

Ken Pekarek's contributions, as a consultant, to the WV Firewise in the Classroom Grant Program (2007 thru 2011).

As GIS consultant to Eagle Promise Charitable Fund (EPCF) West Virginia Firewise in the Classroom Project, Mr. Ken Pekarek built a West Virginia version of the Minnesota AtlasGDS desktop GIS system. He downloaded a complete set of GIS data layers from West Virginia University's web site and developed the capability to access detailed air photos hosted on the WV University's web site. This allowed the WV Firewise project to use air photos via the web. With GIS system and data in place, Mr. Pekarek modified the MN Firewise curriculum and developed a custom GIS training manual. In the summer Sun Schroyer, the HHS science teacher and John Anderson, WVDOF Firewise Specialist, attended two training sessions in Minnesota to learn how to teach WV Firewise in the Classroom. All presentations and curriculum handouts were added to a WV Teacher Resource DVD

In the fall of 2007, Mr. Pekarek traveled to West Virginia to help HHS students conduct Level 1 Wildfire Risk Assessments of the then Woods Resort. Over 90 students in 4 class periods conducted Level 1 assessment of all homes visible from aerial photography. Over two class sessions, the students coded over 1400 homes in the Woods and another 300 in Sleepy Hollow. GIS 4 Schools consultant reviewed all the data to verify accuracy. Using a special feature in the GIS program, users could click on a home see the L1 rating assigned to the house. Mr. Pekarek quality checked all the L1 assessments and then generated a GIS Density Surface Model (DSM) Map that identified "Hot Spots" in The Woods Resort. The DSM map identified Sections 1-3 as the worst areas.

In preparation of field trips to the Woods, Mr. Pekarek GeoCoded the L1 assessments to add Parcel IDs and addresses for all homes in the Woods. From this data base, Ken prepared Home Hazard Assessment sheets for all homes in The Woods. In the spring of 2008, Mr. Pekarek, again traveled to WV and taught students how to conduct a Level 2 Home Fire Hazard Assessments. Ken assisted Terry Mallett and Sun Schroyer on the field trip to Section 1 in District I to conduct L2 assessments. At completion of the field trip, Mr. Pekarek entered all L2 data from the home hazard assessment forms into AtlasGDS and prepared a Section1 L2 Hazard map. Mr. Pekarek returned in the Spring of 2009 to assist HHS students conduct Level 2 Hazard Assessments of homes in Section 2 of The Woods Resort.

In 2009, EPCF received a second Firewise Grant. Mr. Pekarek reprogrammed AtlasGDS to run from a flash drive. This allowed students the ability to assess homes in other communities in West Virginia. Students conducted Level 1 assessments in Sleepy Hollow and Timberline. Mr. Pekarek assessed homes in The Crossing and River Ridge communities. As of the fall of 2011, students have completed over 2,000 Level 1 Wildfire Risk Assessments in five communities.

Over the years, five field trips were conducted at The Woods completing 715 L2 assessments. At completion of each field trip, Mr. Pekarek entered all L2 assessments into AtlasGDS and prepared L2 hazard reports/maps for each section / district assessed.

## BeingFirewise-Education Page GIS 4 Schools Contribution

A major goal of the second grant was to create a Firewise web site. Mr. Pekarek researched Firewise related videos, training and educational material. He prepared reports and graphics that summarized all L2 hazard data for each of the sections of The Woods. Mr. Pekarek also prepared summary reports on five (5) communities in WV where L1 appraisals were completed and then were analyzed. Working with the HHS web page designer and students, Mr. Pekarek prepared over five complete website designs to the Web page designers before a final design was accepted. Mr. Pekarek prepared all the graphics and reports that are displayed on the Education, Class Curriculum, Class Project and Class Hazard Assessment web pages.

Mr. Ken Pekarek is developing new lessons that will utilize the ArcGIS Online system. He will post new lessons and presentations on GIS 4 Schools web site. Click on the link below to check the availability of ArcGIS Online lessons develop so far: [WV Firewise  
http://www.gis4schools.org/wildfireeducation/westvirginiafirewise.html](http://www.gis4schools.org/wildfireeducation/westvirginiafirewise.html)