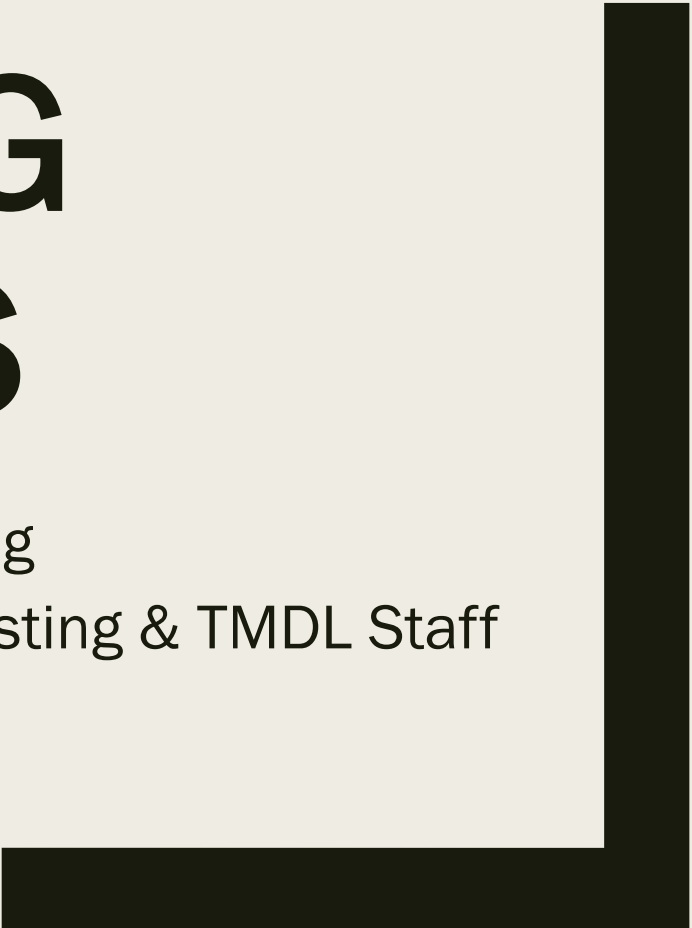# MEASURING PROGRESS

Miranda Chien-Hale & Dwane Young

2019 National Training Workshop for CWA 303(d) Listing & TMDL Staff

May 29-31, 2019

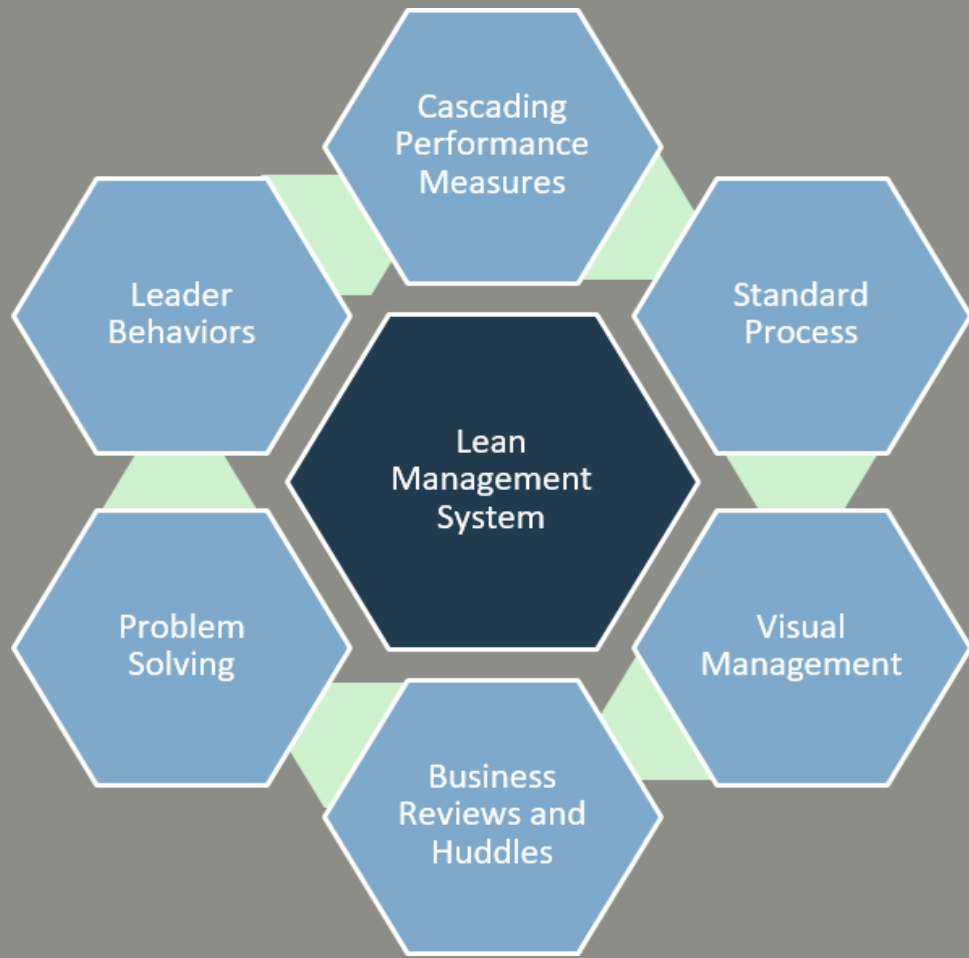# Presentation Roadmap

Quick Overview of EPA's Lean Management System
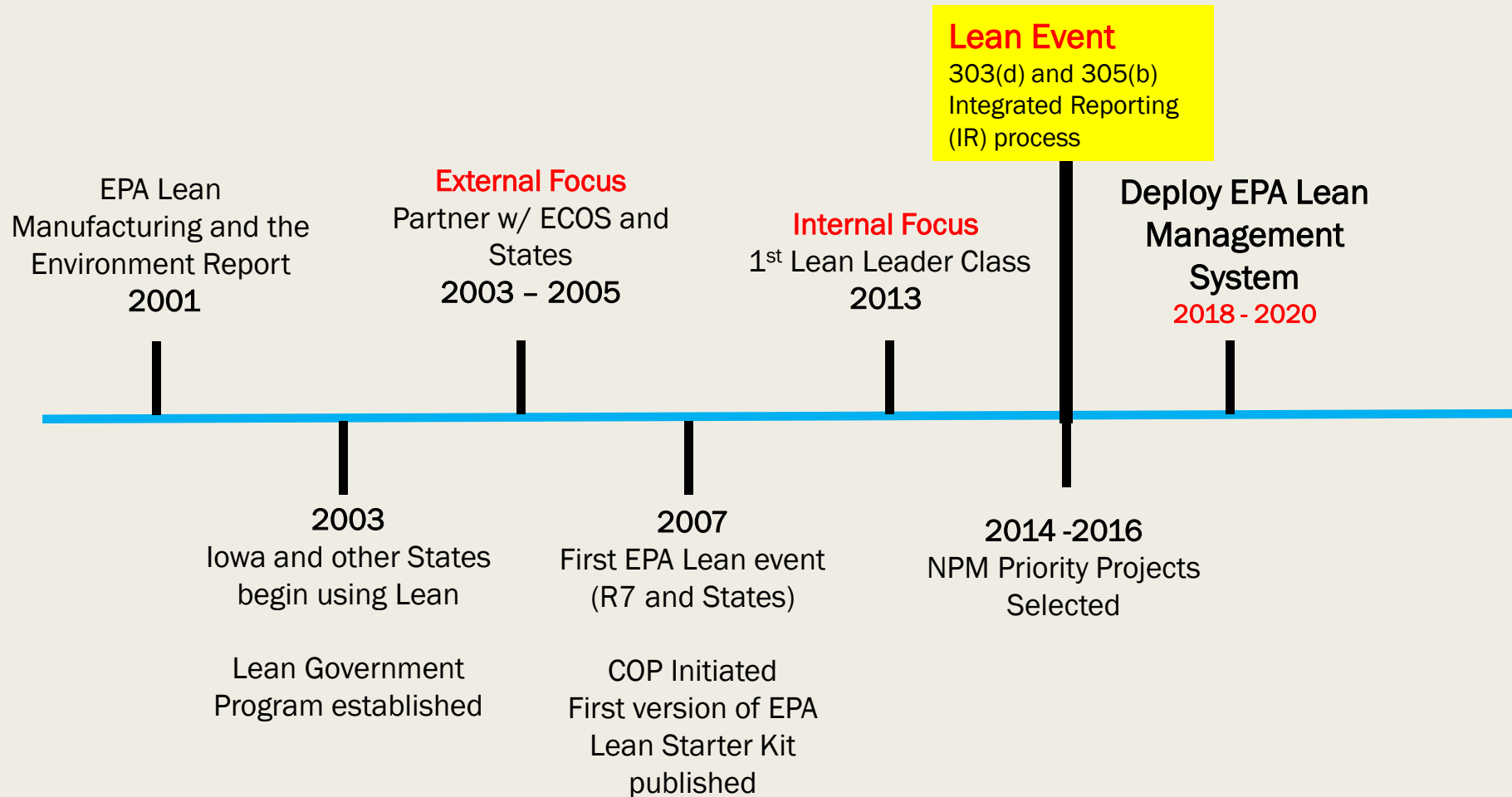
FY19 OWOW CORE Performance Measures

Demo

Q&A

EPA LEAN MANAGEMENT SYSTEM (ELMS)

What is an LMS and how do we practice?
A Standard Process for Monitoring Performance

- Fundamentally, it is about setting targets, measuring results, identifying/filling gaps by taking action
- Solves small problems before they become big problems
- Creating Bowling Charts
- Develop Countermeasures to get on target
- Seeks to create accountability to process without blame of people

15 Years of Lean at EPA

EPA Lean
Manufacturing and the
Environment Report
2001

External Focus
Partner w/ ECOS and
States
2003 – 2005

Internal Focus
1st Lean Leader Class
2013

Lean Event
303(d) and 305(b)
Integrated Reporting
(IR) process

**Deploy EPA Lean
Management
System**
2018 - 2020

2003
Iowa and other States
begin using Lean

Lean Government
Program established

2007
First EPA Lean event
(R7 and States)

COP Initiated
First version of EPA
Lean Starter Kit
published

2014 -2016
NPM Priority Projects
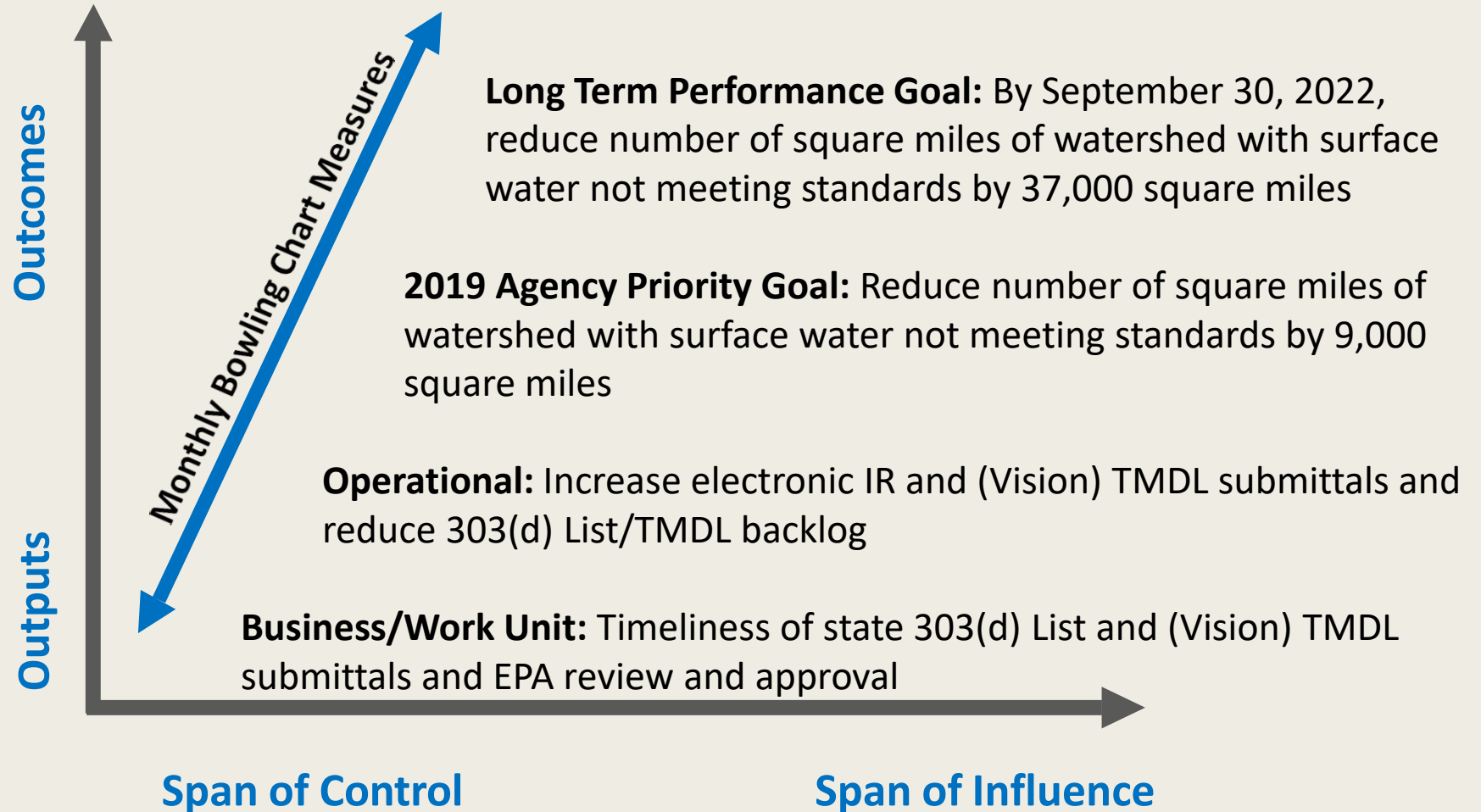Selected

IR Lean Event Summary, January 30, 2015

- The current 303(d) and 305(b) Integrated Reporting (IR) process doesn't enable EPA to meet identified needs, and it imposes a significant reporting burden to the states.

- High-level points about key results / benefits of the event:

    - Reduced state time on IR

    - Reduced EPA time processing IR

    - Created standard formats and templates

    - Increased electronic submissions

    - Eliminated rework loops

Benefits of the Process, A Retrospective Look

- Provide opportunities for earlier engagement between EPA and the states, thereby streamlining the IR process.

- Integration of ATTAINS earlier in the process facilitates better communication between states and EPA.

- The improved process will increase the number of timely IR submittals and ATTAINS becomes the database of record for IR decisions.

- Automated data processes and data validation checks increase efficiencies, reduces wait times, and eliminates multiple rework loops.

- Having standardized formats for IR data will eliminate most of the manual processing that is part of the current process allowing for a reallocation of effort.

Cascading Measures: Outputs and Outcomes

Outcomes

Outputs

Monthly Bowling Chart Measures

Long Term Performance Goal: By September 30, 2022, reduce number of square miles of watershed with surface water not meeting standards by 37,000 square miles

2019 Agency Priority Goal: Reduce number of square miles of watershed with surface water not meeting standards by 9,000 square miles

Operational: Increase electronic IR and (Vision) TMDL submittals and reduce 303(d) List/TMDL backlog

Business/Work Unit: Timeliness of state 303(d) List and (Vision) TMDL submittals and EPA review and approval

Span of Control   Span of Influence

Cascading Visual Management

Administrator
Quarterly Performance Reviews
- Long Term Performance Goals
- Reform Plan Priority Areas

National Program/Regional Office
Monthly Business Reviews
- Bowling Charts • Countermeasures • Breakthroughs

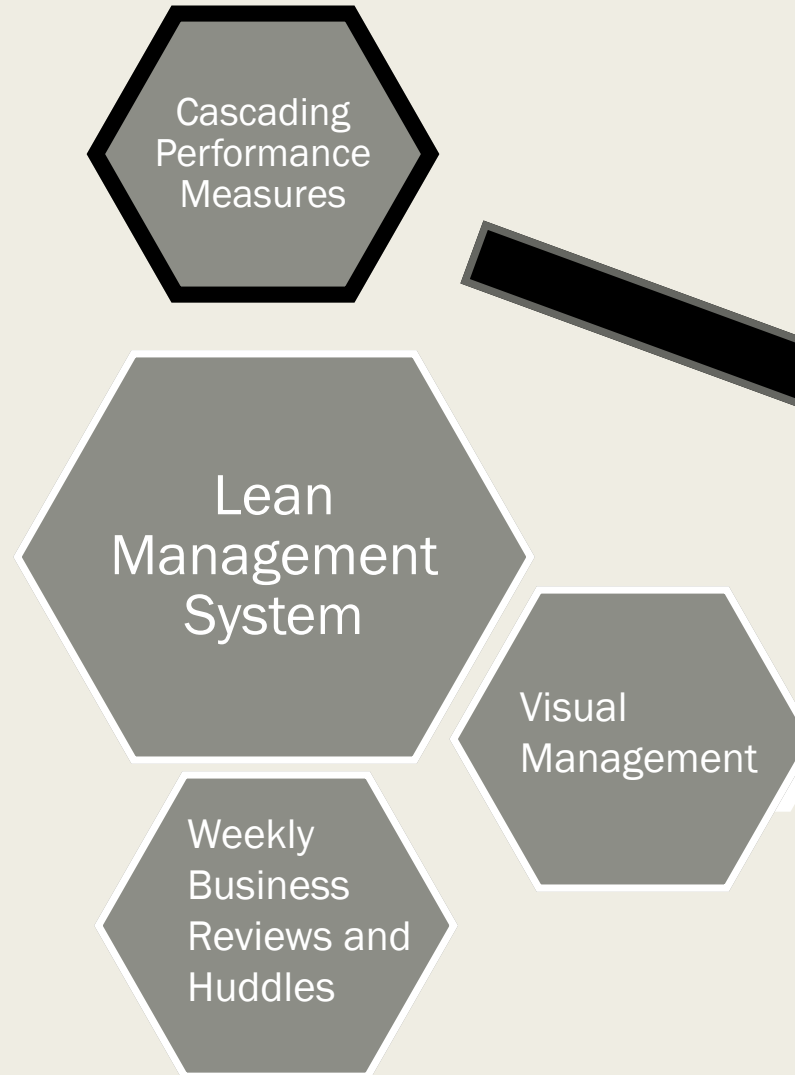### Process Level/Work Units
Weekly Huddles
- Flow Boards • Performance Boards
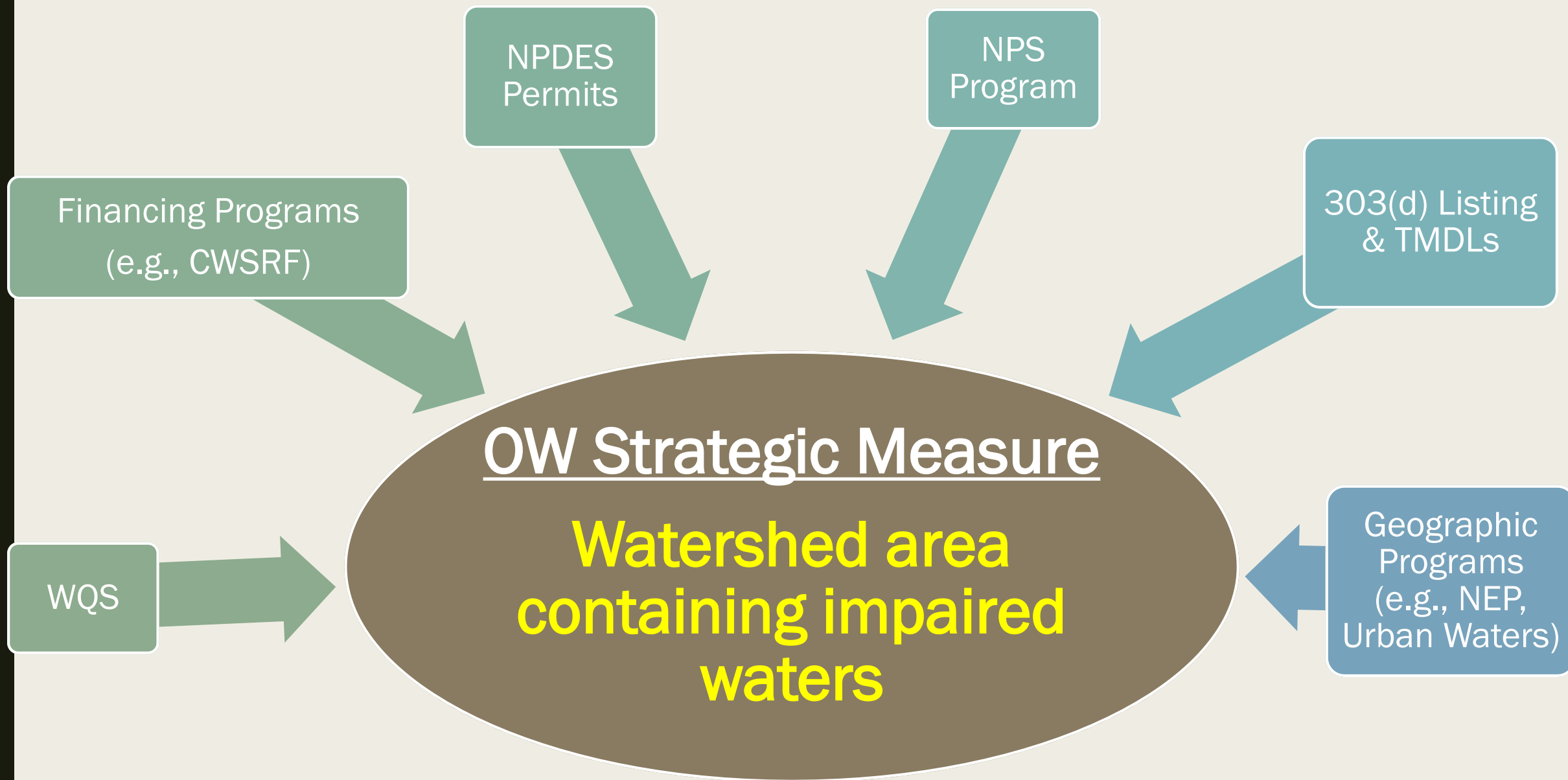
National Water Program Core Measures

- The OW has gone from 108 measures to 31 core performance measures in FY19

- OWOW has 10 of these measures, 8 of which directly relate to ATTAINS data

Cascading Performance Measures

Lean Management System

Visual Management

Weekly Business Reviews and Huddles

| 108 NPM GUIDANCE | 29 MISSION MEASURES | 13 BUDGET MEASURES | 3 STRATEGIC MEASURES | 6 ECOS MEASURES |

CRITERIA
- Retain Strategic and Mission Measures
- Alignment with Administrator's Priorities
- Nexus to Regional, State, and Tribal Work
- Outcome Oriented

Core Measures

Fundamental Changes to EPA's Overarching Measure for Surface Water Quality

Before	After
Old Strategic Measure (SP 10 & 11): Number of waterbodies (*state assessment units of any dimension)* not attaining water quality standards where standards are now fully attained (using 2002 baseline).	New strategic measure (SWP-1/WQ-35): Reduction in the *number of square miles of watersheds* with surface waters not meeting standards

- Documents federal, state and tribal collective progress across all program areas
- Measure calculated automatically using state information on attainment status of waterbodies as recorded in Integrated Reports submitted electronically to the ATTAINS data system
- Results calculated in square miles of watersheds using nationally consistent units

NPDES Permits

NPS Program

Financing Programs (e.g., CWSRF)

303(d) Listing & TMDLs

OW Strategic Measure

Watershed area containing impaired waters

WQS

Geographic Programs (e.g., NEP, Urban Waters)

All CWA programs contribute to our strategic measure for waters meeting standards

11

OWOW's FY19 Monthly Measures

- Water Quality Watersheds with surface waters not meeting standards (square miles) (WQ-35)
  - Not meeting standards because of nutrients (square miles)
- Electronic submission of state IRs
- Outstanding State submission of 303(d) lists
- TMDL Progress in putting Vision plans in place (WQ-27)
- TMDL Backlog of EPA action on TMDLs
  - TMDL Backlog of EPA action on priority TMDLs
- Backlog of EPA action on 303(d) Lists

Performance Measures Specific to 303(d)/TMDL Program

- State progress in putting priority TMDLs, alternative restoration plans and protection approaches in place

  - *Previous "WQ-27" revised to provide recognition for "plans in progress"*

  - *WQ-28 removed from measures tracking*

- Two additional state measures may disappear once electronic baseline is set for the new overarching measure of surface water quality

  - *Electronic submission of state Integrated Reports*

  - *Outstanding State submission of 303(d) lists*

- Three measures track timeliness of EPA Action on state submissions

  - *Backlog of EPA action on TMDLs*

  - *Backlog of EPA action on priority TMDLs*

  - *Backlog of EPA action on state lists of impaired waters needing TMDLs*

Mission Measures Targets and Actuals

Subject Area	Measure Language	FY18 Target	FY18 EOY Result	FY18 EOY Status	FY19 Target	Draft FY20 Planning Target
Water Quality	*Watersheds with surface waters not meeting standards*			*3,597*	*9,000 sq mi*	*18,000 sq mi*
Water Quality	*Watersheds with surface waters not meeting standards because of nutrients that now meet standards*			*138*	*2,000 sq mi*	*4,000 sq mi*
Impaired Waters	Electronic submission of state Integrated Reports	30	14	37	46	70 IRs ⬆
Impaired Waters	Outstanding State submission of 303(d) lists	44	50	35	13	20 303(d) lists ⬇
TMDL	Progress in putting priority TMDLs, alternative restoration plans and protection approaches in place	35%	33.3%	45.7%	50%	67% ⬆
TMDL	Backlog of EPA action on TMDLs	150	95	21	56	28 TMDLs ⬇
TMDL	Backlog of EPA action on priority TMDLs	100	79	12	32	16 TMDLs ⬇
Impaired Waters	Backlog of EPA action on 303(d) Lists	9	12	5	3	0 303(d) lists ⬇

303(d) List and Planning – Current Status

EPA Review	State Submittal
▪ Backlog: 5 (down from 25 in FY18); April Target is 6	▪ 35 state list cycles are not submitted; April Target is 28 ▪ On-time: 6 of 56 (2016); 5 of 56 (2018)

Opportunities
- Decision strategies, e.g., deferrals, combined decisions
- Heightened awareness and tracking
- Continue to work issues before State submittal
- Elevation where necessary

Opportunities
- Submission strategies, e.g., combine two cycle submissions
- Techniques for efficient EPA-state communication
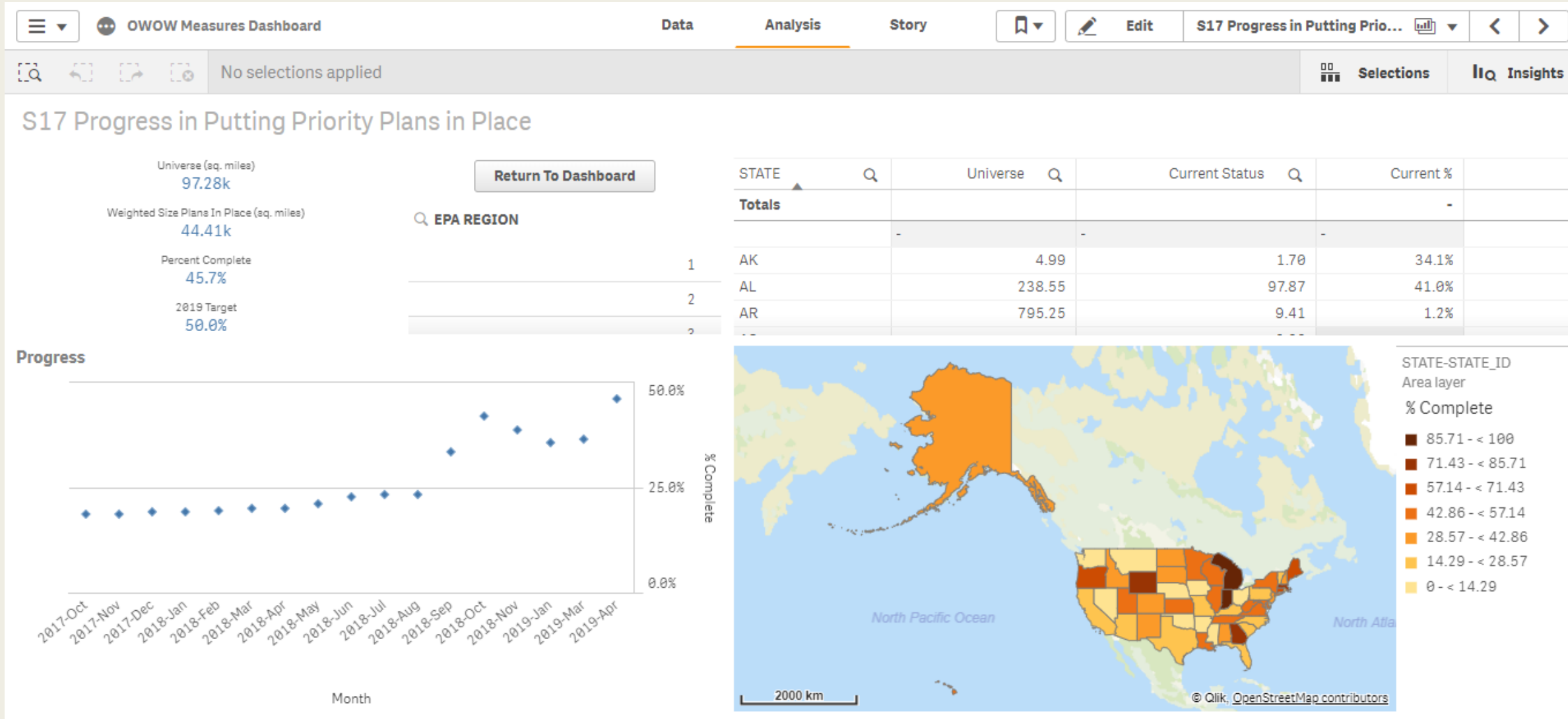- EPA technical, programmatic, and financial assistance, e.g., LEAN events, ATTAINS assistance

303(d) Vision TMDLs, Alternatives, Protection Plans – Current Status

EPA Review	State Submittal
■ Backlog on priority TMDLs: 12; April Target is 51 ■ Backlog on all TMDLs: 21; April Target is 73	■ 45.7% progress on Vision Priorities; End of FY Target is 50%.

Opportunities
- Heightened awareness and tracking
- Elevation where necessary
- Continue to work issues before State submittal
- Staff development, e.g., training, proper expertise

Opportunities
- Annual commitments
- Techniques for efficient EPA-state communication
- EPA technical, programmatic, and financial assistance, e.g., TMDL training, webinars, dedicated funds

EPA Supportive Actions

- Development of options for discussions on strategies for eliminating backlog, including combining outstanding cycles
- Presentations/Discussions with states/Regions
  - Expectations regarding state action on 303(d) lists
  - Targeted conversations with Regions with backlogs
  - Further understand the challenges and strategies for improving timeliness of submittals, and getting Vision plans in place
- Open Season
- Development of graphics to illustrate progress on this measure over time
- Conducting trainings to prepare and help states with transition to electronic reporting
- Measures tracking and data accuracy
- Capacity building

State Supportive Actions

- Continued work on state-identified priority areas under the Vision

- Promote <u>electronic</u> IR submittals and other data in ATTAINS
  - *Promote entering Actions, up-to-date geospatial data and other related information in ATTAINS*
    - Electronic data will be used to automatically calculate several measures
      - *ATTAINS will provide reports on current measure status*
  - *EPA is available to provide assistance*

- Timeliness of EPA and State work will help the public see progress sooner

Open Season

SharePoint Reporting

Qlik Dashboards

Measurements Dashboard

EPA Regions
1
2
3
4
5

SM4 Watershed Area
Now Meeting Standards

3.6k
sq. miles
0   9k

2019 Target: 9000 sq mi

View Measure Details

S03.3 Watershed Area
Now Meeting Standards (Nutrients)

138.42
sq. miles
0   2k

2019 Target: 2000 sq mi

View Measure Details

S20 Waters Restored
through Non-Point Source Activity

823
waters
751   845

2019 Target: 845 Waters

View Measure Details

S17 Priority Plans In Place

36.27
% Compl...
0   50

2019 Target: 50%

View Measure Details

Number of Electronic Submissions
Submitted to ATTAINS

35
Electro...
0   46

2019 Target: 45 Submissions

View Measure Details

S21 Number of Samples Processed

2,545
samples
18   7,063

2019 Target: 7063 Samples

View Measure Details

ATTAINS Reporting

Identified Challenges

- Shifting Priorities – In some states, priorities were not lining up with where they are focusing their actions and resources.

- Political will.

- Staff turnover/shortages/maintaining expertise

- Incentives for states to develop TMDLs/alts/protection plans

- Time needed to move an action through the Agency.

- Data – (1) Getting data from states into the Water Quality Exchange. (2) Data collected doesn't address the issues relevant to our program (integration). (3) State database issues

- For some states, moving beyond "low-hanging fruit"

- Litigation

Identified Opportunities

- Regional–State Communication
  - *Work closely with states in pre-public draft and public draft stages to address issues.*
  - *Have decision documents in draft prior to final document submission (timeliness).*
  - *Seek to ensure that priorities accurately reflect what the state is working on.*
  - *Cultivate relationships through regular check-ins and open communication.*

- Annual Planning Process
  - *Develop goals for TMDL development through 106 process.*
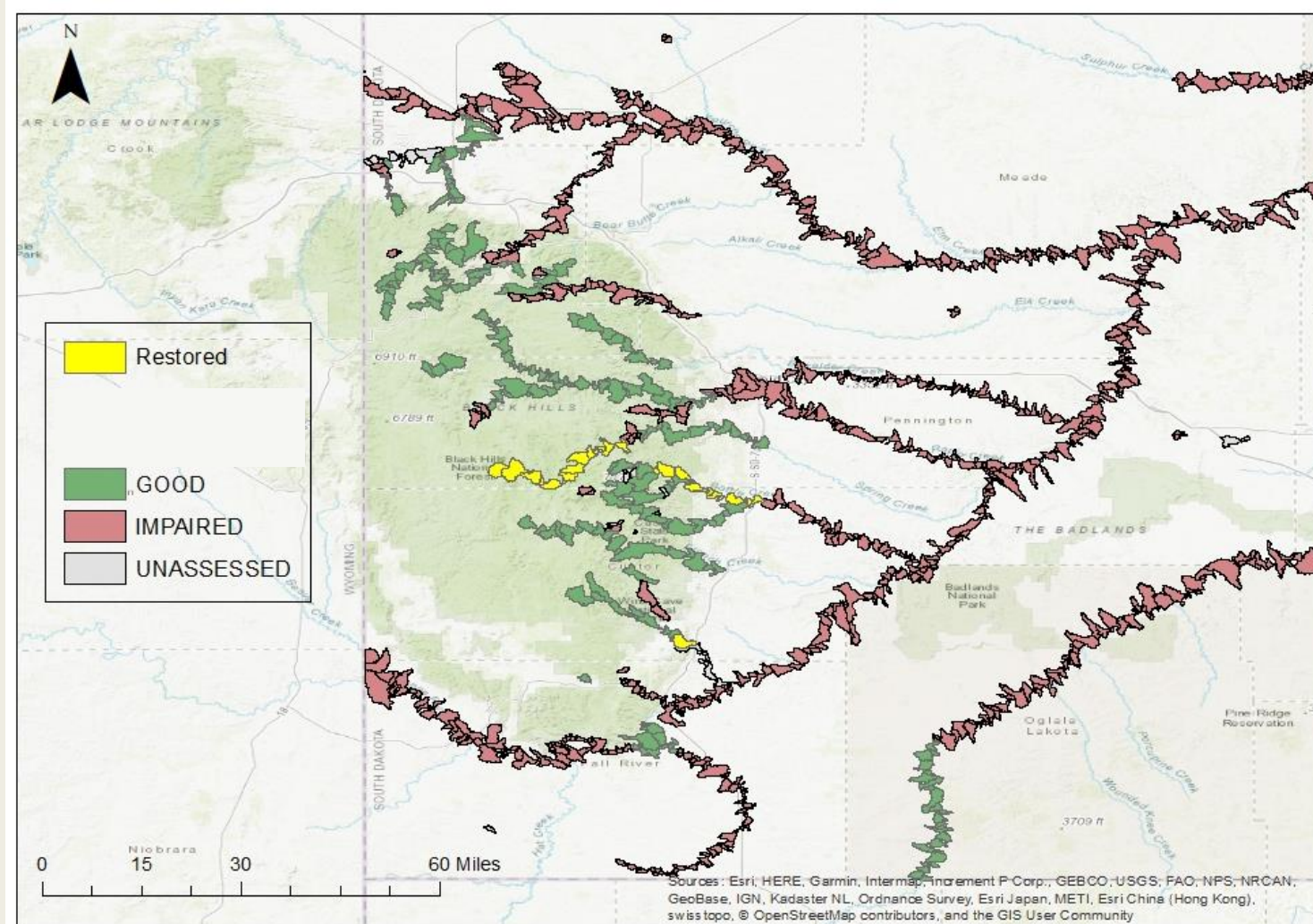 - *Continue measures commitment processes*

- Good examples/Info sharing – States sharing ideas at national forums

- Listing decision/submission approaches (e.g., deferrals, combined decisions)

- Capacity Building

Watersheds with surface waters not meeting standards

Target: By *September 30,* **2022,** *reduce the number of* **square miles** *of watershed with surface water not meeting standards by* **37,000** *square miles.*

Example of South Dakota's measure result

Demo

- Qlik Dashboard
- CIP Tool
- Scenario Tool Builder

- Q&A

- Open Discussion

Thank You!

Miranda Chien-Hale

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