Available, Historical/Future Projections, and RPA Scientist.

Unselecting all items and entering key terms in the filter search box (see example) can help filter more difficult columns. For example, typing “spreadsheet” or “GIS” into the “Data Format” column will select all entries with tabular or geospatial products available, respectively, regardless of whether additional products are also available.

Another method that can be used to locate specific items in the Catalog is pressing Ctrl+F to open the “find” window. Entering text into the search box can be used to find any text within the spreadsheet.



Tabs

The Catalog is an Excel workbook with four tabs:

- **Catalog:** This tab provides the catalog of RPA products, including information about how each one aligns with Planning Rule topic areas and directives, and how it should be appropriately used.
- **Topic/directive crosswalk:** This tab matches each of the 15 assessment topic areas to a section in the LMP directives, helping users locate important contextual information.
- **Scenarios:** This tab defines climate models, socioeconomic scenarios, and integrated RPA scenarios used in the RPA Assessment.
- **Definitions:** Definitions of terms or acronyms used in the Catalog.

Headings in the Catalog tab

Directive Information (green headers)

- **Assessment Topic Number and Area:** Number corresponding to the order the assessment topics are outlined in the LMP Handbook (FSH 1909.12, Chapter 10), and shorthand name(s) of required assessment topics, as outlined in chapter 10 of the Planning Rule directives.
- **Directive Text Addressed:** Specific text in the FSH 1909.12 assessment directives that the dataset either fully or partially addresses.
- **Directive Numbers:** Section and subsection numbers and letters in the FSH 1909.12 assessment directives (chapter 10) where the directive text is found.

Data Information (blue headers)

- **Data Title:** Name given to the dataset or product.
- **Data Location:** Place where data can be obtained. When possible, links to websites are provided. When the data is not available for download, the location of the data within a report or the contact information for the data steward is given. *See accessing information section below.*
- **Information Provided:** Brief description of information provided by the dataset or product.
- **GIS Data Available?** Specifies whether results are available in spatial formats.
- **Data Format:** The format of available data (for example spreadsheets, GIS files, and images).
- **Spatial and Temporal Range and Resolution:** First, the spatial coverage of the data is provided (range), followed by the spatial resolution of the available data (for example, raster pixel size, county, NFS unit). Next, the year(s) for which the data are available (range) is provided. If both historical and future projection data are available, information about the historical data is presented first, separated by a semicolon from the information about the future projection data. The corresponding temporal resolution (for instance, time step) is provided last and can be found within parentheses.
- **Historical/Future Projections:** Specifies whether results contain historical trend information, future projections, or both types of data.
- **RPA Scenarios:** The models and scenarios used to develop RPA projections. See Scenarios tab for definitions. Users must decide if they want to review results of all projections (as

many as 20 different sets of results), or focus on best/worst case results or results that highlight effects from specific scenarios (high versus low growth, hottest or driest future climates, etc.). Your regional climate change coordinator can assist with these decisions.

Advice on Use in Assessments (yellow headers)

- **Suggestions for use in Plan Assessments:** Suggestions from RPA scientists regarding how information can be examined/applied to plan assessments. In some cases, detailed analysis instructions are provided.
- **Best Spatial Scale for Interpretation:** The appropriate scale for data summarization and interpretation, which is often coarser than the finest data resolution available.
- **Important Information or Warnings about Data:** Caveats or other information about proper use and interpretation of the data.
- **Topic Integration:** By listing all relevant planning topic areas for a given data set, this field highlights possible areas of integration across resource areas.

Supporting Information (clear headers)

- **Reference:** RPA Assessment chapters, government reports, journal articles, and white papers that describe the data and methods.
- **Recommended RPA Scientist Contact:** Name and email address for originating scientist.
- **Update in 2020?** States whether this information is being updated for the 2020 RPA Assessment.

Accessing Information

Some of the information provided in the catalog can be accessed directly from documents or from web-based maps and tools. However, much of the information in the catalog may require contacting individual scientists to get raw data or regional summaries. RPA staff in the Washington Office can help facilitate conversations with scientists or make requests on your behalf once you have determined the particular data, tools, or information needed. Please contact Claire O'Dea, Assessment Program Manager, for further assistance at claire.odea@usda.gov.

Pivot Tables

Table 1. The number of RPA Assessment data sets providing relevant information for each LMP topic area.

Row Labels	Count of Data title
Air, soil, and water resources and quality	4
At-risk species	1
Baseline Carbon Stocks	4
Ecosystem Services	7
Energy and Minerals	1
Land Status	4
Multiple Use	10
Recreation and Scenery	7
Social, cultural, and economic conditions	12
System Drivers and Stressors	5
Terrestrial ecosystems, aquatic ecosystems, and watersheds	7
Grand Total	62

Table 2. The number of LMP topics for which each RPA Assessment data set provides information.

Row Labels	Sum of Topic Number
"Update to the 2010 RPA Assessment" regional recreation projections	2
"Update to the 2010 RPA Assessment" water supply model	2
2010 RPA Assessment land use data	1
2010 RPA national recreation projections	2
2010 RPA recreation resources	1
2010 RPA recreation trends	2
2020 RPA Assessment population and income data	2
2020 RPA Assessment population and income data; 2010 RPA Assessment land use data	1
2020 RPA water supply model	2
9-factor condition analysis for 15,000 watersheds in the continental United States	2
Annual production of rangelands (forage)	3
Carbon on US rangelands	1
Census urban land	1
Climate data for 2020 RPA Assessment: MACAv2 (METDATA) historical modeled (1950-2005) and future (2006-2099) projections for the conterminous United States at the 1/24 degree grid scale	1
County-level counts of species formally listed as threatened or endangered by broad species groupings	1
Drought summary tool	1
Fish and other aquatic resource trends	1

Forest disturbance history from Landsat, 1986-2010	2
Global forest products model	1
Importance-performance analysis (IPA) of recreation attributes on national forests	2
Inventory of US greenhouse gas emissions and sinks: Land use, land-use change, and forestry	1
MC2 dynamic global vegetation model results	1
National woodland owner survey	3
Projecting housing starts and softwood lumber consumption in the United States	1
Rangeland productivity coefficient of variation	3
Rangeland vegetation simulator	1
Rangelands and drought storymap	4
Regional forest carbon trends and projections	1
RPA Historical observational data (1979-2015) for the conterminous United States at the 1/24 degree grid scale based on MACA training data (METDATA)	1
RPA landscape pattern data	1
RPA water demand model	4
Statistical forest type classification	1
Statistical forest type projections	1
US forest products sector trends and projections	1
Vulnerability of cattle production to climate change	1
Water shortage vulnerability assessment	1
Wildland-urban interface	1
Wildlife population and harvest data	1
Wildlife-associated recreation trends	2
Wood pellet trends and projections	1
Grand Total	62