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rangeland biomass v3.0
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These data represent an update to the annual aboveground biomass (lbs/acre) as
described in Jones et al. (2021). Biomass estimates are partitioned into the
following plant functional types:

Band 1 - annual forb and grass
Band 2 - perennial forb and grass
No Data value = 65535

Estimates represent annually accumulated new biomass throughout the year.
Estimates do not account for biomass accumulation in previous years. Biomass was
calculated by separating partitioned net primary production (Robinson et al.
2019; Allred et al. 2021) to aboveground and converting carbon to biomass (Jones
et al. 2021). Estimates are provided in United States customary units (lbs/acre)
to facilitate use.

Although these data were produced across a broad region, they are primarily
intended for rangeland ecosystems. Biomass estimates may not be suitable in
other ecosystems, e.g., forests. Estimates in agricultural lands are not to be
used. No masking was performed and is therefore the responsibility of the user.

Coordinate reference system
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Data are in WGS84 Geographic Coordinate System (EPSG:4326); spatial resolution
is approximately 30m.

Google Earth Engine
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Data are available by converting the
'projects/rap-data-365417/assets/npp-partitioned-v3' ImageCollection to
biomass. Example script:
https://code.earthengine.google.com/91c11938c061abbe99d26c0cd3fa9980

Download tip
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To download a specific location, use the GDAL virtual file system. For example,
the following gdal_translate command will retrieve a small section of Montana
(see the gdal_translate documentation for more information):

gdal_translate -co compress=lzw -co tiled=yes -co bigtiff=yes \
/vsicurl/http://rangeland.ntsg.umt.edu/data/rap/rap-vegetation-biomass/v3/vegetation-biomass-
v3-2020.tif \
-projwin -108 48 -107 47 out.tif

Contacts
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RAP inquires: Sarah McCord (sarah.mccord@usda.gov)
Archive inquires: Scott Morford (scott.morford@ntsg.umt.edu)

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Data are provided "as is" without warranty of any kind, express or implied.

Please attribute these data to:

Jones, M.O., N.P. Robinson, D.E. Naugle, J.D. Maestas, M.C. Reeves, R.W.
Lankston, and B.W. Allred. 2021. Annual and 16-Day Rangeland Production
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Estimates for the Western United States. Rangeland Ecology & Management 77:112-117. http://dx.doi.org/10.1016/j.rama.2021.04.003

Robinson, N. P., M. O. Jones, A. Moreno, T. A. Erickson, D. E. Naugle, and B. W. Allred. 2019. Rangeland productivity partitioned to sub-pixel plant functional types. Remote Sensing 11:1427. http://dx.doi.org/10.3390/rs11121427

Allred, B. W., B. T. Bestelmeyer, C. S. Boyd, C. Brown, K. W. Davies, L. M. Ellsworth, T. A. Erickson, S. D. Fuhlendorf, T. V. Griffiths, V. Jansen, M. O. Jones, J. Karl, J. D. Maestas, J. J. Maynard, S. E. McCord, D. E. Naugle, H. D. Starns, D. Twidwell, and D. R. Uden. 2021. Improving Landsat predictions of rangeland fractional cover with multitask learning and uncertainty. Methods in Ecology and Evolution. http://dx.doi.org/10.1111/2041-210x.13564

Changelog
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2021-12-21 Data release, version 3.0
2023-03-16 2022 data release, update contact
2023-05-18 Release corrected 2022 data product
2024-02-23 2023 data release; updated extent of 2022 product to be consistent with collection
2024-05-03 Updated license and contacts
2025-02-05 2024 data release
2025-03-14 Fixed CRS issues in 2022, 2023, and 2024 rasters
2026-02-24 2025 data release