National Nonpoint Source Pollution Control Program

CWA § 319 101

For State and Territory NPS Programs

National NPS Meeting, Boston, MA (Nov 2, 2016)
Tina Yin, Region 9
Peter Monahan, Region 8
Steve Schaff, Region 7
Cyd Curtis, HQ
Bill Ruckelshaus:

“The biggest problem by far is what’s called non-point source pollution.

That’s the ones that we’re all convinced we’re not doing any of this – this is all some terrible person or all some terrible industry or city that I have no control over.

But getting people to manage their land ...to control their lives in such a way that they don’t contribute to this non-point source pollution problem is proving to be very difficult.”
NPS Pollution is Diverse and Dominates the Nation’s Impaired Waters

- **Agriculture**
  - Nutrients, sediment, pathogens, pesticides, metals
  - Row crop runoff, irrigation water, animal facilities
- **Onsite septic systems** – nutrients, pathogens
- **Acid mine drainage**
  - abandoned mines, metals
- **Unregulated urban runoff**
  - Pathogens, fertilizer, pet waste, oil & grease, construction sediment
- **Forestry**
  - Sediment (slides, road construction, fire), temperature
- **Hydro-modification**
  - dams, channel straightening – sediment, temperature, habitat destruction
## Top Sources of WQ Impairment in Assessed Rivers and Streams (National)

<table>
<thead>
<tr>
<th>Probable Source Group</th>
<th>Miles threatened or impaired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>130,976</td>
</tr>
<tr>
<td>Unknown</td>
<td>103,201</td>
</tr>
<tr>
<td>Atmospheric Deposition</td>
<td>99,768</td>
</tr>
<tr>
<td>Urban-Related Runoff/Stormwater</td>
<td>61,049</td>
</tr>
<tr>
<td>Hydromodification</td>
<td>60,234</td>
</tr>
<tr>
<td>Municipal Discharges/Sewage</td>
<td>59,094</td>
</tr>
<tr>
<td>Natural/Wildlife</td>
<td>51,820</td>
</tr>
<tr>
<td>Unspecified Nonpoint Source</td>
<td>49,007</td>
</tr>
<tr>
<td>Habitat Alterations</td>
<td>34,659</td>
</tr>
<tr>
<td>Resource Extraction</td>
<td>29,265</td>
</tr>
</tbody>
</table>

Source: Draft CWA 305(b) National Water Quality Inventory (year?)
THE Watershed Approach

Iterative + Adaptive Planning

Monitoring and Assessment

Stakeholders

Non-regulatory Tools and Programs

Regulatory Mechanisms

Photo: Yin. Upper Carson River Headwaters CA

Photo: Yin. Carson River Headwaters CA
### Clean Water Act (CWA)

**Tools for Watershed Protection and Restoration**

<table>
<thead>
<tr>
<th>Assess</th>
<th>Restore and Protect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish WQ Standards and Beneficial Uses CWA 303 (c)</td>
<td>Wetlands Regulatory Permits (dredge and fill) CWA 404</td>
</tr>
<tr>
<td>Monitor and Assess CWA 106 ($)</td>
<td>NPDES Permits (regulatory stormwater, industrial, wastewater discharges) CWA 402</td>
</tr>
<tr>
<td>State WQ Report CWA 305 (b)</td>
<td>State Revolving Fund CW SRF ($$$)</td>
</tr>
<tr>
<td>Impaired Waters List (where and what) CWA 303 (d)</td>
<td>Nonpoint Source Program CWA 319 ($)</td>
</tr>
<tr>
<td>TMDLs establish goals, identify pollutant loads + sources CWA 303(d)</td>
<td>National Estuary Program CWA 320</td>
</tr>
<tr>
<td>Planning (How to restore/protect) CWA 319, CWA 104 (b)(3)</td>
<td>Geographic Programs SFBWQIF, SNPLMA, Great Lakes ($)</td>
</tr>
</tbody>
</table>
~$163 million / year (FY16)
• ~$8 million for eligible Tribal NPS Programs (>75% tribal land)
• State allocations range from <$1m to $8m
• Leveraged by 40% non-federal match
State NPS Management Program
5 Year Plan

How 319 Programs Fit Together

Results, Tracking and Adaptive Management

Annual 319 Grant Workplans
Annual 319 Grant Workplans
Annual 319 Grant Workplans
Annual 319 Grant Workplans

Annual Reports
Annual Reports
Annual Reports
Annual Reports

SPPD
SPPD
SPPD
SPPD

Update 5 YP
CWA 319 $ Support States and Territories Program and Project Funds: Two Colors of Money

**Implement State NPS Management Program Plans**
- Staff
- Regulatory and non-regulatory state NPS programs and policies
- Watershed Plan and TMDL development and tracking
- Monitoring and Assessment
- Education and Outreach
- Coastal NPCP (CZARA)

**Implement Watershed Plans to Restore NPS WQ Impairments and Protect High Quality Watersheds**
- On-the-ground projects to improve WQ and prevent impairments

**Project Grant Eligibility**
- Implement a Watershed Plan and/or TMDL
- Targeted to WQ improvements and achieve load reductions
- Implement protection measures
- Not be NPDES Permit Requirement
Urban Stormwater Runoff (MS4 - NPDES)

Highway Stormwater Runoff BMPs (MS4 - NPDES)

WWTP Discharge and Treatment Wetlands

Construction Site Permits (SWPPPs)

CWA 319 $$
§319 supports National Program, State Programs, and Local Watershed Efforts
Watershed Planning
319 watershed projects must be guided by watershed-based plans

• Watershed plans are not only the technical workplan guiding work related to:
  • Pollutant loads, sources, critical areas and practices that will have greatest impact on water quality
  • They are also a critical approach for engaging affected stakeholders and landowners in the process along the way.

Basically, without local capacity/landowner engagement projects don’t happen
Watershed Planning to achieve WQ Results

The “9 Elements”

1. Identify pollutant sources
2. Estimate load reductions
3. Identify management practices (BMPs)
4. Technical and $ resources
5. Education and outreach strategy
6. Implementation schedule
7. Milestones
8. Evaluation criteria
9. Monitoring plan

http://epa.gov/nps/watershed_handbook/
Critical & Priority Areas – NPS loads vary widely

Critical Areas (Red)
• Need treatment to improve existing poor water quality

Priority Areas (Green)
• Need protection to protect relatively good water quality

Based upon:
• historic water quality data
• current water quality data
• confirmed sources
• projected future development
• causes of impairment
Watershed plan example
Turkey River & Chihak Creek, IA
Watershed plan example
Turkey River & Chihak Creek, IA

North & West Branches of the Turkey River & Chihak Creek, Howard & Winneshiek Counties
Estimated Sediment Delivery, 2015

Watershed Area: 41,502 acres
Landform Region: Iowan Surface
Sediment Delivery Ratio: 10.6%
Average Sediment Delivery: 0.13 t/a/y
Total Sediment Delivery: 5,273 t/y
Watershed plan example
Turkey River & Chihak Creek, IA

Watershed Area: 41,502 acres
Average Sheet & Rill Erosion: 1.2 t/a/y
Total Sheet & Rill Erosion: 49,985 t/y
319 Grant Mechanics and Funding
<table>
<thead>
<tr>
<th>EPA</th>
<th>State Nonpoint Source Agency</th>
<th>Subawardees</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Award: Work Plan Development</strong>&lt;br&gt;EPA announces 319 grant allocations and issues annual grant guidance</td>
<td>EPA and state work to develop grant work plan.</td>
<td>State and EPA work to develop grant work plan. Many states use Requests for Proposals or other procurement processes to develop work plans (projects to be funded) early in the work planning process.</td>
</tr>
<tr>
<td></td>
<td>State and EPA work to develop grant work plan.</td>
<td>State negotiates with EPA to finalize work plan. State submits final application.</td>
</tr>
<tr>
<td></td>
<td>EPA region and state negotiate to finalize work plan.</td>
<td>EPA region approves work plan.</td>
</tr>
<tr>
<td></td>
<td>EPA region approves work plan.</td>
<td>EPA region approves work plan.</td>
</tr>
<tr>
<td><strong>Grant Award</strong>&lt;br&gt;EPA awards 319 grant funds to state.</td>
<td>State uses 319 funds to implement NPS Management Program and approved work plan.</td>
<td>Subawards for 319 funds are negotiated with state.</td>
</tr>
<tr>
<td></td>
<td>State distributes funds to subawardees, in accordance with state and federal requirements (e.g., RFP*)</td>
<td>Subawardees use 319 funds to implement NPS projects.</td>
</tr>
<tr>
<td><strong>Post-Award: Reporting</strong>&lt;br&gt;EPA and/or state enters NPS information into GRTS® and monitors projects using GRTS.</td>
<td>State and/or EPA enters NPS information into GRTS.</td>
<td>Subawardees may provide information for GRTS.</td>
</tr>
<tr>
<td></td>
<td>State submits periodic progress reports and interim financial status reports (FSR) to EPA.</td>
<td>Subawardees submit progress and financial reports to state agency.</td>
</tr>
<tr>
<td></td>
<td>EPA reviews progress report and program/grant progress.</td>
<td>EPA determines satisfactory progress.</td>
</tr>
<tr>
<td></td>
<td>EPA determines satisfactory progress.</td>
<td>State submits annual report on NPS management program.</td>
</tr>
<tr>
<td><strong>Project Closeout</strong>&lt;br&gt;EPA closes out state grant.</td>
<td>State submits final FSR and final report, and closes out grants.</td>
<td>Subawardees submit final project and financial reports and close out contract/grant.</td>
</tr>
</tbody>
</table>

*RFP process may occur before or after initial grant negotiations and/or award.<br>
*GRTS: Grants Reporting and Tracking System.

Figure 1. Overview of EPA grant award, implementation, and review process.
Work Plans

1) Connection with goals and objectives in NPSMP
2) Has programmatic, technical and/or scientific Merit
3) Includes costs that are eligible reasonable consistent with the grant
4) Well coordinated with other state/federal programs
5) Identifies and resolves gaps between program objectives and planned activities
6) Identifies, outcomes, outputs and results
7) Facilitates tracking progress toward national goals and WQ standards
### General Overview of Grant Conditions:

#### EPA Grant Conditions

<table>
<thead>
<tr>
<th>Financial</th>
<th>reimbursement, EFT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost:</td>
<td>consultant Cap, Management fees</td>
</tr>
<tr>
<td>Reporting:</td>
<td>including subawards, indirect cost rate, Audit requirements</td>
</tr>
<tr>
<td>Programmatic:</td>
<td>Acknowledgement, Copyrights, electronic information, Light refreshment (updated)</td>
</tr>
<tr>
<td>Public Policy</td>
<td>Civil Rights, Lobbying, Recyled paper, Drug-free</td>
</tr>
<tr>
<td>Cyber security</td>
<td>Public Awareness</td>
</tr>
</tbody>
</table>

#### Financial:
- Non-federal match, obligation of funds, Maintenance of Effort, Limitation on Administrative Cost

#### Reporting:
- Project Reports, Annual NPS Program Report, GRTS, STORET, Success Stories

#### Programmatic:
- Quality Assurance, Sufficient Progress, Watershed Based Plans, O&M, Permits, National Meetings, TMDL
- Substantial Involvement *(only if cooperative agreement)*
Progress Reports

A description of the evaluation process and a reporting schedule must be included in the workplan.

- accomplishments as measured against workplan commitments;
- cumulative effectiveness of the work performed under all work plan components;
- existing and potential problem areas; and
- Suggestions for improvement, including, where feasible, schedules for making improvements.
Final Reports

• Executive summary

• Introduction: project area, HUC number(s), data from historical reports, rationale for pursuing grant funds, and the NPS problems in the project area.

• Project Goals Objectives and Activities

• Planned and actual milestones, products, and completion dates

• Evaluation of goal achievement and relationship to the state nps management plan

• Monitoring Results

• Public involvement and coordination (including partner Agencies)

• Other Sources of Funds

• Aspects of the Project that did not work well

• Future Activity Recommendations
Results and Outreach
NPS Success Stories - Number of Waterbodies Restored

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
<td>20</td>
<td>48</td>
<td>97</td>
<td>147</td>
<td>215</td>
<td>357</td>
<td>433</td>
<td>501</td>
<td>555</td>
<td>599</td>
<td>675</td>
</tr>
</tbody>
</table>

Total

- FY2005: 10
- FY2006: 20
- FY2007: 48
- FY2008: 97
- FY2009: 147
- FY2010: 215
- FY2011: 357
- FY2012: 433
- FY2013: 501
- FY2014: 555
- FY2015: 599
- FY2016: 675
Water Quality Successes Partially or Fully Restored Waters 2005-2015
Nonpoint Source Program Delivers Results

Section 319
NONPOINT SOURCE PROGRAM SUCCESS STORY

Nonpoint Source Success Stories

This Nonpoint Source Success Stories website features stories about primarily nonpoint source-impaired waterbodies where restoration efforts have led to documented water quality improvements. Waterbodies are separated into three categories of stories, depending on the type of water quality improvement achieved:

- Partially or fully restored waterbodies
- Progress toward achieving water quality goals
- Ecological restoration

See the table below or choose a state from the list of states and territories.

Partially or Fully Restored Waterbodies

Pennsylvania
- Nonpoint Source Success Story
  - Reclaiming Abandoned Mine Lands Reduces Impact of Acid Mine Drainage in the Bennett Branch Basin
    - Waterbodies Improved: Acid mine drainage (AMD) degraded water quality in Pennsylvania Bennett Branch Streambanking Creek. As a result, Pennsylvania added the stream to its 1998 Clean Water Act (CWA) section 303(d) list of impaired waters for high metal concentrations. To address the AMD problem, significant partnerships were developed with the mining industry to accomplish mine reclamation and to use measurable cost and waste cost measures. Water quality in Bennett Branch has dramatically improved after restoration, with decreased metal concentrations and increased alkalinity.

612
WQ 9  Annual pollutant load reductions

<table>
<thead>
<tr>
<th>Pollutant Type</th>
<th>Unit of Measure</th>
<th>Current FY13 Estimate</th>
<th>Annual Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen</td>
<td>LBS/YR</td>
<td>44,465,261</td>
<td>9,100,000</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>LBS/YR</td>
<td>9,089,485</td>
<td>4,500,000</td>
</tr>
<tr>
<td>Sedimentation-Siltation</td>
<td>TONS/YR</td>
<td>2,431,295</td>
<td>1,200,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant Type</th>
<th>Unit of Measure</th>
<th>Current FY15 Estimate</th>
<th>Annual Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen</td>
<td>LBS/YR</td>
<td>10,926,838</td>
<td>9,100,000</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>LBS/YR</td>
<td>2,434,319</td>
<td>4,500,000</td>
</tr>
<tr>
<td>Sedimentation-Siltation</td>
<td>TONS/YR</td>
<td>954,068</td>
<td>1,200,000</td>
</tr>
</tbody>
</table>
Other things data as part of grant requirement can do, has done
more to come

Cheers!