

2002 303(d) List

Section 303(d) of Clean Water Act & 40 CFR 130.7(b)(1):

Each State shall identify those water quality-limited segments still requiring TMDLs within its boundaries for which:

- (i) Technology-based effluent limitations;**
- (ii) More stringent effluent limitations; and**
- (iii) Other pollution control requirements are not stringent enough to implement any water quality standards applicable to such waters**

1992 Regulations: List prepared every two years

Lists prepared in 1992, 1994, 1996 and 1998

All TMDLs prepared to date based on 1998 list

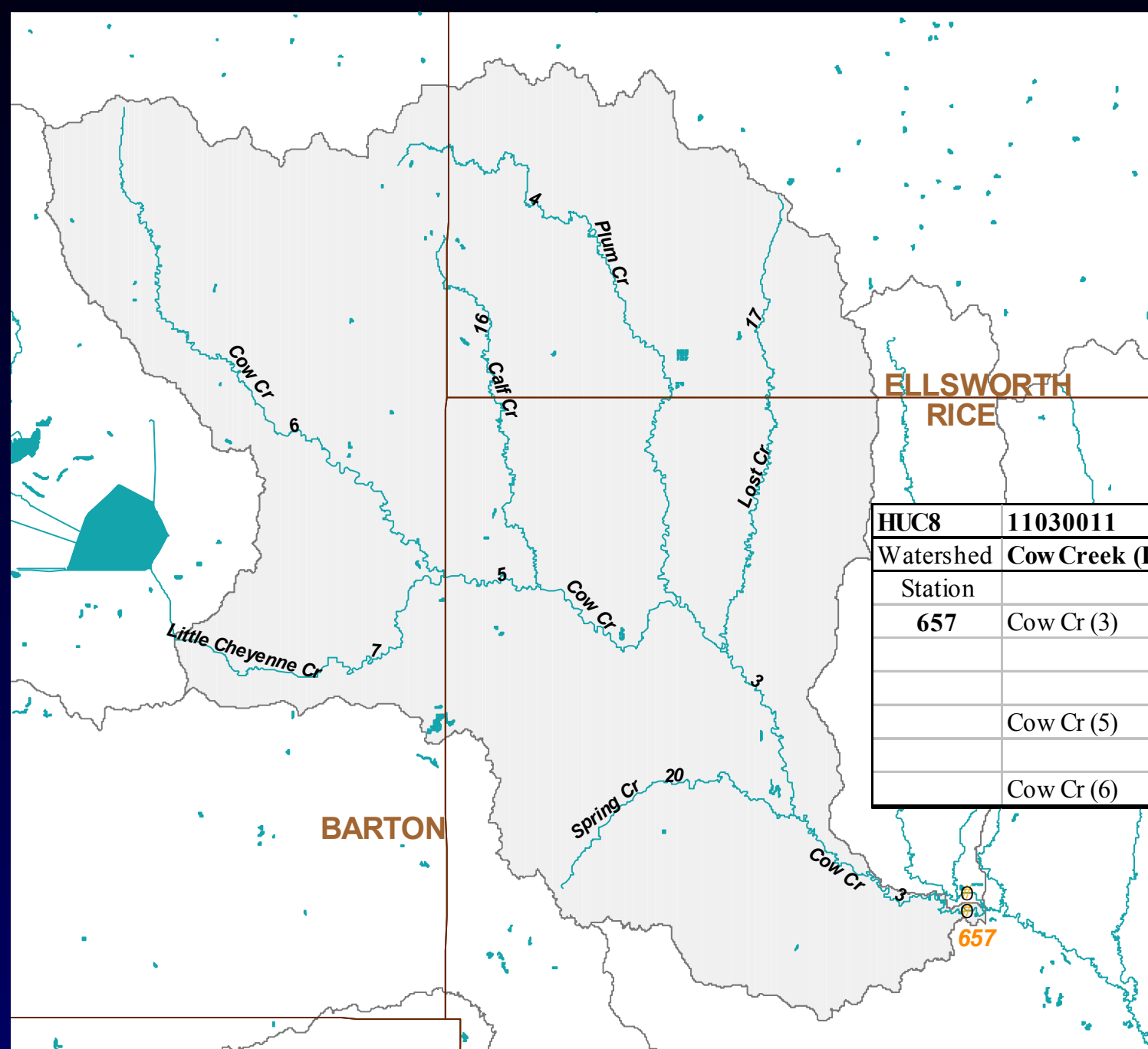
2000 Regulations: Defer preparation of list until 2000

**2001 Guidance: Begin integration of 303(d) list with 305(b) assessment
Assign all waters to one of five categories
Only Category 5 requires a TMDL**

2002 Regulations: Submit list on October 1, 2002 with Methodology

Surface Water Assessment Units

- 1. Based on 304 ambient stream chemistry sites; 68 biological monitoring sites; 19 fish tissue sites; and 315 lakes**
- 2. Watersheds aggregate the segments of streams draining that area, whether impaired or not**
- 3. Hierarchy of Stream Segments identified for each Watershed**
- 4. Lake Watersheds - Established for the 27 largest lakes; smaller lakes incorporated within the stream-based watersheds**
- 5. This approach covers 97% of the state.**



HUC8	11030011	
Watershed	Cow Creek (Lyons)	
Station		
657	Cow Cr (3)	Spring Cr (20)
		Lost Cr (17)
		Plum Cr (4)
	Cow Cr (5)	Calf Cr (16)
		Little Cheyenne Cr (7)
	Cow Cr (6)	

Categories for Surface Waters

- Category 1** Attaining the water quality standard and no designated use is threatened
- Category 2** Attaining some of the designated uses; no use is threatened; and insufficient or no data and information is available to determine if the remaining uses are attained or threatened.
- Category 3** Insufficient or no data and information to determine if any designated use is attained.
- Category 4**
- 4a** Impaired or threatened for one or more designated uses but does not require the development of a TMDL because the TMDL is completed. [most of 1998 listed waters]
 - 4b** Impaired or threatened for one or more designated uses but does not require the development of a TMDL because other pollution control requirements are reasonably expected to result in the attainment of the water quality standard in the near future. [Point source permit limits]
 - 4c** Impaired or threatened for one or more designated uses but does not require the development of a TMDL because the impairment is not caused by a pollutant. [Hydrology]
- Category 5** The Water Quality Standard is not attained. The AU is impaired or threatened for one or more designated uses by one or more pollutants and requires a TMDL [303d list]

Data Used for Impairment Evaluation

1. Remainder of 1998 List is carried over in total for the Smoky Hill-Saline; Solomon and Upper Republican basins.
2. 2002 305b Assessment used to initially screen streams; identifies impaired lakes, wetlands, biological and fish tissue impairments
3. 1996-2001 Data used for routine stream sites; sample size 30-36
4. 1990-2001 Data used for rotational stream sites; sample size 15-18
5. Minimum sample size is 12; else Category 3
6. Binomial Analysis used for listing decisions

Set Type I error rate at 0.10

Analyze sample sizes of 12 or greater

Emphasize recent impairments

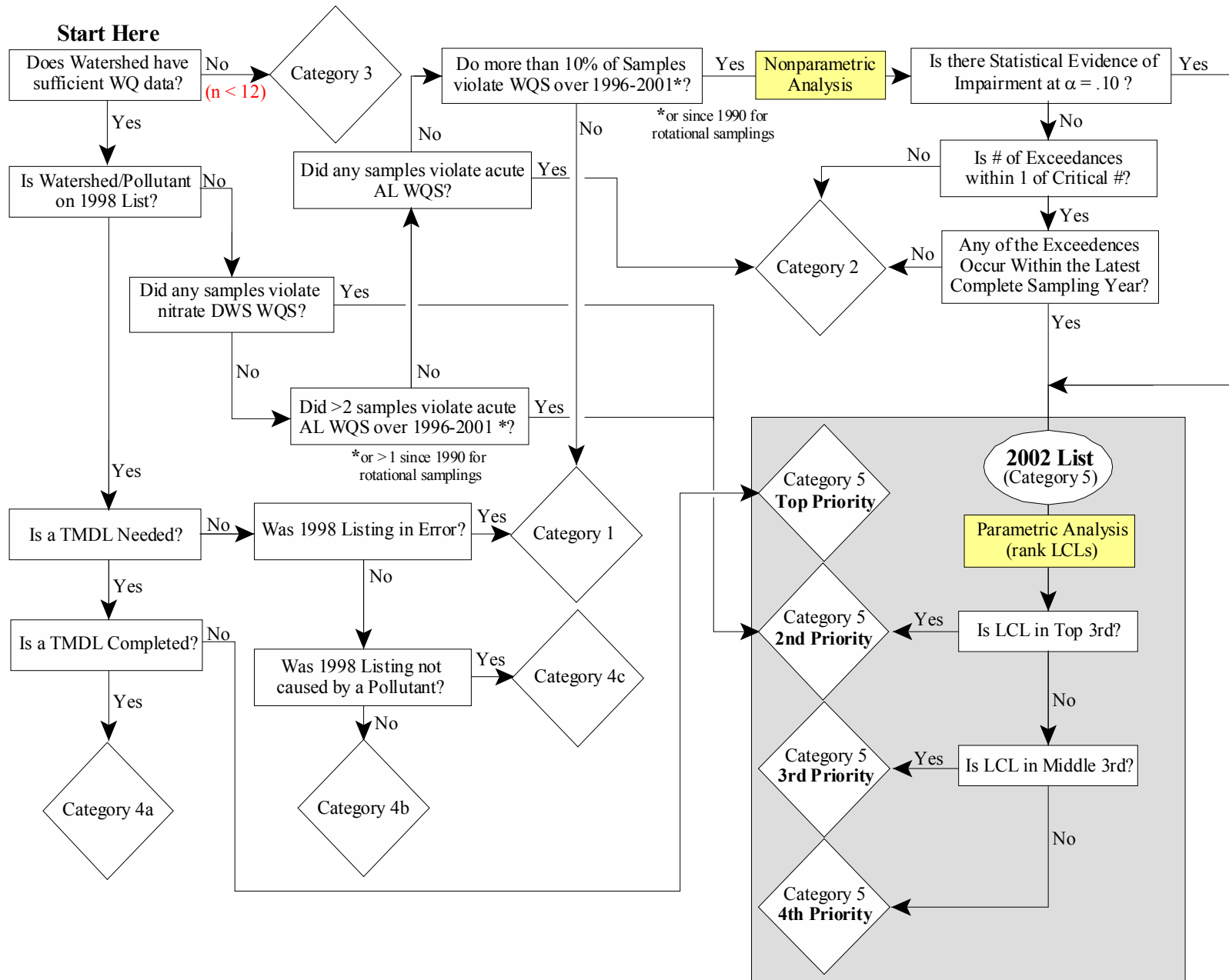
Key on both chronic and acute aquatic life criteria

7. Lakes evaluated on Chlorophyll and Phosphorus levels, Siltation issues
8. Biological Data

Any indication of non-support over 1996-2001 or two years of partial support

Any indication of impairment in fish tissue in two years over 1996-2001

Summary of logic used to place watersheds (assessment units) into the categories of the Kansas 2002 303(d) List



Priority for Establishing TMDLs from the 2002 List

1. The carryover listings from 1998 for Northwest Kansas are the top priority; TMDLs to be done in 2002-2003.

2. Stream Impairments

Statistical Analysis will evaluate the value of the lower 90% confidence limit on the 90th percentile concentration of the pollutant at each impaired station

Comparison will be among all impaired stations in the state

Impairment magnitude will be ranked and segregated into thirds

Highest priority will go to the watersheds in the upper third; next priority will go to the watersheds in the middle third; last priority will go to the watersheds in the lower third.

3. Lake Impairments

Highest priority goes to the impaired lakes of Northwest Kansas

Next priority goes to lakes supporting primary contact recreation and having chlorophyll a between 12-16 ppb

Next priority goes to lakes with chlorophyll a greater than 40 ppb or phosphorus greater than 100 ppb

Lowest priority goes to lakes with chlorophyll a between 16-40 ppb or phosphorus between 50-100 ppb.

Priority for Establishing TMDLs from the 2002 List (continued)

- 4. Biology Impairment rankings based on MBI scores over 1996-2001**
- 5. TMDLs will be done on the highest priority impairments within each basin, rotating in the order that the first round of TMDL development occurred.**

2003-2004: Kansas-Lower Republican

2004-2005: Lower Arkansas, Upper Arkansas, Cimarron

2005-2006: Missouri and Marais des Cygnes

A new 303d List will be prepared by 2006

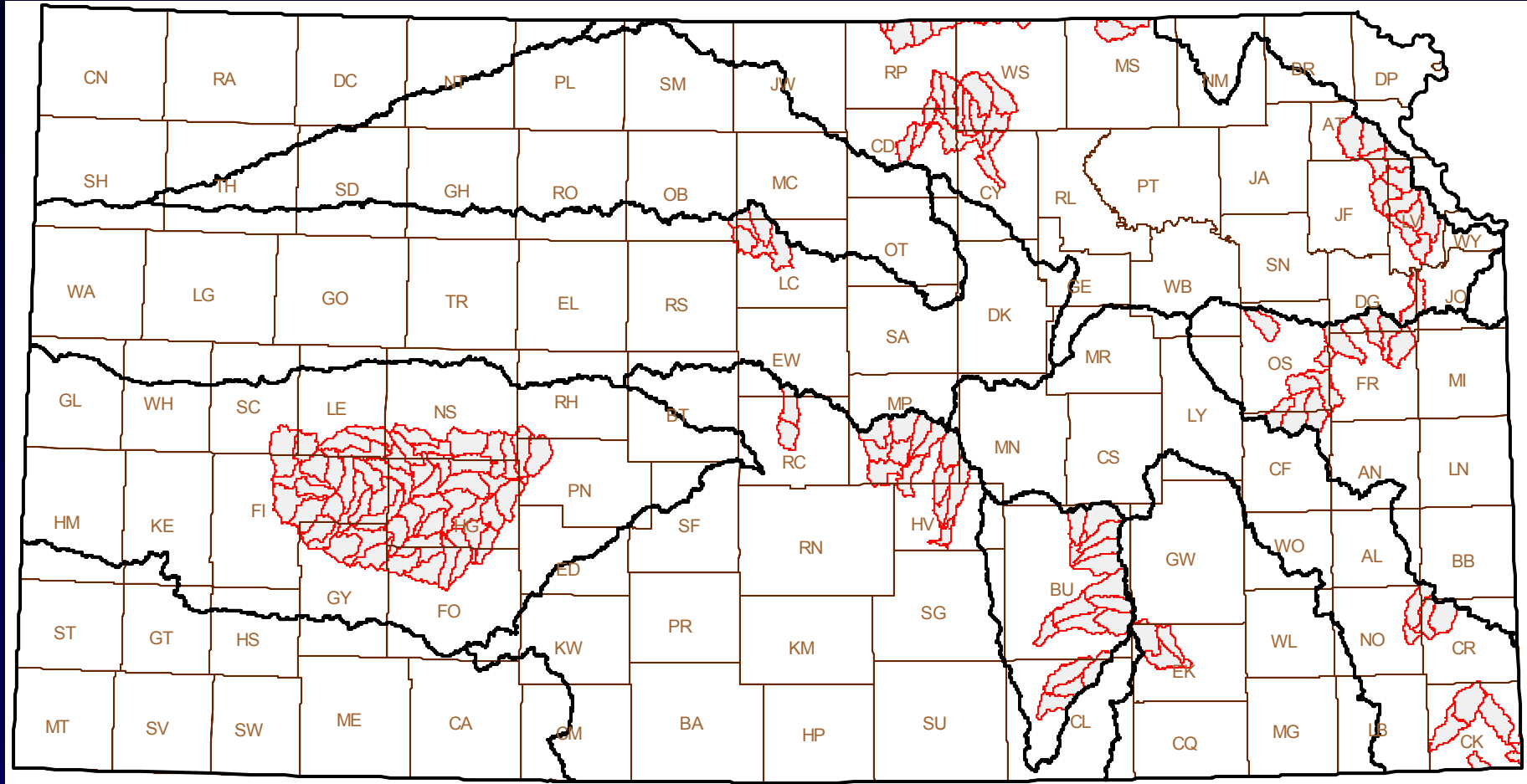
2006-2007: Neosho, Verdigris and Walnut

2007-2008: Smoky Hill-Saline, Solomon, Upper Republican

Initial Results of 2002 Listing

1. **177 TMDLs expected for Northwest Kansas basins, dealing with chloride, sulfate, selenium, bacteria, dissolved oxygen and eutrophication**
2. **Atrazine is seen in certain streams and lakes**
3. **Lead and copper chronic impairments in a number of areas of state**
4. **Eutrophication is prevalent, or manifested as pH or DO issues**
5. **Siltation in lakes also prevalent, dampens primary productivity**
6. **Biological monitoring showing stress**
7. **Selenium emerging as issue at Colorado State Line**
8. **May wish to re-open existing TMDLs in some basins to incorporated updated information.**

2002 Copper and/or Lead Listings



Methodology Available at:

<http://www.kdhe.state.ks.us/tmdl/>

List and methodology will be submitted to Region VII of EPA on October 1, 2002

**Submit comments to: Watershed Planning Section, Bureau of Water
Kansas Department of Health and Environment
1000 S. Jackson, Suite 440
Topeka, KS 66612**

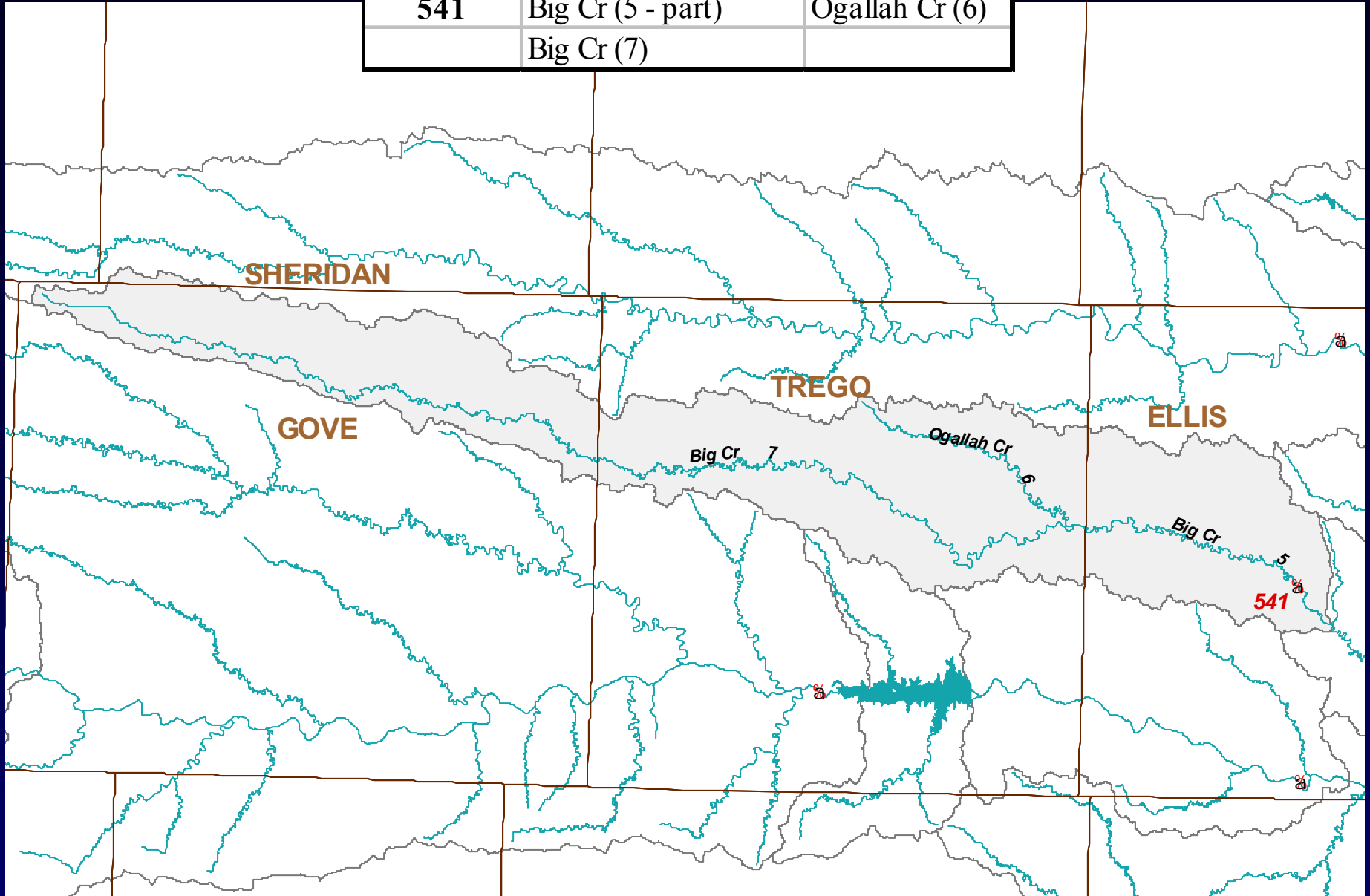
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HUC8	10260007	
Watershed	Big Creek (Hays)	
Station		
541	Big Cr (5 - part)	Ogallah Cr (6)
	Big Cr (7)	



HUC8	10270104			
Watershed	Upper Wakarusa R.			
Station				
109	Wakarusa R. (30)-part	Lynn Cr (67)		
		Burys Cr (32)		
	Wakarusa R. (31)	Sixmile Cr (65)	Unnamed Stream (583)	Unnamed Stream (584)
		S. Br. Wakarusa R. (63)		
		Middle Br. Wakarusa R. (64)		

