

# Water Quality Issues As They May Pertain to Planning Processes

Presentation by Dr. Bill Simon, ARSG, to the San Juan County  
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As the Commission members know, water quality in the Upper Animas watershed has an extreme range of variability. In many small tributaries we are blessed with pristine waters. However, several areas are highly mineralized and streams originating or passing through these areas tend to be impaired by high acidity and toxic metals. Mine drainages often further degrade water quality. Often these streams do not support aquatic life and in certain instances can be a human health risk if consumed.

The ARSG has been monitoring water quality and characterizing sources of both acidity and toxic metal pollution in the Upper Animas for over 10 years. Serving the purposes of scientists, engineers, regulators, and enforcement agencies, the ARSG has developed a large database that, although effective, is cumbersome and difficult to interpret. The maps and accompanying information that I will be presenting to the Commission is an attempt to simplify water quality related information into a friendlier format such that it can assist with planning from your prospective as well as from that of property owners.

Tonight you can view the maps. In the near future I would like the opportunity to relate their meaning and potential uses. These maps were only completed last week and I have not been given the opportunity to do a final check, therefore they must be considered to be “drafts”. The water quality maps, whether for wells, seeps, or draining mines, reside in a geographical information system that will allow one to pull up the accompanying water quality data for that site. It is important to note that samples taken from a site represent the condition only at a single point in time. Nevertheless the information can be used to provide a general sense of what might be expected at the site. Water quality can be related to the life of aquatic organisms, as it is with stream standards, or as a potential risk to human health. Property owners should be aware of both since the former may affect their pocket books while the latter, their health. Tables will accompany the maps to provide stream standards as well as drinking water standards.

A map of stream use classifications (based upon aquatic life classes) and a map of streams that have Total Daily Maximum Load (TMDL) restrictions also accompany this material. These are of particular importance as they relate to potential industrial or development related dischargers or an expanding discharger (e.g. Silverton’s waste water treatment facility).

There are several issues that should be considered by the Commission relating to the use of these maps, not the least of which is some of their limitations. I hope to further explain this at your earliest convenience.