(music)

Joan Cartan-Hansen, Reporter: Is Idaho running out of water? It’s a question that concerns state lawmakers.

Rep. Dell Raybould: We don’t have the information that we need on all of the aquifers that tells us where they are at and what we need to do.

Cartan-Hansen: And without good scientific data, policy makers and residents have a more difficult time deciding how to manage our land and water.

Boise State University researcher Bangshuai Han is working on a new tool to help.

Bangshuai Han: Our aim is to predict the water availability in this area.

Cartan-Hansen: Over the last year and a half, Han has built a computer model so policy makers can see how different land management decisions would impact the Treasure Valley over the next 30 to 50 years. He plotted water rights; population patterns; biological processes like soil type, weather patterns and land uses; and human activities, like irrigation and how we move and use water through the valley.

Han: In the future, with the fast urban growth and land use change and also climate change, there is a very high risk of water scarcity.

Cartan-Hansen: Han’s research shows that if current growth rates continue unchecked, the population of the Treasure Valley could triple in 50 years, having a major impact on the area’s ecosystem.

Han: Agricultural land is at the most risk of change.

Cartan-Hansen: After plotting current information, Han developed three scenarios: what would happen if growth patterns and land use continue as is, what happens with unconstrained growth and with managed growth.

Han: In the status quo, there is population growth, but it will also displace the green infrastructure in the urban areas, like the green belt, and the parks and reserved areas.

Cartan-Hansen: With unconstrained growth, farmlands would also disappear as people move into any available green space.

Han: But in the management scenario, we can see that the main population growth allocation will be centered around the current urban center or small cities like Star or Eagle and those areas like the green belt will still be preserved.

Cartan-Hansen: Han’s computer model also shows the lack of available water rights where growth is currently expected to take place.

Han: Local stakeholders want scientific information to guide them how they can manage the land use and how they make decisions.

Cartan-Hansen: Not having solid information before lawmakers decide on land use management can have devastating consequences.

Han: If we don’t manage the water correctly, there is a high risk that the water will not be enough to use and the ecosystem will also be degraded.

Cartan-Hansen: Han’s computer model should be ready for more general use in the next few months. His work is part of a larger multi-university, statewide research effort to help better manage Idaho’s ecosystems.

For Idaho Science Journal, I’m Joan Cartan-Hansen.

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