PARR 2.0: Federal Policy Updates for Data Sharing, Publication, and Reuse
Perspective from NOAA

Workshop on Open Data and Reuse in Social Science Weather Research
April 11, 2022

Tony LaVoi
NOAA Chief Data Officer
PARR 2.0 Context: NOAA Data Governance

- **Scope** = All NOAA data, not just environmental
- **Docs** = NOAA Data Strategy and Action Plan
- **Body** = NOAA Data Governance Committee
- **Leads** = Mission-Area Assistant Chief Data Officers (ACDOs)
- **Authority** = NOAA Administrative Order
- **Policy** = NOAA Data Management Handbook (*in progress*)
- **Community** = Growing and diversifying
PARR 2.0 Context: Open Data / Open Science

- **Open Data Policies** = Evidence-Based Policy Making Act, Geospatial Data Act, FOIA, Paperwork Reduction Act, Privacy Act
- **Executive Orders** = Scientific Integrity, Equity, and Climate EOs all speak to importance of open data and open science
- **FAIR Principles** = Findable, Accessible, Interoperable, and Reusable
- **National Science and Technology Council (NSTC) Subcommittee on Equitable Data**
- **Office of Science and Technology Policy (OSTP)** = 2023 Year of Open Science
- **NOAA Science Advisory Board** = Open Data / Open Science Recommendation Report
Background: why a new OSTP PARR memo?

- Covid-19 pandemic demonstrated value in adopting immediate public access to research outputs
- Technological opportunities since 2013, esp in AI/ML
- Increased focus on equitable delivery of federally funded research to all – not just those with special access through institutions
- Desire to increase transparency re: conflicts of interest, sources of funding, researcher identification
- Memo was developed “iteratively” by the OSTP’s Subgroup on Open Science, with feedback from the agencies
Timeline for 2022 OSTP Public Access Policy Guidance

OSTP Public Access Policy Guidance Released
- 25 August 2022

Section 3: Plans due for agencies with more than $100M in R&D
- 21 February 2023

Section 3: Agency policies published & Section 4: Plans due
- 20 August 2023

Section 4: Agency policies updates published
- 31 December 2024

Section 3: Effective date
- 31 December 2025

Section 4: Effective date
- 31 December 2026

Section 4: Research & scientific integrity
- 31 December 2027

Section 5: Interagency coordination

Public Access Memorandum Timeline Key:
- Section 3: Publications & data
- Section 4: Research & scientific integrity
- Section 5: Interagency coordination

Section 5: Ongoing interagency coordination
NOAA Approach to OSTP Memo

● Guiding Principle - *build on what is working, improve where necessary*

● Comprehensive **plan & policy revision** in FY2025, followed by **implementation** through FY2028, with **regular reporting** starting in FY2029

● **Applicable current NOAA policies remain in place until revisions are adopted**

● New NOAA policy will address all OSTP requirements, including:
  ○ Simultaneous access to publications and data at time of publication (no embargo)
  ○ Access to data with no associated publications
  ○ Digital persistent identifiers for authors, publications, datasets, and grants
  ○ Machine-readable publication formats
  ○ Specific use and reuse rights for publications and data
  ○ Consistent requirements for grantees, cooperative institutes, and NOAA scientists
NOAA PARR Working Group

- Executive Sponsorship from NOAA Chief Scientist and Chief Data Officer
- Reporting to Science Council, Observing Systems Council, and Program Management Council
- Membership from mission, staff, and corporate offices reflecting broad reach of PARR impacts to NOAA policies and practices
- Deliverables
  - February 2023: Memo outlining NOAA’s approach to addressing the 2022 PARR Memo requirements
  - December 2024: Updated NOAA PARR Plan and Policies
- Outreach and Education - started + recognize much more is needed both internally and externally
## NOAA PARR 2.0 Timeline

<table>
<thead>
<tr>
<th>FY</th>
<th>Phase</th>
<th>Actions</th>
<th>Milestones</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY23</td>
<td>Guidance Phase</td>
<td>Drafting <em>Memo to OSTP</em> Scoping Sections 3 &amp; 4 requirements</td>
<td></td>
<td><em>Memo to OSTP</em> (02/21/23)</td>
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<td>FY24</td>
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<td>Conducting user engagement Drafting Section 3 guidance</td>
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<tr>
<td>FY25</td>
<td></td>
<td>Planning Section 3 implementation Drafting Section 4 guidance</td>
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<td><em>Revised NOAA PARR Plan</em> (12/31/24)</td>
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<tr>
<td>FY26</td>
<td>Implementation Phase</td>
<td>Planning Section 4 implementation Tracking Section 3</td>
<td>Section 3 effective 12/31/25</td>
<td></td>
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<tr>
<td>FY27</td>
<td></td>
<td>Planning enterprise implementation</td>
<td></td>
<td><em>Partial Report</em> (12/31/26)</td>
</tr>
<tr>
<td>FY28</td>
<td></td>
<td>Tracking Sections 3 &amp; 4 Enterprise implementation</td>
<td>Section 4 effective 12/31/27</td>
<td><em>Partial Report</em> (12/31/27)</td>
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<tr>
<td>FY29</td>
<td>Reporting Phase</td>
<td>Tracking enterprise implementation</td>
<td></td>
<td><em>Full Enterprise Report</em> (12/31/28)</td>
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Contact Information

Tony LaVoi (tony.lavoi@noaa.gov)

Jennifer Fagan-Fry (jennifer.fagan-fry@noaa.gov)
PARR 2.0: Key Changes and Requirements

- Applies to all agencies with R&D expenditures
- Removes 12-month embargo on publications; data associated with publication “needed to reproduce results” must be available at time of publication
- Requirement that agencies ensure that PIDs (persistent identifiers) track all stages of research lifecycle: from awards, to researchers, to outputs
- Any provision of 2013 memo not affected remains in place
- Agencies must update their PARR plans
  - Final effective date of December 2025, although agencies have until 2026 to deliver their final plan to OSTP
PARR 2.0 New Requirements: Publications

- No embargo on publications – they must be available freely available “by default in *agency-designated repositories*”
- Publications must be available in machine-readable formats
- New agency PARR plan must spell out how the agency intends to license any re-use rights on publications, including restrictions, e.g. CC BY-ND, CC BY-NC
- Agencies shall report to OSTP “when requested,” the number of federally funded scholarly publications available in their agency repository
PARR 2.0 New Requirements: Data

- Data associated with a scholarly publication must be made available at the time of publication (covers intramural and extramural data)

- Federal agencies should develop approaches and timelines for sharing other federally funded scientific data (e.g., not associated with a pub)

- Agencies should outline policies to establish researcher responsibilities on managing and sharing federally funded data, including:
  - Describing any security, legal, etc. use limitations
  - Guidelines regarding digital repositories
  - Data licensing
PARR 2.0 New Requirements: Scientific Integrity

- “Federal agencies should take steps to ensure that public access policies support scientific and research integrity by transparently communicating to the public critical information…”

- Now required:
  - Collect and make publicly available appropriate metadata associated with scholarly publications and data
    - Including a unique digital persistent identifier for the research output (i.e. a DOI)
  - All federally funded researchers must obtain a PID that meets the requirement of NSPM-33 Implementation Guidance (i.e., ORCID)
  - Assign PIDs to all awards