



Oklahoma Nonpoint Source Management Plan Update: 2013

Oklahoma Conservation Commission

July 23, 2013

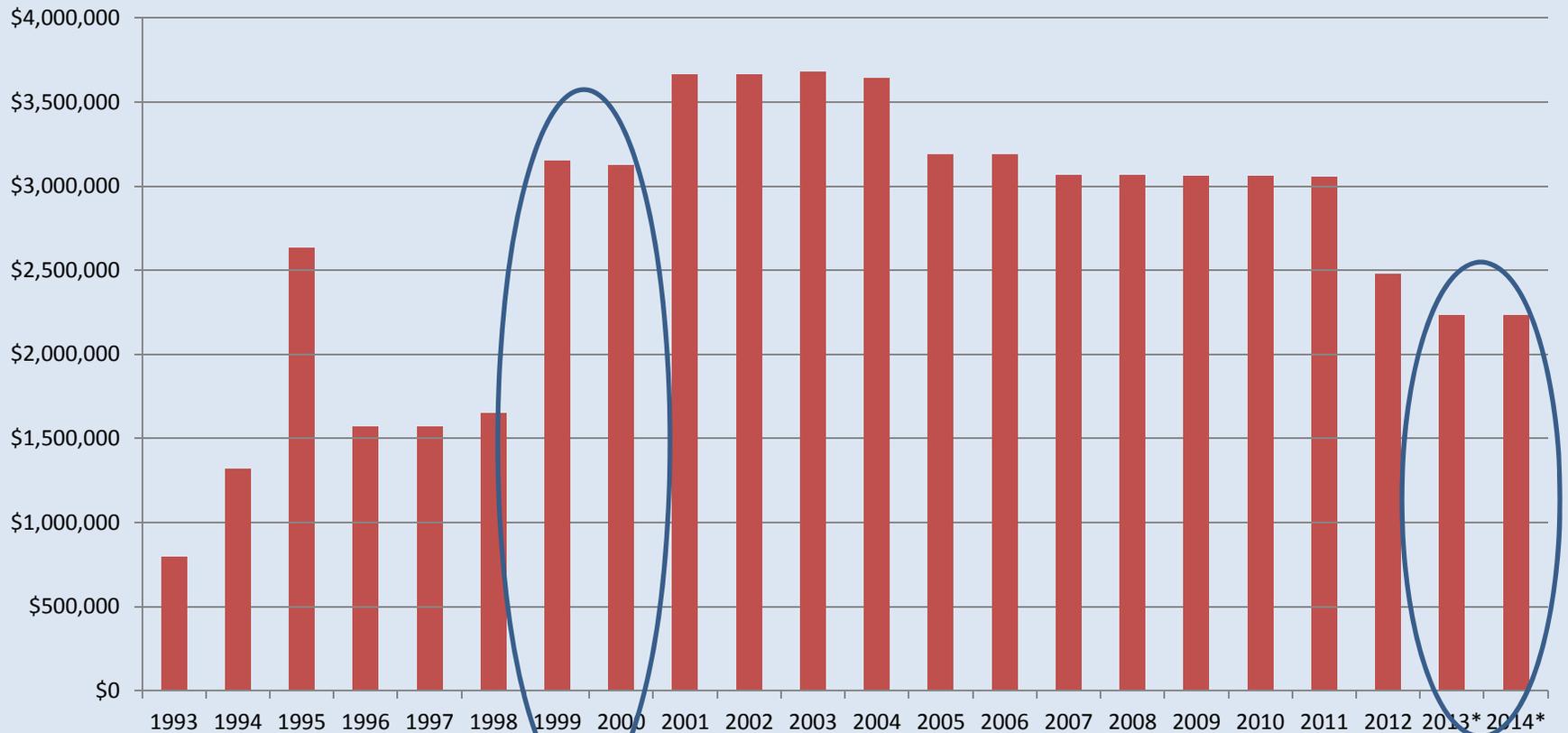


Overview of Dec. 2012 Meeting

- New EPA Guidance Issued in April 2013
 - All States to have their NPS Management Plans updated by Sept. 2014
- 319 Funding Changes and Challenges
- Time to Update Plan
 - Ensure it is inline with EPA guidance
 - Possibly change prioritization scheme to better ensure success
 - Last full update was in 2006
 - Milestones update in 2012

Changes to Annual 319 Funding

Oklahoma 319 Funding



- Decline of \$1.4 million since 2001. 31% reduction since 2011, likely additional cuts to 2014 with sequestration.

Overview Continued

- Long-term Goal of NPS Management Plan
 - By 2015, the State of Oklahoma's NPS Program will establish a State Approved Watershed Restoration Action Strategy, TMDL or implementation plan (unless the original basis for listing a waterbody is no longer valid) to restore and maintain beneficial uses in all watersheds identified as impacted by NPS pollution in the 1998 303(d) List. The 1998 303(d) List identifies 8,156 miles of stream and 291,293 acres of lake area as impaired or fully supporting but threatened. ***By 2020, the State will attain and maintain beneficial uses in waterbodies listed on the 303(d) list as threatened or impaired by NPS pollution.***

More with Less??? Or Use Every Dollar to Its Fullest

- Review and revision about 319, including EPA and GAO studies and funding cuts, have been focused on program effectiveness.
- Program is effective if it can document three things:
 - waterbody full or partial removal from the 303(d) list-NPS Success Stories(primary measure for the program)
 - Load reductions of nitrogen, phosphorus, and sediment
 - That it spends money as fast as possible



The screenshot shows the EPA website's "Section 319 Nonpoint Source Success Stories" page. The page is titled "Section 319 Nonpoint Source Success Stories" and includes a navigation menu with "LEARN THE ISSUES", "SCIENCE & TECHNOLOGY", "LAWS & REGULATIONS", and "ABOUT EPA". A search bar is located in the top right corner. The main content area features a map of the United States with state-level data points, a list of featured stories by state, and a search bar. The page also includes a "Partially or Fully Restored Waterbodies" section with a count of 417 waterbodies.

Section 319 Nonpoint Source Success Stories

This Section 319 Nonpoint Source Success Stories Web site 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:

- Stories about partially or fully restored waterbodies
- Stories that show progress toward achieving water quality goals
- Stories about ecological restoration

To find stories, either follow the story category links above or choose a state from the map.

Featured Stories

Stories about Partially or Fully Restored Waterbodies

This section includes stories about waterbodies that have achieved water quality standards for one or more pollutants and/or designated uses after having been previously included on the 303(d) list of impaired waters. [Get more details.](#)

State	Waterbody
Alabama	Carry Branch Dry Creek Flint River
Alaska	Caribou Creek Chena River
Minnesota	Chambers River
Mississippi	Bethamches River Lake Hazzie Nagers Creek (2)
Puerto Rico	Rio Grande de Manatí (2)
Rhode Island	Gilbert Stuart Stream
South Carolina	Cane & Little Cane Creeks (2)

Overview Continued

- Oklahoma has proven program effectiveness
 - Only 3 states have more NPS success stories than OK (soon to be only 1 state)
 - OK uses money at a reasonable rate
 - OK has been 1st in the nation in nitrogen and phosphorous load reduction for the last two years
- Need to maintain our success and continue improving through:
 - More NPS success stories
 - More NPS load reductions
 - More money for the program

Overview Continued

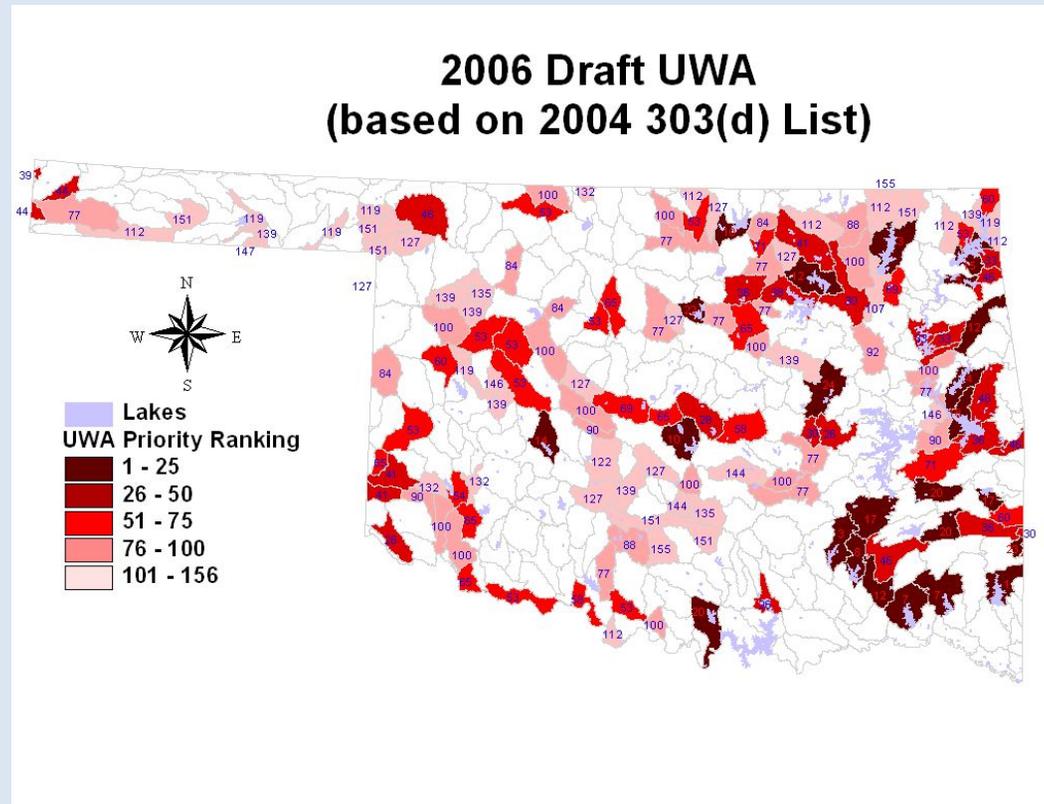
- What needs to be done?
 - Review and possibly update long-term goal
 - Review and strengthen short-term goals, adding as necessary
 - Ensure NPS Management work scope maximizes likelihood of success
 - Revise unified watershed assessment (UWA) ranking

Dec. 2012 Meeting - Comments

- Revise based on HUC 12 watersheds
- Revisit pollutant ranking to better align with national NPS priorities (N, P, sediment)
- Revisit how lakes affect ranking
- T & E species – include state list as well
- Ensure incorporation of Cat 4 as well as 5
- Incorporate WQ protection in planning
- Other metrics to consider (e.g., degree of biological impairment, source water, exotic species)
- Preserve consistent ranking scheme used by all

Revision of the NPSMP Begins with Updating the Prioritization of NPS Watersheds

- Focus on smaller watersheds- HUC 12 instead of HUC 11
- Focus in watersheds where success is likely (e.g., consider cause)
- Need to focus in watersheds where information about sources is well documented
- Etc.



Current NPS Watershed Prioritization Ranking Criteria

RANKING CRITERIA		POINTS	15	10	5	3	0
% Waterbodies on 303d list in HUC			≥85%	<85 to 65%	<65 to 45%	<45 to 25%	≥25%
Pollutant severity score of HUC			> 75% quartile	Median to 75% quartile	25%quartile to median	< 25% quartile	no impairments
Federal T & E species in HUC ¹			≥3	2	1		
Highest designated protected waterbody			Scenic R./ORW	HQS	SWS		
Est. decrease in wetlands, 1982 to 2002			gain or <1%	1 to 5%	>5 to 10%	>10% to 20%	>20%
USF&WS priority wetland present					YES		NO
App. B, % of HUC					upper 50th percentile	lower 50th percentile	no appendix B areas
NRCS Local emphasis areas					YES		NO
		POINTS	7.5	5	2.5	1.5	
# of PWS intakes in HUC			≥4	3	2	1	0
# of PWS customers served in HUC			≥100,000	999,999 - 10,000	9,999 - 1,000	999 - 1	0

1- includes habitat for Federally threatened or endangered aquatic and semi-aquatic organisms only.

Current NPS Watershed Prioritization Ranking Criteria

- UWA is used by other programs for ranking purposes
- Ranking UWA for NPS program may be at odds with the program's goals
- Should we develop a separate NPS-focussed UWA or should we re-work the UWA with a NPS focus since the majority of our water's are NPS-impaired?

Pollutant Severity Score

- Current prioritization doesn't necessarily match NPS program goals to reduce N, P and sediment or to achieve WQ success
- Consider changes to Pairwise Comparison Matrix to better fit goals of Plan

Pollutant	Group Ave. Score
Toxics/Bioassay	73
Pesticides	58
Low D.O.	55
Biocriteria	49
Pathogens	43
Metals	42
Phosphorus	37
Ammonia	32
Nitrate	26
Turbidity	19
Oil and grease	15
Cl/TDS/SO ₄	13
Taste and Odor	13
pH	12

Pollutant Severity Score

proposed change

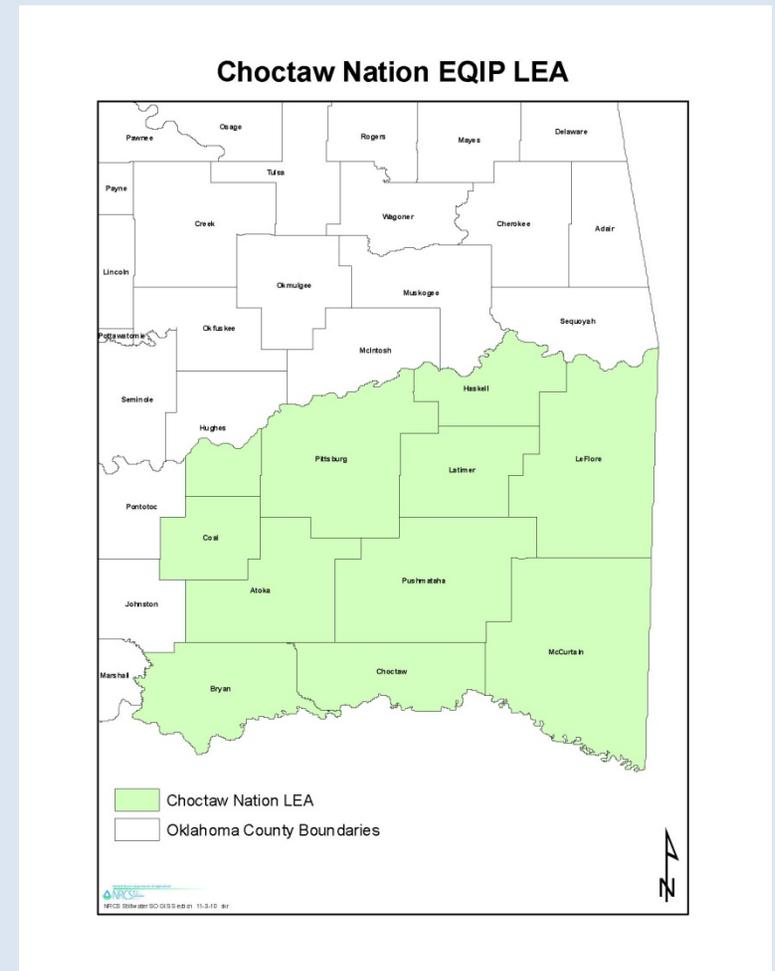
- Re-rank pollutant score based on NPS goals (i.e.- pollutants including and related to nutrients and sediment rank highest)



Pollutant	Group Ave. Score
Toxics/Bioassay	73
Pesticides	58
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Biocriteria	49
Pathogens	43
Metals	42
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Turbidity	19
Oil and grease	15
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Other Conservation Initiatives/Efforts

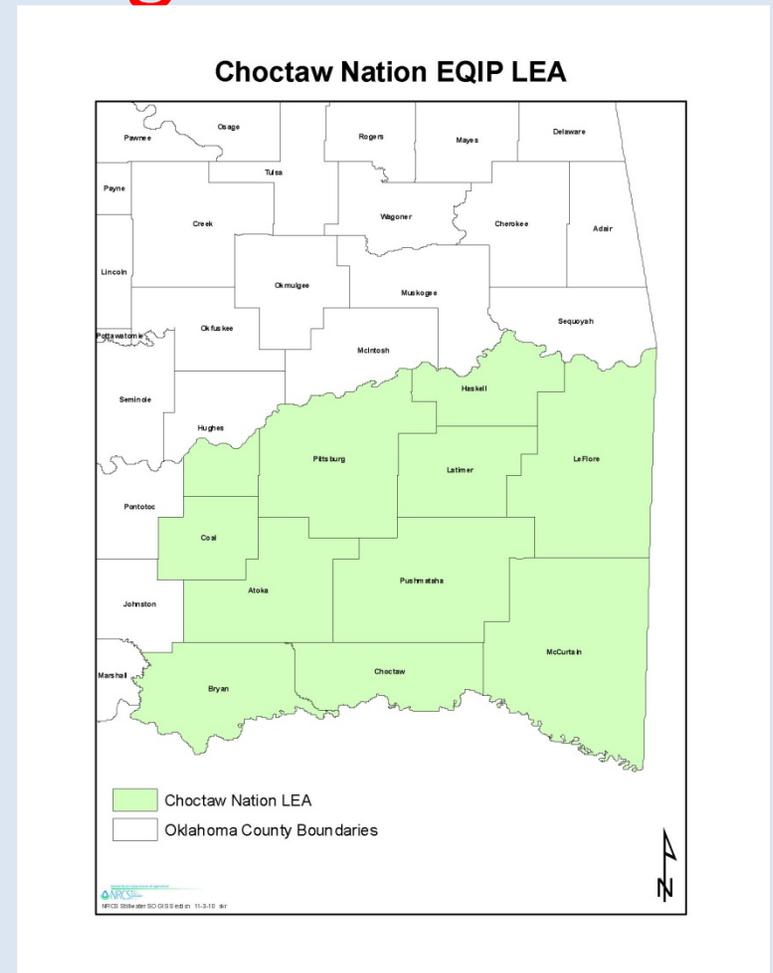
- E.g., NRCS Local Emphasis Areas - extra EQIP dollars focused on a specific resource concern. Several success stories coincide with LEA's.
- How about watersheds with other conservation initiatives/programs?



Other Conservation Initiatives/Efforts-

Proposed change

- Include watersheds where Conservation Security Program (CSP) has had a high number of sign-ups
- Include watersheds with highest number of WRP or other long-term/permanent conservation easement acres
- No change to point values



RANKING CRITERIA		POINTS	15	10	5	3	0
NRCS Local emphasis areas					YES		NO

Calculation of % WB on 303(d) List

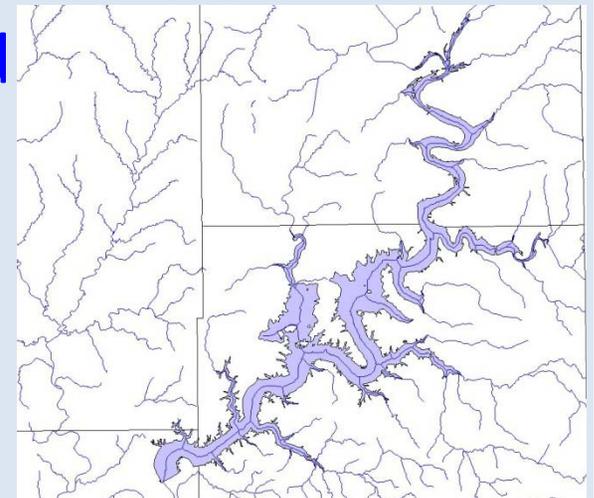
RANKING CRITERIA		POINTS	15	10	5	3	0
% Waterbodies on 303d list in HUC			≥85%	<85 to 65%	<65 to 45%	<45 to 25%	≥25%

- Metric should be changed to % waterbody impaired (includes both Cat 4 and 5)
- Current calculation equates lake acres to stream miles; however, is still heavily weighted to watersheds with reservoirs. How can we adjust the equation to give impaired reservoirs appropriate weight, but still select watersheds where measurable success is likely and timely?
 - 1 square meter lake = 0.028618 meters stream length

Calculation of % WB on 303(d) List- Proposed Change

RANKING CRITERIA	POINTS	15	10	5	3	0
% Waterbodies on 303d list in HUC		≥85%	<85 to 65%	<65 to 45%	<45 to 25%	≥25%

- Metric changed to % waterbody impaired...
- Calculation of equivalency for lake acres:
~~1 square meter lake = 0.028618 meters stream length~~
 – # miles of thalweg streams impounded
- No change to point values



Should Additional Criteria be Adjusted?

- Federal T&E species in HUC
 - Should we include state T&E aquatic species?
 - Is there another parameter that should replace T&E species
 - Should point values change?

RANKING CRITERIA	POINTS	15	10	5	3	0
Federal T & E species in HUC ¹		≥3	2	1		



Photos courtesy of OWDC website

Should Additional Criteria be Adjusted?

Proposed Change

- Federal T&E species in HUC
 - include any state T&E aquatic species
 - No change to point values

RANKING CRITERIA	POINTS	15	10	5	3	0
Federal T & E species in HUC ¹		≥3	2	1		



Photos courtesy of OWDC website

Should Additional Criteria be Adjusted?

- Highest Designated Protected Waterbody
 - Should this criteria remain?
 - Should its values be adjusted?
 - Should other categories be considered
 - Should Nutrient Limited Watersheds be included?

RANKING CRITERIA		POINTS	15	10	5	3	0
Highest designated protected waterbody			Scenic R./ORW	HQS	SWS		

Should Additional Criteria be Adjusted

Proposed Change

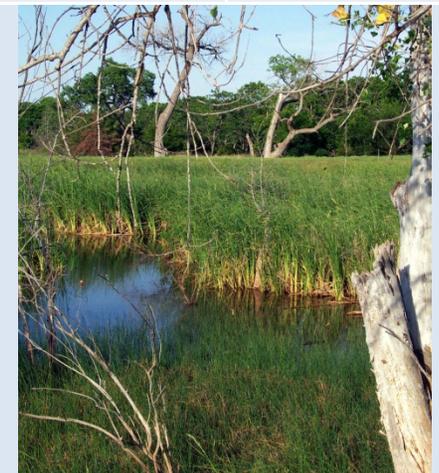
- Highest Designated Protected Waterbody
 - Add Nutrient Limited Watersheds
 - Increase importance of Sensitive water supplies

RANKING CRITERIA		POINTS	15	10	5	3	0
Highest designated protected waterbody			Scenic R./ORW/NLW	HQS/SWS			

Should Additional Criteria be Adjusted?

- Estimated Decrease in Wetlands (1982-2002)
- USFWS Priority Wetland Present
 - Is there a better measure for wetlands?
 - What is the best source of data to track this?

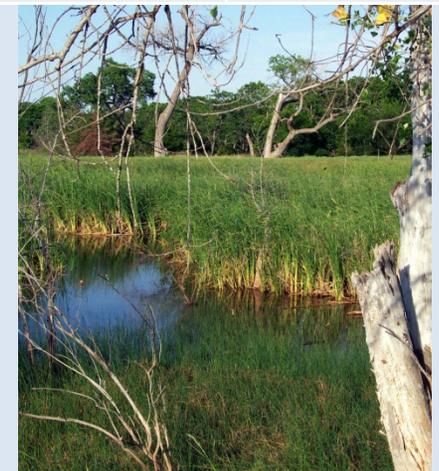
RANKING CRITERIA		POINTS	15	10	5	3	0
Est. decrease in wetlands, 1982 to 2002			gain or <1%	1 to 5%	>5 to 10%	>10% to 20%	>20%
USF&WS priority wetland present					YES		NO



Should Additional Criteria be Adjusted- Proposed Changes

- Estimated Decrease in Wetlands (1982-most recent measurement)- update dates
- No other changes

RANKING CRITERIA	POINTS	15	10	5	3	0
Est. decrease in wetlands, 1982 to 2002		gain or <1%	1 to 5%	>5 to 10%	>10% to 20%	>20%
USF&WS priority wetland present				YES		NO



Should Additional Criteria be Adjusted?

- % of HUC waters in Appendix B (recreational and/or ecological significance- generally waters near National wildlife areas, National forests, State parks and related areas)
 - Is this the best measure of ecological significance?
 - Should the points be adjusted?

RANKING CRITERIA		POINTS	15	10	5	3	0
App. B, % of HUC					upper 50th percentile	lower 50th percentile	no appendix B areas



Should Additional Criteria be Adjusted- Proposed Changes

- % of HUC waters in Appendix B (recreational and/or ecological significance- generally waters near National wildlife areas, National forests, State parks and related areas)- No changes

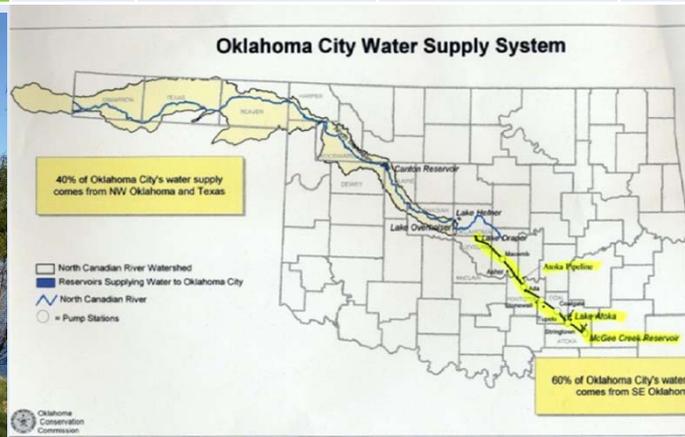
RANKING CRITERIA		POINTS	15	10	5	3	0
App. B, % of HUC					upper 50th percentile	lower 50th percentile	no appendix B areas



Should Additional Criteria be Adjusted?

- # of PWS intakes in HUC
- # of PWS customers in HUC
 - Are these the correct criteria and should we adjust the point values awarded to these?
 - Should water supplies with sourcewater protection plans be included in the ranking?

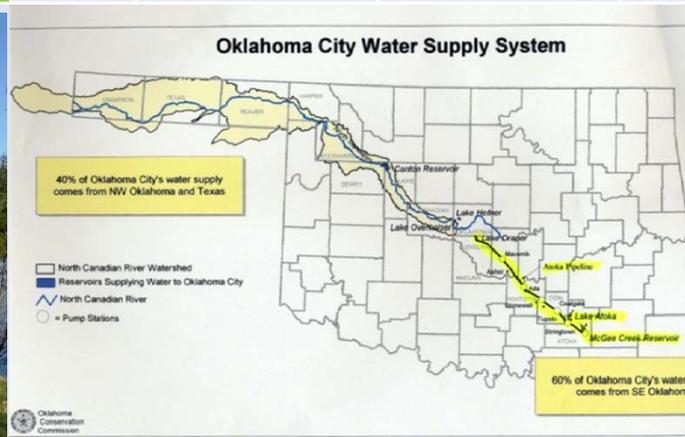
RANKING CRITERIA	POINTS	7.5	5	2.5	1.5	0
# of PWS intakes in HUC		≥4	3	2	1	0
# of PWS customers served in HUC		≥100,000	999,999 - 10,000	9,999 - 1,000	999 - 1	0



Should Additional Criteria be Adjusted- Proposed Change

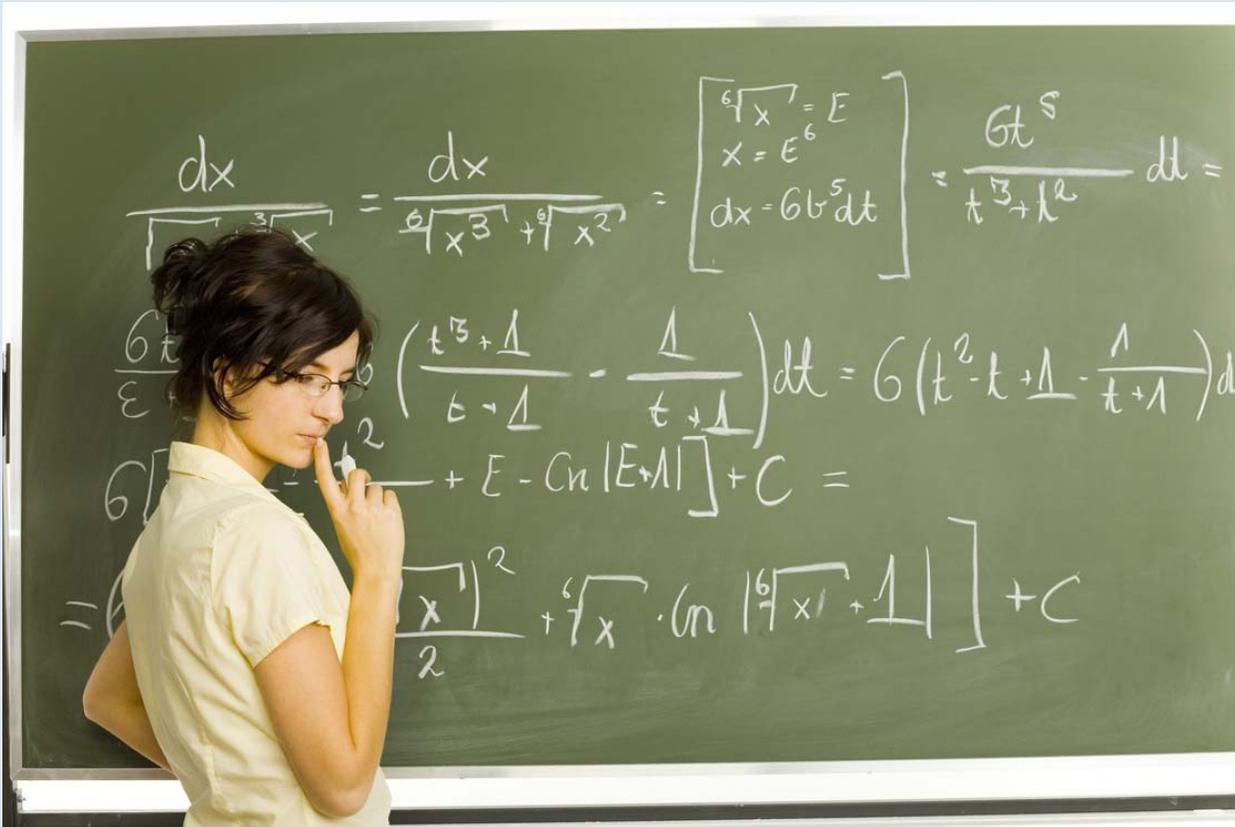
- # of PWS intakes in HUC- no changes other than updated data
- # of PWS customers in HUC-no changes other than updated data
- No changes to point values

RANKING CRITERIA	POINTS	7.5	5	2.5	1.5	0
# of PWS intakes in HUC		≥4	3	2	1	0
# of PWS customers served in HUC		≥100,000	999,999 - 10,000	9,999 - 1,000	999 - 1	0



Should Additional Criteria be Added?

- Other criteria?



How Other States Prioritize

- Arkansas

Category	Criteria	Scoring	
1. Water Body Impairment	Non-support of designated uses as identified by ADEQ and status of TMDL	Non-Hg, NPS TMDL	10
		Impaired	1
		Nutrient Sensitive	0.85
		Use Variance	0.7
		Other	0.5
2. Human Health Impact	The nature of the use not supported by the stream	Drinking water	10
		Primary or secondary contact	8
		Aquatic life	5
3. Biotic Impact	The nature of the pollutant and the use not supported by the stream with respect to aquatic life	Dissolved oxygen	9
		Pathogenic organism	8
		Sedimentation	6
		Ammonia	4
		Other	2
4. Potential Human Exposure	Potential for consumption and likelihood of contact	Drinking water	10
		Recreational lake	8
		Wild and scenic or urban river	6
		Other	2
5. Construction	Density of construction activity in watershed,	Quantile ranking of density times 10	
6. Unpaved Roads	Density of unpaved roads in watershed	Quantile ranking of density times 10	
7. Non-row Crop Agriculture	Density of pasture and animal units in the watershed	Quantile ranking of density of pasture times 5 + quantile ranking of animal density *5	
8. Row Crop Agriculture	Density of row crop agriculture in watershed	Quantile ranking of density times 10	
9. Urban	Density of urban and suburban land in watershed	Quantile ranking of density times 10	
10. Forestry	Density of forest acreage by landowner category	Quantile ranking of public forest times 3 + quantile ranking of private *7	
11. Priority of Adjoining States	Watershed has been set as a priority by and adjoining State	Yes, - 10	
		No - 0	

• Texas prioritizes TMDLs for Development

Table 3.2 Criteria for Prioritizing TMDLs (Category 5a Waters) for Development

1. The pollutant causing the impairment is a:	Points
A. Threat to human health <i>Includes nonsupport of the following uses: public water supply, contact recreation, fish consumption, oyster waters.</i>	50
B. Threat to aquatic life <i>Includes nonsupport of the following uses: aquatic life, general, and narrative criteria</i>	30
C. Threat to both human health and aquatic life	30
2. Watershed proximity, related pollutants, and the ease of incorporating a newly identified parameter of nonsupport into an existing project.	Points
A. Ongoing TMDL in the same segment for a different pollutant	10
B. Ongoing TMDL in the same segment watershed for the same pollutant	20
C. Ongoing TMDL in the same segment watershed for a different pollutant	10
D. Ongoing TMDL in a contiguous watershed for the same pollutant	10
E. No ongoing TMDL in the same segment or contiguous watershed	0
3. Data availability for TMDL development	Points
A. Ongoing modeling activities in the segment	10
B. Recent targeted data collection activities within the segment, other than routine monitoring	10
C. TMDL tools still in development (for example, bacteria source tracking, mercury)	-30
4. Local and regional support for TMDL development	Points
A. River Authority and/or Council of Government active in current or recent TMDL project	20
B. TSSWCB or other state agency active in current or recent project	20
C. Dedicated regional staff are available in TCEQ region of the project	10
D. Positive stakeholder interest within the segment watershed	10

E. Strong opposition to the project	-10
5. Year of listing: under the commitment by TCEQ leadership in 1997 to begin development of TMDLs within 10 years of listing, water bodies listed earlier have a higher priority. If original listing year is:	Points
A. 1998	50
B. 2000	40
C. 2002	30
D. 2004	20
E. 2006	10
6. Best available funding information, with first priority given to ongoing projects. If project status is:	Points
A. ≥ 50% complete	50
B. < 50% complete	20
C. New project	0
Total Points	Priority
< 80	Low
90-160	Medium
> 160	High

- **New Mexico**

- **5.2 Priorities for Addressing Water Quality Problems**

- The most useful tool for identifying priority watersheds from the standpoint of nonpoint source pollution reduction is the TMDL program. Staff working in the TMDL program of the SWQB look closely at existing data to confirm impairment, often collect supplemental data to characterize loading, and publish analyses using a public process, including estimates of load reductions required for a stream to meet water quality standards, that adds value to the resulting information. TMDLs establish separate maximum acceptable loads for nonpoint sources and point sources. TMDLs do not establish separate load reduction goals for point and non-point sources, but rather establish an overall load reduction goal (called the target load reduction).

- New Hampshire

- The revised list of NPS concerns, reflected in Table 2.3, is based on the following factors:

- Danger to public health
 - Magnitude and pervasiveness of the potential threat
 - Potential impacts to receiving waters
 - Professional judgment
 - Ability of existing regulatory programs to control pollution (assuming adequate enforcement capability)
 - Adequacy of existing educational programs to promote pollution control
 - Public perception, as discussed above
 - Comments of NPS Management Plan Subcommittees

New Hampshire

Current NPS Categories in Order of Priority

1. Urban Runoff	9. Land Disposal of Biosolids
2. Hydrologic and Habitat Modifications	10. Land Disposal of Septage
3 Subsurface Systems	11. Agriculture (Hobby and Commercial)
4. Junk, Salvage, and Reclamation Yards	12. Timber Harvesting
5. Construction	13. Resource Extraction
6. Marinas	14. Storage Tanks (Above and Below Ground)
7. Road Maintenance	15. Golf Courses and Landscaping
8. Unlined Landfills	

Next Steps

- Another webinar in September
- Any dates to avoid?
 - Should we have a face to face meeting ?
- Likely Topics of Discussion
 - Further discussion of prioritization
 - Changes in the 319 Guidance
 - Review of existing Management Plan
 - Updating of NPS Management Plan Goals
- Questions/Comments?
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