Changes in the NRCS Nutrient Management Standard 590

590 Standard Not Yet Released

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Todays Topics

- What is the Nutrient Management Problem in Utah?
- Who does it affect in Utah?
- What is the path of nutrients that cause the problem?
- What are we going to do about it?

What is the Nutrient Management Problem in Utah?

- Many reservoirs have unacceptably high levels of phosphorus. A large percentage of them are actually located *above* the farmland in their watersheds.
- The source of phosphorus is geologic; apatite and fluorapetite are rocks in the 'Park City Formation' which is a geologic layer that shows up in many areas of the state. Where the layer is thick and accessible it is actually mined for phosphate ore.

What is the Nutrient Management Problem in Utah?

- That means there is already a high background level of P in our streams.
- A slight addition of more P can tip the scales and cause eutropication.
- We talk about P as if it were the only nutrient problem; actually, we use it as an indicator. Elevated levels of P can imply elevated Nitrates and elevated e Coli or other harmful bacteria.

What is the Nutrient Management Problem in Utah?

- Phosphorus doesn't directly poison animals and humans. Nitrates do.
- Nitrates can accumulate in an aquifer over time to the point that the water is dangerous for infants to drink. *(think of carbon monoxide poisoning)*
- Bacteria from manure can also make people sick. *(think of e. coli, fecal coliform)*
- Streams that are positioned low in some watersheds may not be swimmable, fishable streams.

What is the path of nutrients that cause the problem?

- Most of our drinking water sources are pristine mountain streams, and the water is stored in reservoirs.
- The reservoirs are above farming areas so agriculture doesn’t have a strong effect on drinking water quality.
- However! Nitrates from Ag can affect wells.

What is the path of nutrients that cause the problem?

- State and Federal government has partnered with many livestock operators and built dikes and diversions and other structures to catch and store runoff from feedlots. Most of the feedlots with problems have been addressed in the past ten years.
- Once it is captured and is stored some where is the problem solved?
- Spreading manure on agricultural fields is the wisest and best use of an important resource.

What is the path of nutrients that cause the problem?

- When manure is spread in *most* fields there is no chance of having a problem of it reaching ground water or a stream.
- Some locations are risky to apply manure because water (rain, snow, or irrigation) will carry it into a stream or into the ground water.
- Our task is to identify those situations and figure out how to minimize the risk.

What are we going to do about it?

- NRCS works with cooperators to make Nutrient Management Plans; identifying problem spots and developing alternatives.
- We follow a set of nationally developed guidelines that are uniform for all states. Nutrient Management 590 is this “practice standard” we use for spreading manure on agricultural land.

Issues

- One of the issues facing us is spreading manure on frozen and snow covered land

Issues

- We can build storage for manure that can be emptied when the weather is good and the ground is dry. If fields are covered with snow and ice, and the storage structure gets full, what happens?

Issues

- When manure is applied on a field,
- ….and it is incorporated into the soil by irrigation….
- ….if the irrigation drives the soil moisture deeper than the root zone, what happens?

Issues

- What happens when a field already has too much of a particular nutrient but we keep adding more every year?

Questions?