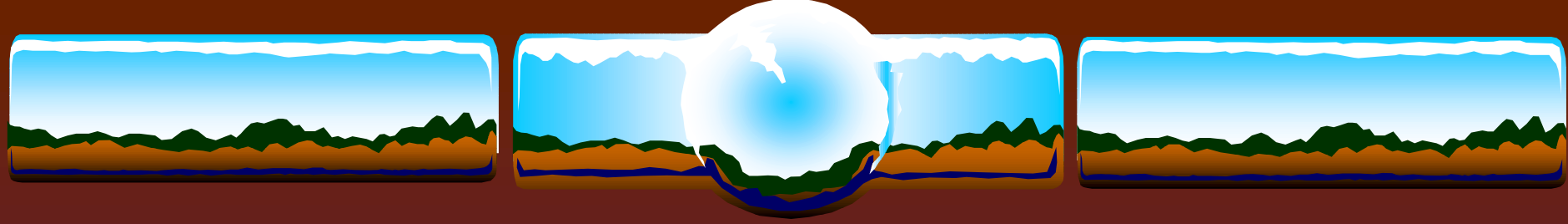
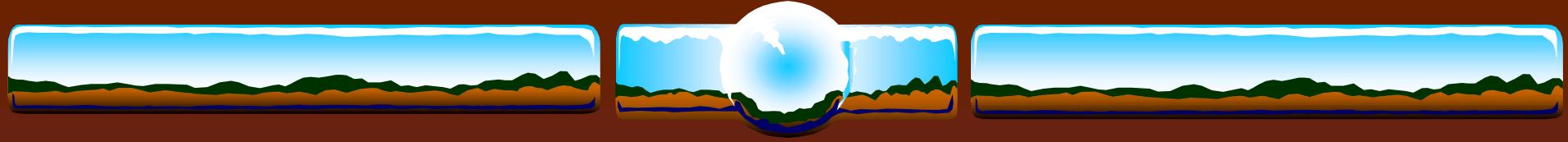


Turning Data Into Useful Information

Kent Tracey

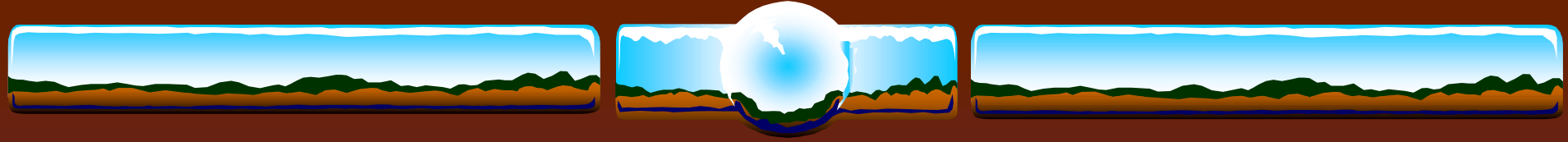
IDNR, Div of Soil Conservation



“..none of us knows as much about something as all of us”

Dennis Phillippi, Coordinated Resources Management Guidelines

In evaluating what you have learned, be careful to be objective and non-judgmental.

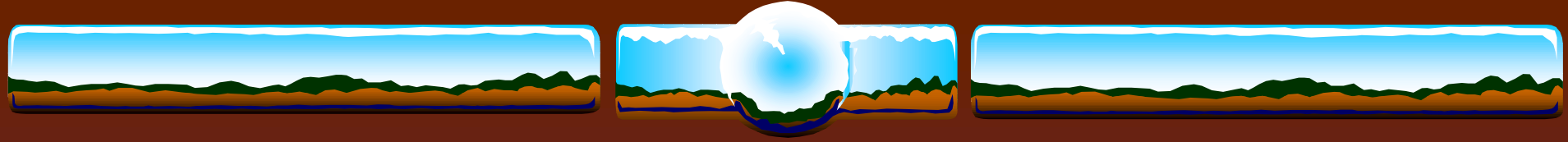


For each section, ask yourself:

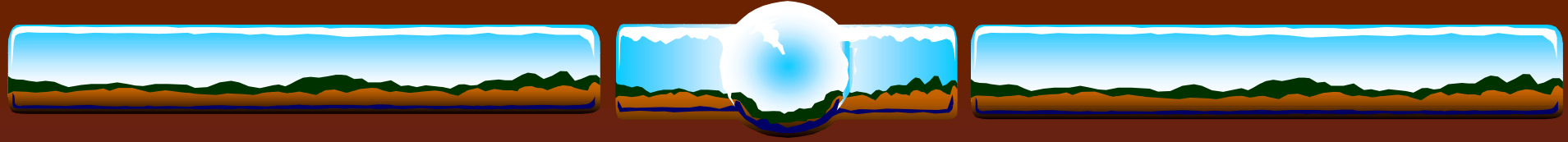
1. What have we learned about the landscape.
2. What have we learned that is positive.
3. Do we know enough to reach a decision about what needs to change?

4. If not, what else do we need to find out.
5. Who could help us bring about change?
6. What's the priority for this activity, land use, or feature?

7. If we think we have identified a problem, is it one we should address as a group or should we turn it over to somebody else?

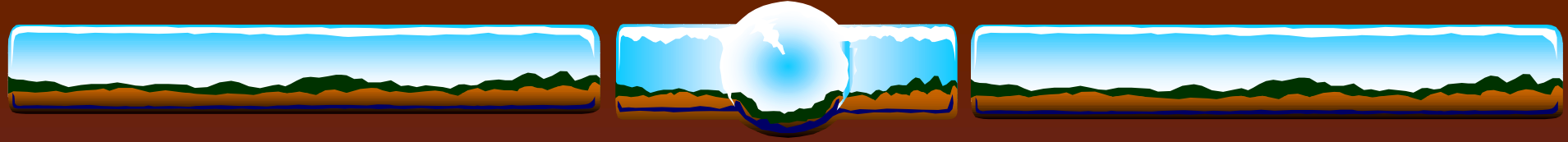


What did the land use inventory tell you about the watershed?



What did the land use inventory tell you about the watershed?

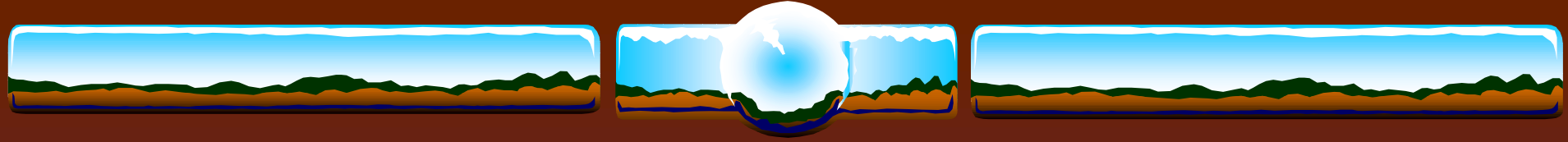
Streams and Lakes



What did the land use inventory tell you about the watershed?

Streams and Lakes

Wetlands

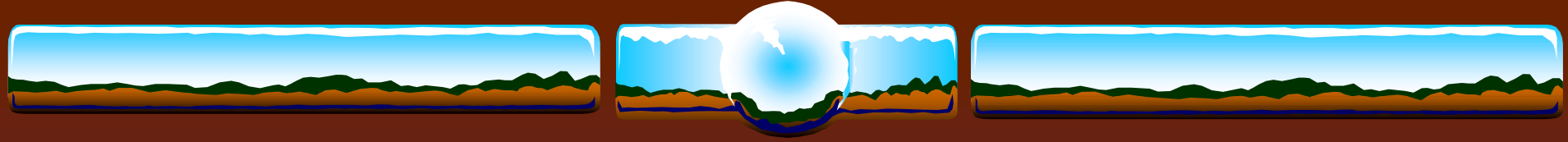


What did the land use inventory tell you about the watershed?

Streams and Lakes

Wetlands

Residential and Urban Use



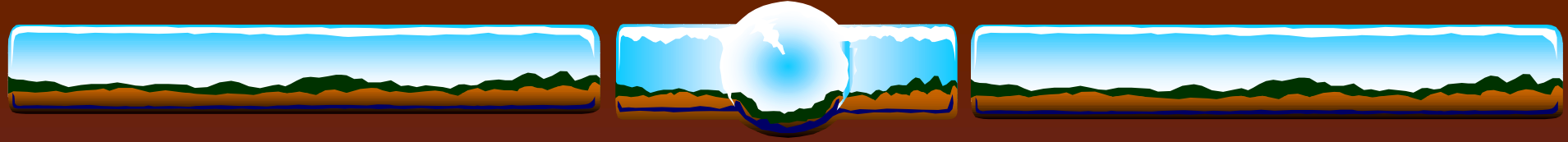
What did the land use inventory tell you about the watershed?

Streams and Lakes

Wetlands

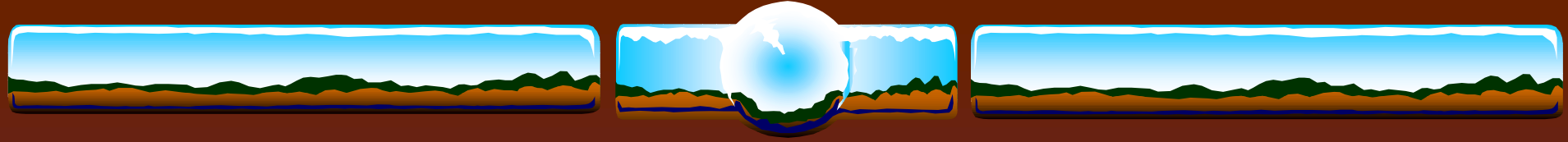
Residential and Urban Use

Regulated Pollution Sources



What did the land use inventory tell you about the watershed?

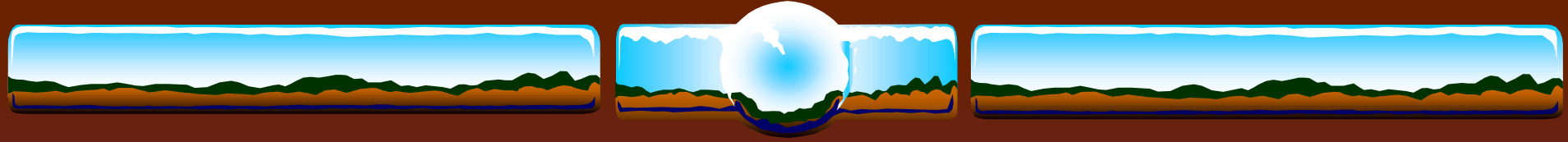
Agriculture



What did the land use inventory tell you about the watershed?

Agriculture

Forest and Wildlife

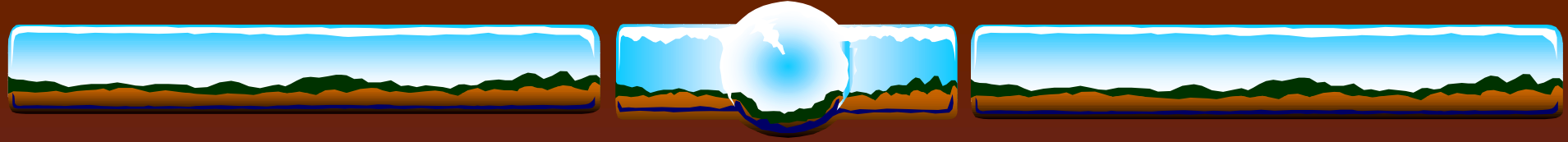


What did the land use inventory tell you about the watershed?

Agriculture

Forest and Wildlife

Mines and Wells



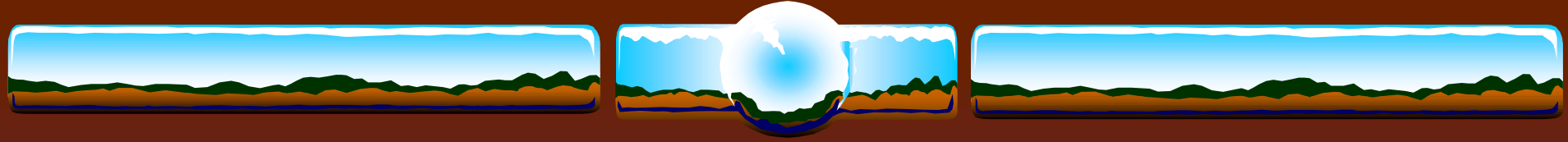
What did the land use inventory tell you about the watershed?

Agriculture

Forest and Wildlife

Mines and Wells

Cultural Resources



What did the land use inventory tell you about the watershed?

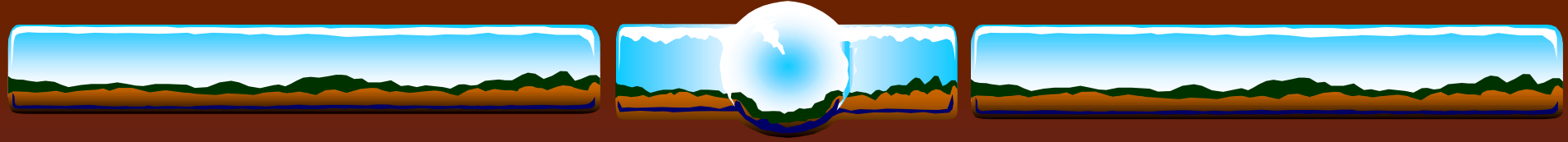
Agriculture

Forest and Wildlife

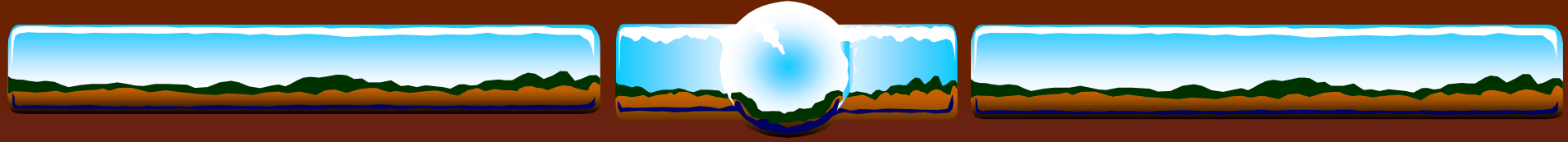
Mines and Wells

Cultural Resources

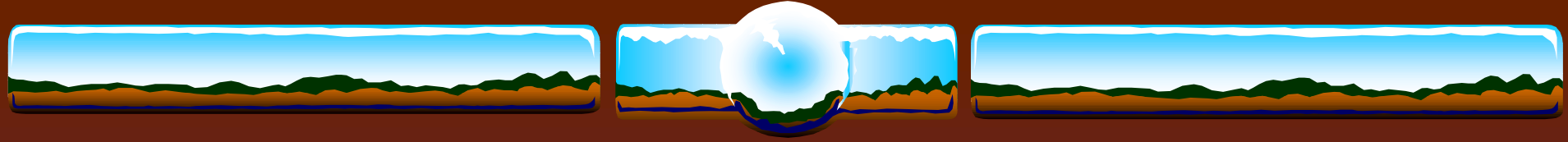
Social and Economic factors



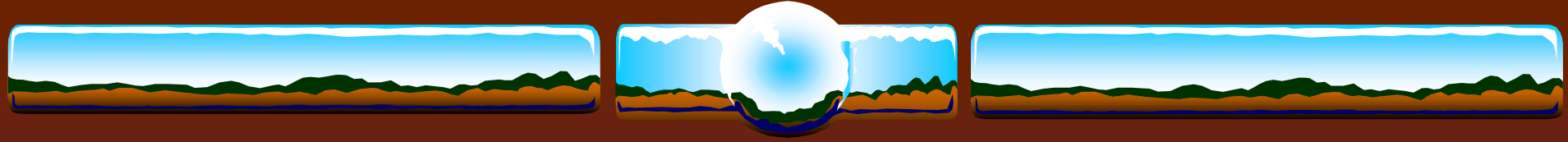
Water Quality Information.



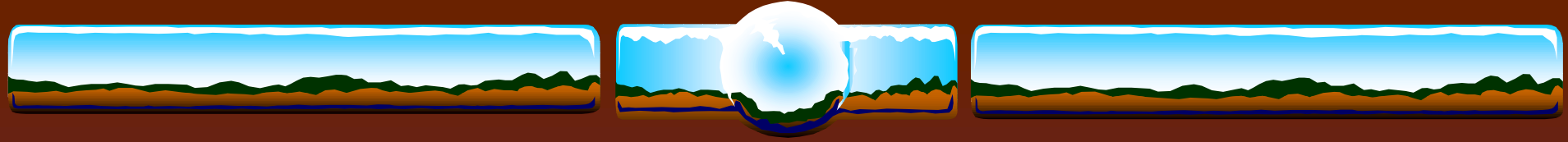
Water Quality Information.
What does it tell you?



Water Quality Information.
What does it tell you?
Does it agree with the land use information?



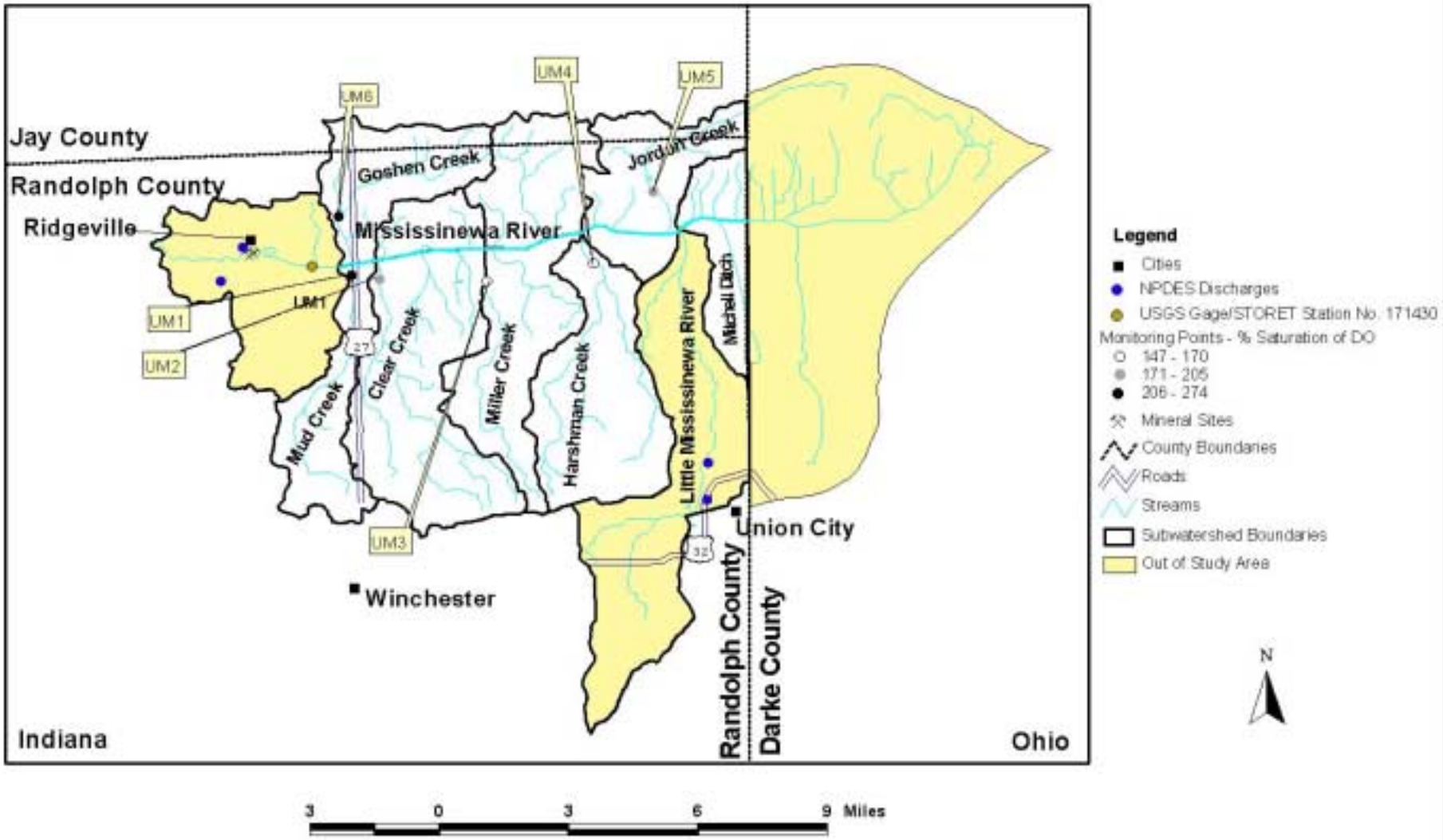
Water Quality Information.
What does it tell you?
Does it agree with the land use information?
Why or why not



REVIEW YOUR MAIN OBJECTIVES

- Identify significant nonpoint sources of water pollution
- Prioritize subwatersheds for pollution control projects

Look at the value (score) of certain key parameters – do relative comparisons between each subwatershed

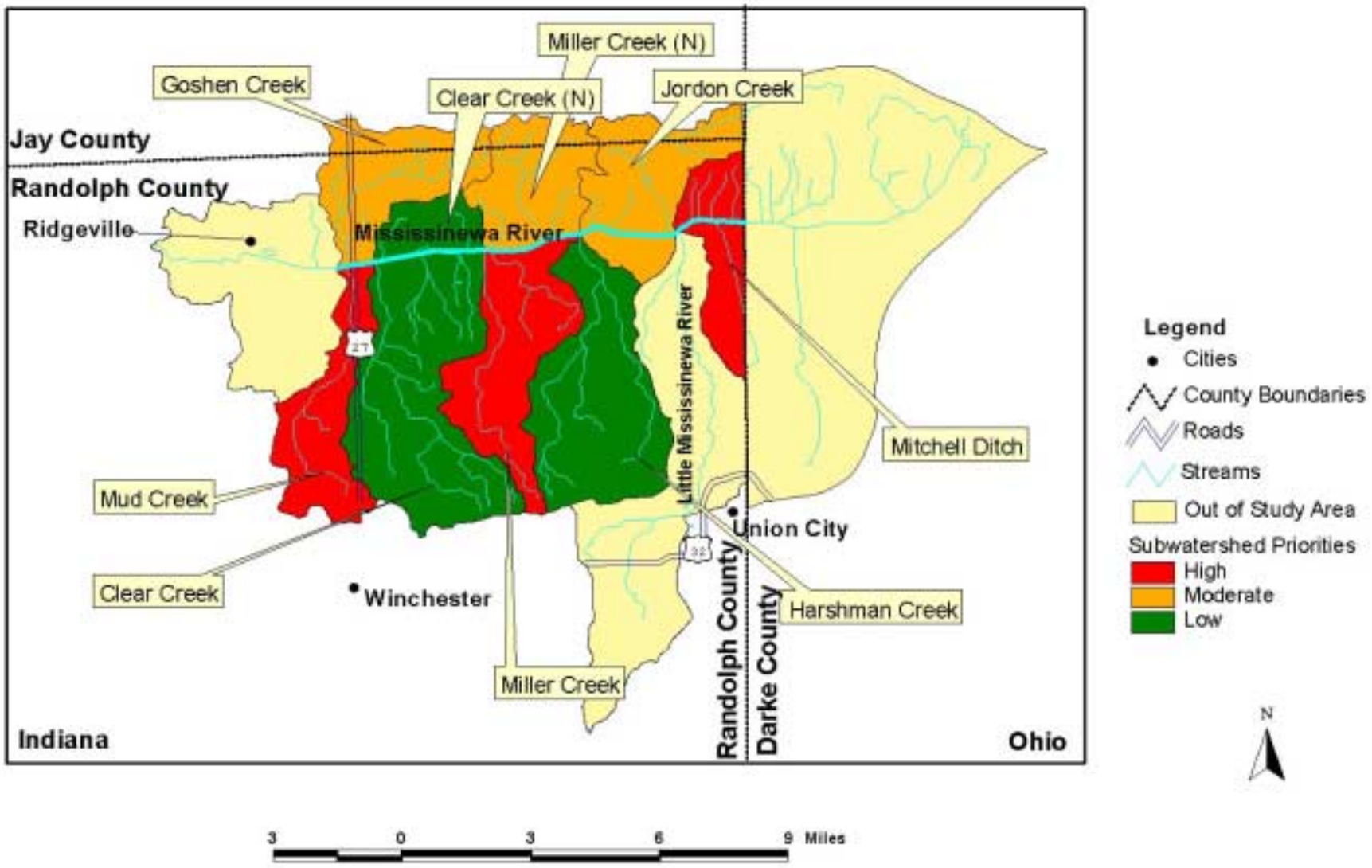


Refer to the LARE Quick Guide to help with Interpretation

PARAMETERS	WHAT IT IS…	IMPORTANCE	SOURCE/CAUSE OF IMPAIRMENT	ACCEPTABLE LEVEL
Dissolved Oxygen (DO)	The amount of oxygen dissolved in water that is readily available for use by all aquatic life (the higher the water temperature, the less DO it can hold)	-Necessary for fish and most other aquatic organisms to survive -Most sport fish suffer in low DO levels	-Excess loads of organic matter resulting in increased decomposition -Sources: nutrient runoff from construction, intensive tillage, improper manure application, and poor silviculture practices	DO concentrations should never fall below 4 mg/L. Indiana's standard is set at 5 mg/L. Ideal values should be substantially higher than 5, not to exceed 10.
Conductivity	The ability of water to carry an electric current due to the presence of dissolved ions	At the proper level, dissolved ions of nutrients are essential for growth of organisms. Fish are very sensitive to changes in the concentration of salts (chloride ions) in the water	Nutrient runoff from: -Agricultural practices -construction sites -runoff from urban areas -factory and municipal effluents (discharges)	Standards for Indiana have been set at 1200 mS/m which equals 12000 micromhos/cm (equivalent dissolved solids value is 750 mg/L. Ideal range is 200-500 mg/L)

SUBWATERSHED RATING CRITERIA

- Land use “hotspots”
- Sediment loading
- Phosphorus loading
- Family Biotic Index
- Habitat Index (QHEI)

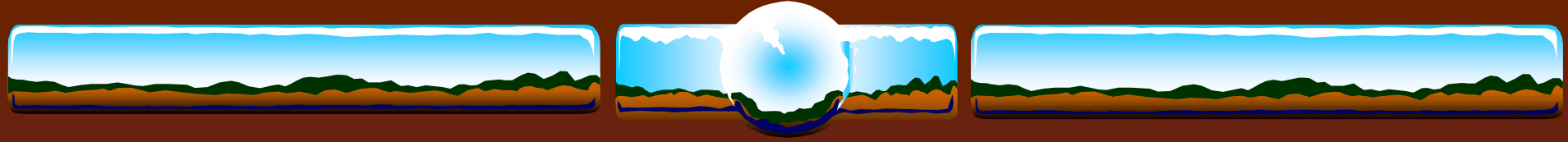


HARZA ENGINEERING COMPANY
WATER & ENVIRONMENT

SUBWATERSHED PRIORITIES FOR NONPOINT SOURCE POLLUTION CONTROL

MISSISSINEWA WATERSHED DIAGNOSTIC STUDY

Exhibit 27

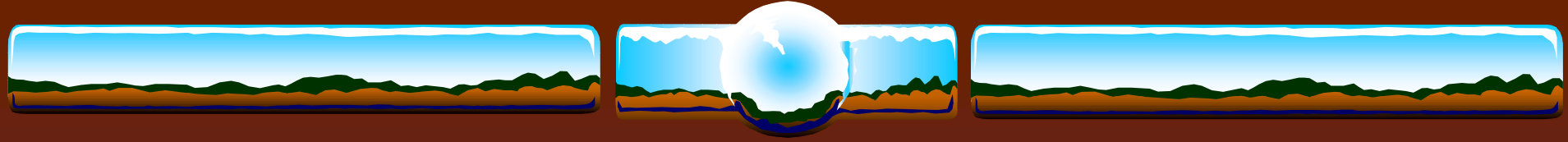


Problem Statements

- Specifies What, Where, and Why
- State only what you know

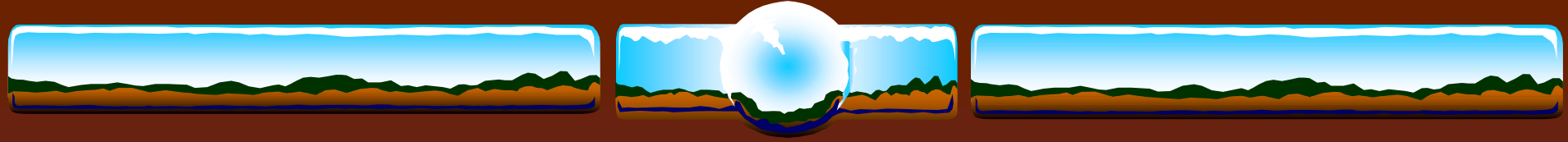
Problem Statements

"There's a visible plume of sediment going into Lick Creek north of Centenary Road when it rains; from our field observations, it appears to be due to the lack of erosion and sediment control practices in the new Country Corner subdivision."



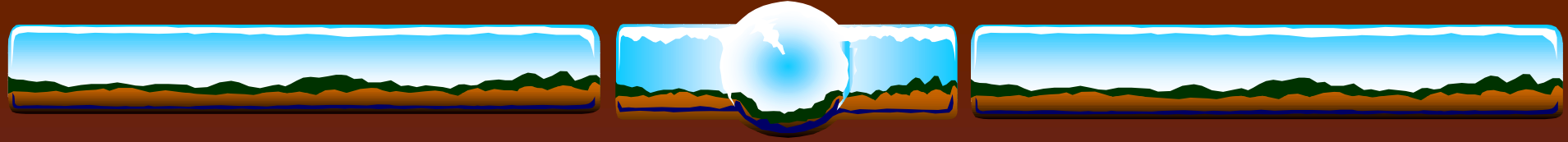
Problem Statements

"Streambank erosion was noted at 60% of stream observation points, and we know that impervious area in the watershed has increased from 8% to 15% over the last five years. The county presently has no stormwater management ordinance in place, and 75% of subdivisions do not have any provision for retarding stormwater. It appears that increased impervious area may be changing the hydrology of the streams."

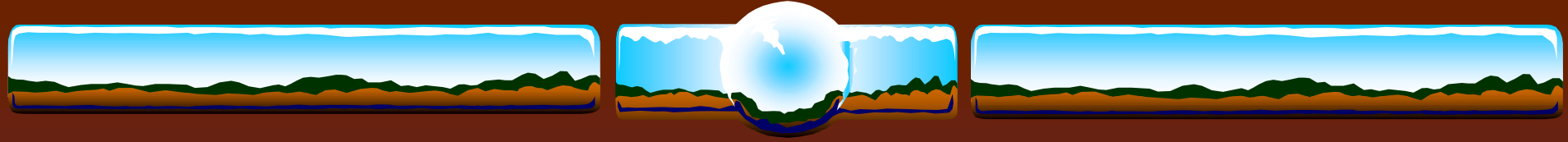


Prioritize them based on:

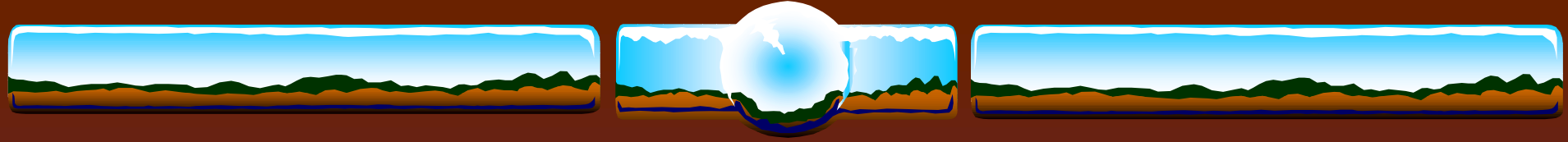
- Urgency.. What will happen if the problem isn't fixed?
- Feasibility.. Is it something that the group can fix or influence?
- Location.. Does the problem occur all over the watershed or only in certain areas?



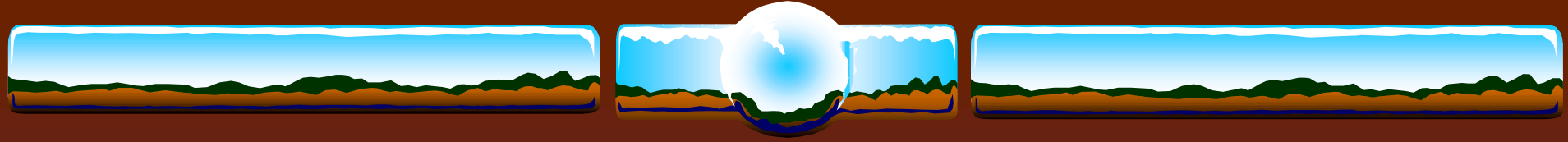
So What's Next?



What needs to be done to improve the conditions?

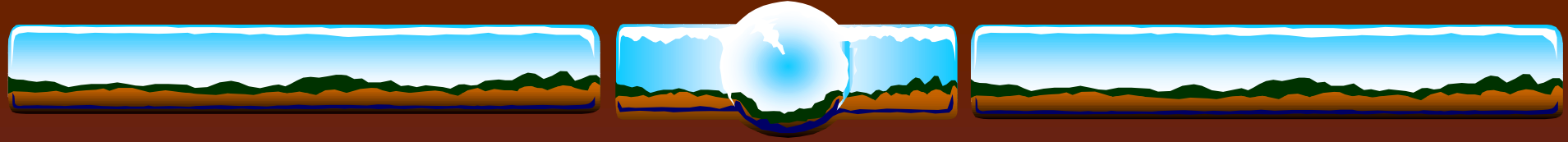


Who needs to be involved to assist with changes?

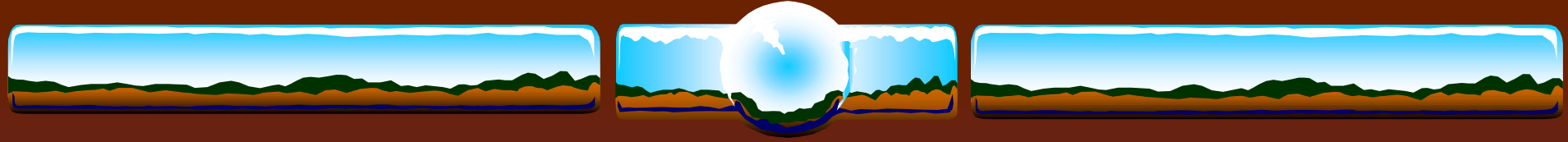


Who needs to be involved to assist with changes?

Can we provide the needed assistance?



Will the landusers be willing to make the necessary changes?



Questions and Comments