On the eastern slopes of Washington’s Cascade Range, an explosion is imminent—a population explosion. Quiet Kittitas County, 85 miles east of Seattle, is on the brink of change as development closes in. A trio of towns—Roslyn, Cle Elum, and South Cle Elum—will bear the brunt of the development, which will likely have a profound influence on land use across the entire county.

In 1996, Jeld-Wen, a millwork and specialty wood manufacturing firm based in Oregon, purchased 7,400 acres from a Kittitas County timber company with the intention of developing the land for a master-planned resort (MPR) called MountainStar. The resort will almost certainly become a catalyst for further development.

Historically, the three towns have depended upon coal mining and logging to generate most of their revenue. The last coal mine closed in the 1960s and since then the communities have existed as small tourist/service centers to the surrounding region. Roslyn gained a measure of fame in the early 1990s when the hit television series “Northern Exposure” used the town as its live set. The show boosted the local economy with an infusion of tourists, but it also upset some residents with the disruption of its small-town lifestyle.

It came as no surprise that resort developers had their eye on this spectacular valley. Vacationers—and the people who service them—have been mainstays in the valley for some time. Geographically, the county is a gateway through the Cascades to Seattle and its burgeoning suburbs. Now, attracted by the rural qualities of the region, increasing numbers of Seattle workers are commuting. And as wealthy city folks seek space to retire, invest, or play on the weekends, the long-predicted eastward flood of people has begun spilling into the Kittitas valley. The resort may well be the last element required for rapid population growth in this region.
Foreseeing Impacts

The ramifications of unplanned, accelerated growth in this rural area will be far reaching. Upper-county communities could be faced with intense demands placed on their supplies of water, electricity, agricultural land, public utilities and social infrastructures. In addition to fears surrounding inadequate infrastructure, residents of the towns have concerns about soil erosion, preservation of green spaces, and wetland protection. Citizens have also voiced concerns about development impacts on social and economic resources such as real-estate values, housing supply, employment, traffic corridors, and school systems.

Having accepted the arrival of the MountainStar resort—under construction at this writing—citizens have questions about the associated secondary growth that will occur once the resort is in place. The high level of uncertainty surrounding rapid population growth has created an urgent need for a regional development “road map.” Planning models that analyze impacts and create alternative development scenarios are one means for untangling the myriad impacts new development may have on natural, social, and economic resources.

CommunityViz

We believe that state-of-the-art community-planning software CommunityViz will provide insight into the impacts the resort may have on surrounding communities of the upper county. CommunityViz is part of a constellation of new tools, collectively called planning support systems (PSS), that help planners explore the implications of land-use alternatives. These tools enable planners to create and explore "what-if" scenarios based on specific regional data.

CommunityViz offers citizens and other interested parties a chance to incorporate their issues of concern into a comprehensive planning model. The aim is to devise a community-development plan that ensures everyone’s concerns are represented. The power of CommunityViz is in its capability to provide complex, dynamic information in ways that are easy to understand and visualize. To do so, it provides information on alternative scenarios via the following perspectives:

- **Analysis**: Assesses the direct impacts of specified proposed change. The analysis can address specific questions such as: *What will be the impact on the total water consumption rate if a new residential development is implemented on the north side of town?*

- **Prediction**: Investigates long-term implications. For example, *What impact will a new residential development have on land values on the north side of town over the next 30 years?*

- **Visualization**: Offers three-dimensional interactive representations of the proposed changes.

CommunityViz is attractive to land-use and community planners because it combines all three planning perspectives into one multi-dimensional environment using distinct software modules: Scenario Constructor (analytical perspective), Policy Simulator (predictive perspective) and Site Builder 3D (visualization).
Engaging the community

Although CommunityViz is a valuable planning tool, we need to further evaluate the role its predictive capabilities play in the decision-making process. RGIS believes the MountainStar project provides an excellent opportunity to not only showcase the benefits of using CommunityViz, but also to evaluate community participants’ perceptions of its effectiveness in the decision-making process.

Community participation is an important component in making policy decisions. Yet there are roadblocks that have hindered public participation in the past: arcane and jargon-laden language, difficult concepts, opaque data, lengthy and boring meetings, and closed processes, to name a few. Other factors also contribute to breakdowns within the decision-making process: lack of information, arguments based on emotional appeals rather than facts, and domination of public meetings by a vocal minority fighting for a specific cause. CommunityViz is designed to engage and educate citizens by using accurate digital data to provide useful information.

To showcase the technology to citizens, project coordinators, county staff, and others, RGIS has developed a pilot-planning model that links different development scenarios with specific impacts on water consumption, wastewater production, and municipal waste production. The pilot-planning model uses CommunityViz Scenario Constructor to create multiple scenarios, each of which will be evaluated against project objectives and constraints outlined in the MountainStar MPR Environmental Impact Statement. Interested citizens and other stakeholders can move through virtual scenes, allowing them to explore the visual impacts of each scenario. In coming months the community model will be more fully developed, becoming more comprehensive in scope.

To date, RGIS–Pacific Northwest has hosted two workshops aimed at developing interest in the software’s capabilities. Already, it has demonstrated its power to engage and educate people about the community planning process. Stakeholders can raise issues and concerns that they would like to see included in the construction of the community model. In this way, all interested groups will have the ability to help shape and direct the community model throughout its development stages.
Assessing the Tools

Although computer technology often sports a high “gee-whiz” factor, how effective are tools such as CommunityViz in actual planning situations? Do they address issues of substance? Do they provide information useful for making decisions?

RGIS-PNW is conducting a study to assess the participants’ perceptions of the model’s effectiveness in the decision-making process. Throughout the series of workshops, individuals will have the opportunity to learn more about the modeling approach, contribute to the model’s design, and provide useful feedback to RGIS staff to help guide the model’s development. We hope that by developing awareness of the planning process within the community, stakeholders will take an increased interest in how their community is shaped, and how they can participate in planning its future.

If CommunityViz is successful, as our assumptions predict, the implications are far-reaching. Local governments or community groups may wish to adopt the model to assess potential impacts to the environment, examine development alternatives, or determine the effects of proposed policy changes on their community. The hoped-for result is better information that contributes to more thoughtfully conceived plans, and better communication between local governments and the people they serve.

*This bulletin was prepared by Graeme Aggett and Chris McColl at the National Consortium for Rural Geospatial Innovations – Pacific Northwest, Central Washington University, Ellensburg, WA. Additional support provided by the USDA Cooperative State Research Education and Extension Service (CSREES).*