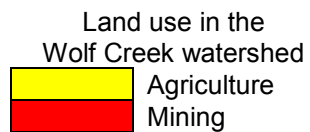
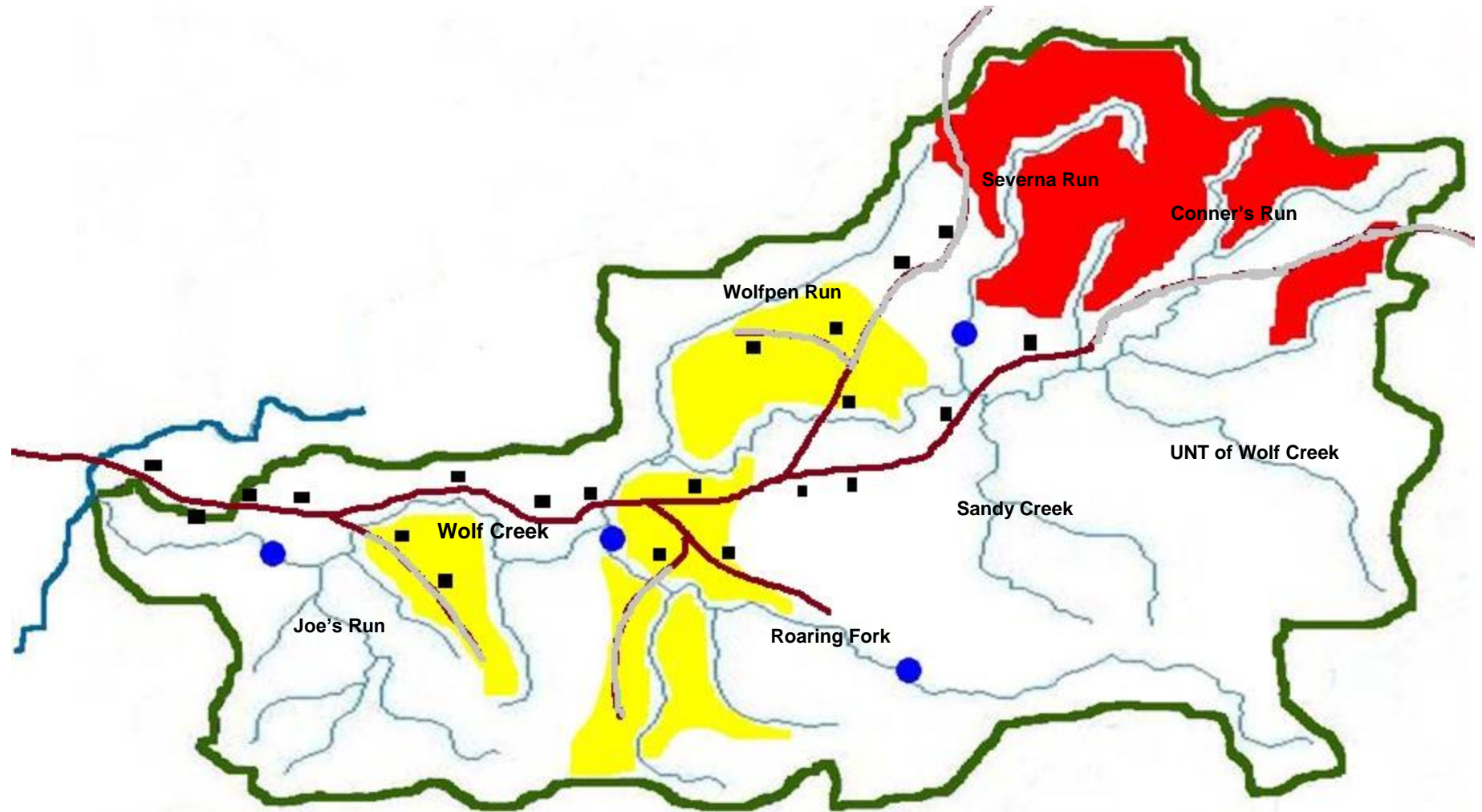


## Assessing chemical conditions

The purpose of this activity is to use the chemical data on page two to evaluate the conditions of the **Wolf Creek** watershed. As a group, attempt to answer the questions and submit your answers to the WV Save Our Streams Coordinator.



**Assumptions:** Agriculture consists of cropland and pasturelands; cropland is more prevalent; mining consists of active and abandoned mines; most of the mining in the watershed has been abandoned. You can assume that the areas of the map not having a land-use designation are mostly forested and un-disturbed except for some single-family homes (black) scattered throughout the watershed. There are also roads in the watershed indicated by either brown (paved) or gray (un-paved) lines.

**Assessing chemical conditions**

Analysis	Sample #	Result
pH	<b>117</b>	4.2
Nitrate		ND
Alkalinity		0
Dissolved oxygen		5.2
Conductivity		800

Analysis	Sample #	Result
pH	<b>705</b>	6.4
Nitrate		1.2
Alkalinity		20
Dissolved oxygen		6.0
Conductivity		450

Analysis	Sample #	Result
pH	<b>1423</b>	7.6
Nitrate		2.0
Alkalinity		20
Dissolved oxygen		5.5
Conductivity		300

Analysis	Sample #	Result
pH	<b>329</b>	8.1
Nitrate		ND
Alkalinity		40
Dissolved oxygen		8.6
Conductivity		200

**Sample stations:** Below are the site **numbers** and descriptions for those shown on the map.

- 1** Wolf Creek mainstem downstream from Joe's Run
- 2** Roaring Fork (station 1) just upstream of the confluence with Wolf Creek and below most of the agricultural practices
- 3** Roaring Fork (station 2) farther upstream on Roaring Fork above the agricultural practices
- 4** Severna Run downstream from mining activities

Based upon your analysis of the samples provided, match your sample # with its location. Enter the results in the table below. Note: The sample number refers to the entire suite of samples for a given location.

Sample #	Site #	Site description
	1	Wolf Creek mainstem downstream from Joe's Run
	2	Roaring Fork (station 1) just upstream of the confluence with Wolf Creek and below most of the agricultural practices
	3	Roaring Fork (station 2) farther upstream on Roaring Fork above the agricultural practices
	4	Severna Run downstream from mining activities

**Other questions to consider:**

Would you choose different sites?

Would additional sites be necessary?

If you choose additional sites, explain your reasons why.

How many would you add and where would you place them?

Email your answers to the WV Save Our Streams Coordinator.