

Least Impacted Reservoir Screening Method

Data Source

Land use cover data for this project covers data from 1990-1992 and was acquired from the National Landcover Characterization Dataset, which can be found on the USGS website at <http://seamless.usgs.gov>.

Toby Welborn of the USGS TX District (512-927-3567 twelbor@usgs.gov) can provide detailed (but not yet published) metadata.

Least Impacted Reservoir Determination

Least impacted reservoirs are those with the following characteristics. The land use characteristics must be met for both the reservoir's Area of Primary Influence or API (see below) and the reservoir's watershed. All land use percents are only in terms of total land, i.e. water acres excluded.

1. Less than 10% urban land use
(high intensity residential, low intensity residential, urban/recreational grasses, and commercial/industrial/transportation land uses).
2. Less than 10% agriculture land use
(orchards/vineyards, row crops, small grains, and fallow)
(The pasture/hay land use is not included in the above groups)
3. No major domestic discharges to the watershed's segment. A major domestic is a municipal facility discharging greater than 1.0 MGD.
4. No major domestic discharges to the watershed's upstream segment(s). EPA's enviromapper was used to determine if there were major domestics (greater than 1 MGD) on the truncated upstream stream segments of the remaining list of lakes.

Determination of the API

This API is defined as the area within 1,000 feet of a reservoir and within 1,000 feet of the downstream reaches of streams entering the reservoir. The upstream boundary of a stream reach used for the API is determined by estimating 2-hour travel times (the water in the stream must reach the reservoir within 2 hours during a 2-year flood discharge). These estimates are made for each of 11 Texas hydrologic regions (Asquith and Slade, USGS Water Resources Investigation Report 96-4307).

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Nutrient Criteria Development Workgroup III