

# Draft Revisions to EPA's STAA program

SAB STAA Committee Briefing

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# Disclaimer

These slides are intended for facilitating discussion with SAB STAA Committee members for the purpose of seeking feedback that will assist the EPA in its decisions on how to improve the STAA program. These recommendations are preliminary and do not represent EPA policy.

# Lean Process and the EPA STAA Program

Lean Process: A set of principles and methods for identifying and eliminating non-value added activity in a process

March 2015: EPA STAA process contributors met to review entire STAA process

# Objectives for March 2015 STAA Lean Meeting

- Reduce the time and complexity to complete a cycle
- Reduce errors in the nomination and awards process by taking advantage of automation and other IT tools
- **Increase the quality of STAA nominations**
- Create standard work procedures/update STAA manual
- Clarify responsibilities for everyone involved in the process

# Internal EPA STAA Lean Process Activities

- Invested in electronic nomination system to reduce errors and speed forwarding for review
- Reduced administrative burden associated with STAA awards
- Reviewing forms, procedures, and guidelines for inefficiencies

# Three STAA Lean Process Draft Recommendations Related to SAB STAA Panel Responsibilities

1. Revise SAB charge, STAA review criteria and align with the nomination justifications
2. Extending the time period of eligibility (which is currently only 3 years)
3. Improving justifications, including changing the bibliometric statistics from journal-based (e.g., JIF) to more meaningful article-based or author-based metrics

# 1. Revise STAA Award Criteria and Nomination “Justifications” to Reflect the Following Factors...

- **Science Quality and Innovation:** The degree to which the nomination creates or revises a scientific or technological principle or procedure, and is a product of the originality, creativeness, initiative, and problem-solving ability of the researchers
- **Scientific Significance:** The degree to which the nomination is of scientific significance and is recognized for having far-reaching consequences within its discipline or field of study
- **EPA Mission/Program Support:** The degree to which the nomination impacts or relates to a mission or organizational component of the EPA (impacts at international, national, regional, or state levels)

# 1. ...and Revise SAB Charge

- Use best professional judgment to determine which nominations warrant a Level I, Level II, Level III or Honorable Mention STAA Award based on the degree to which each nomination meets the three award criteria factors:
  - Science Quality and Innovation
  - Scientific Significance
  - EPA Mission/Program Support

## 2. Extend Time Period of Eligibility (from current 3 years)

2013 SAB STAA panel recommended EPA develop a separate awards program to recognize EPA-published works which have demonstrated an impact on EPA's mission but are not currently eligible for STAA awards (i.e. published more than 3 years ago)

- Two separate awards programs would be unnecessarily difficult to manage
- Propose extending the eligibility period from current 3 years

2013 SAB STAA report stated "...it often takes time between when research is published and when benefits can be fully realized."

- An eligibility window of 8-12 years is being considered

### 3. Move from Journal-Based Metrics...

Current approach uses journal-based metrics (Immediacy Index, Citation  $\frac{1}{2}$  Life, and Journal Impact Factor - JIF) for each publication

- These do not measure impact of the individual articles
- Many articles even in high-JIF journals never become cited or are poorly cited
- Publications in highly specialized journals have low JIFs but may still be scientifically significant

# 3. ... To Article-Based Metrics

Propose that nominations require:

- More detailed narrative explanations of impact (facilitated by the recommended longer period of eligibility)
- Citation counts and bibliographic listing of up to 20 selected full non-self curated citations with a brief summary of their significance
- Nominated papers lacking sufficient recognition by the scientific community (e.g. <5 years) include a Hirsch index-based metric for the principal author(s) to help predict potential future impact
  - The Hirsch or h-index is  $N$  for a core set of  $N$  published papers when each has received at least  $N$  non-self citations. It reflects a combination of both productivity and impact. Its numeric value becomes exponentially more difficult to grow without increasing numbers of papers, where each must receive increasing numbers of citations.

# Outcomes from Implementing Three Draft Recommendations

- Streamlines and simplifies examination and evaluation by SAB STAA panel
  - Allows more consistent evaluations
  - Less need for panel to project potential *future* impact and scientific significance
  - Award decisions can be based on demonstrated significance
- More consistently recognizes impactful EPA science
- Reduces number of low-impact nominations requiring SAB review

# Next Steps

- The three recommendations for improvement of STAA process are among others EPA is considering in updating the guidance and requirements for STAA nominations.
- We welcome any additional thoughts for improvement to the STAA nomination process.