

### **Attachment 1. Morning Session Pre-read Materials**

The Agency asks that all participants ponder the following questions and scenarios in advance of the meeting. Suggested reading references are listed below for those with limited experience with federal and state antidegradation policy.

- 1) What is a stream? Where does a stream begin?
- 2) Are there important differences between a stream channel of natural origin vs. a stream channel constructed or highly modified by human activity? If so, what are the differences?
- 3) Are there streams on the landscape that don't need the attention of water quality regulators? If so, what are they - how would you describe those streams?
- 4) What does the term "existing use" mean to you? What are some of the key factors to consider within a regulatory scheme that seeks to implement the requirement that "permitted projects may not result in the loss of an existing use?"
- 5) What do you see as the appropriate outcome for these 2 hypothetical projects that seek permission to alter local streams draining 5 square mile watersheds? Would you want to have additional facts about these scenarios before making a regulatory decision?
  - a) Refer to Figure 1. A local car dealership is expanding their business by offering a second product line. The company's existing Frank Road location is next to Big Run. Located in an urban watershed, Big Run rarely floods because of upstream flood storage, but the stream is very flashy. Trash and other debris are frequently strewn along the banks of Big Run after rains. The dealership owner recently purchased the adjoining land parcel that has a 1000 foot frontage along Big Run. Envisioning a "clean" look to his expanded operation, as well as more room for inventory, the owner makes an application to fill and place 1000 feet of Big Run in a box culvert.
  - b) Refer to Figure 2. A regional airport serving a large metropolitan area needs to expand in order to meet the current and future service needs of the community. Economic development studies confirm the importance of this transportation hub to the regional economy. After thorough study the airport authority decides to expand the present facility. In order to build the larger runways 3 small ravines will be completely filled and a larger stream will be substantially altered. Two ravines have stream channels that are ephemeral and don't support any aquatic life. A spring feed stream runs year round in the third ravine and cold-water

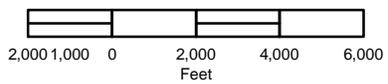
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adapted fish and invertebrates are present. The larger stream fill will place 5000 feet of an existing warmwater fishery stream, an unnamed tributary to the Crystal River, in a box culvert. Stream ecologists believe the combination of the fill and other modifications to the watershed hydrology created by the airport expansion will eliminate the warmwater fishery use along the entirety of this unnamed tributary. They also report that spring feed ravines are common in the general vicinity with over 50 such environments inventoried in the Crystal River watershed.

### Suggested reading materials on antidegradation:

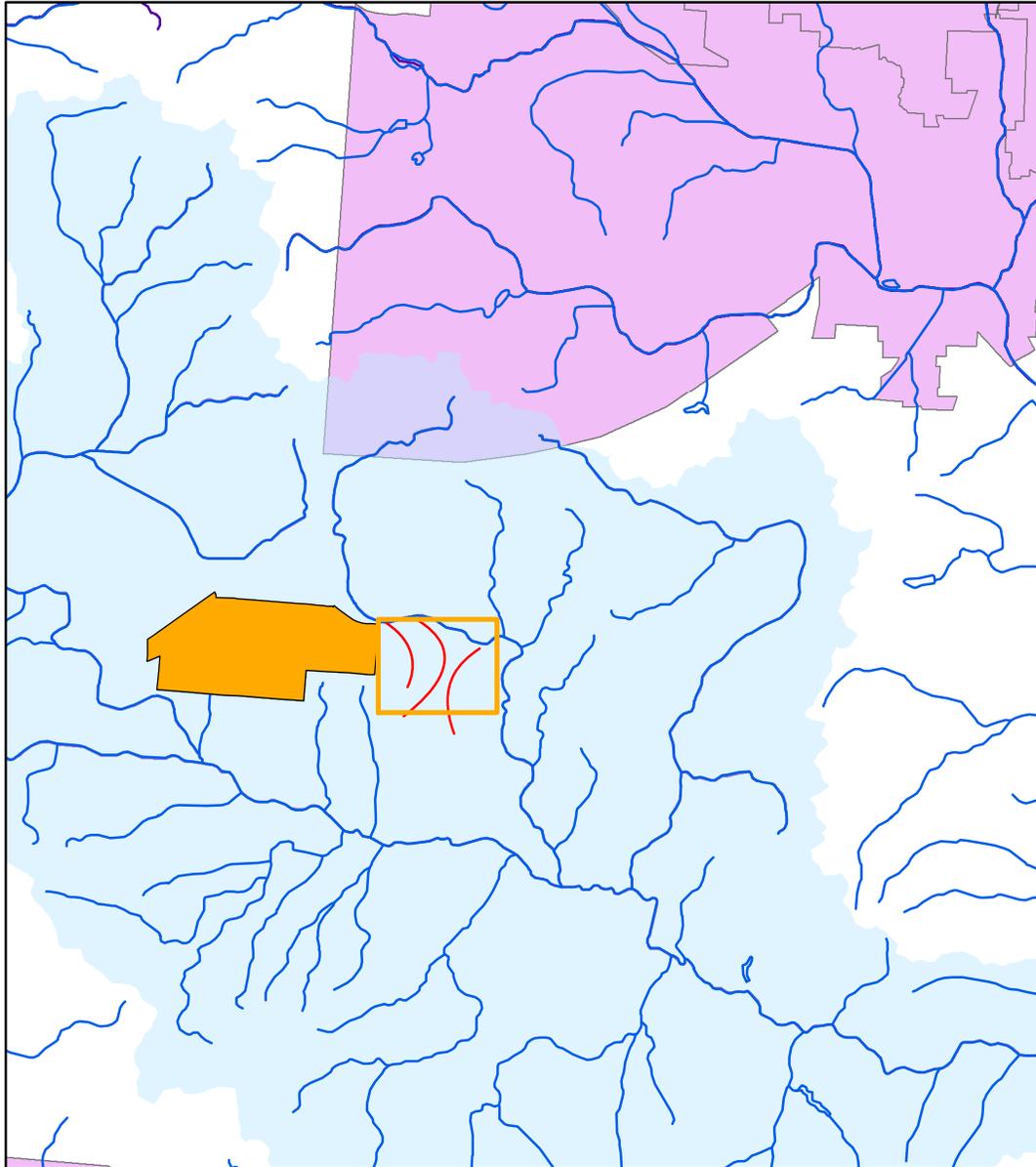
- USEPA Web page
- USEPA Questions & Answers on Antidegradation - August 1985
- USEPA memo - November 22, 1985
- USEPA memo - June 13, 1991

Fig. 1. Scenario for hypothetical Frank Road Car Dealership expansion.



- Roads
- Streams
- Adjoining Land Parcels

Fig. 2. Hypothetical expansion of Regional Airport located within Crystal River watershed.



-  Current Regional Airport
-  Streams
-  Crystal River watershed
-  Corporate limits

Red lines are ravines

Gold box is area of expanded airport