Vector Overlay

In this exercise you will practice the use of various vector overlay tools. You are given the following data layers:

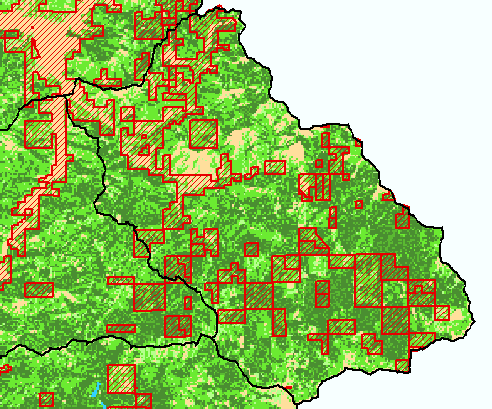
**Subwatersheds** – boundary of 6 subwatersheds within the Applegate watershed; the NAME field identifies each unique subwatershed.

**Vegetation** – land cover data showing three forest cover seral stage classes (late seral, mid seral, and early seral), along with other forest, non-forested and water. This is derived from a Landsat image; originally the file was a raster file, but has already been converted to vector. The original resolution of the Landsat image has been resampled to 100 meters. The COVER filed identifies the specific type of land cover and the TYPE field indicates whether the land cover is forest or non-forest.

**Ownership** – ownership data for the Applegate watershed. The OWNER field indicates the detailed owner category, while the OWN\_TYPE field indicates the general owner category (federal, state, industry, etc.).

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|  | *Applegate watershed boundary and rivers* |
|  | *Applegate subwatersheds* |
|  | *Land cover type* |

One of the primary concerns in the Applegate watershed is logging. Different regulations apply on public and private lands, and therefore you will carry out an analysis of the ownership of the forests. For example, the image below shows the vegetation types, with the lands owned by private individuals and industry overlaid in red. Much of the private lands are in the non-forest category (urban and agriculture), but a substantial portion of the forested area of the Applegate watershed is owned by private individuals and the forestry industry.



For the Little Applegate subwatershed only determine how much of the forest is owned by the various owner categories.

To help you get started, here are some suggested analysis steps:

* Select the Little Applegate subwatershed and export as a new shapefile;
* Clip the vegetation and ownership layers with the Little Applegate subwatershed boundary;
* Intersect the vegetation and ownership layers for the subwatershed;

**Question:** Determine the total area of the forested land in the Little Applegate watershed, both as total area (acres) and as a percentage of the watershed. Also determine how much of this forested land is in public ownership and how much is in private ownership. So your result will read like: The Little Applegate watershed contains \_\_\_\_ acres of forested land, which is \_\_\_\_ % of the watershed. Of this forested land \_\_\_\_ acres are in public ownership and \_\_\_ acres are in private ownership.