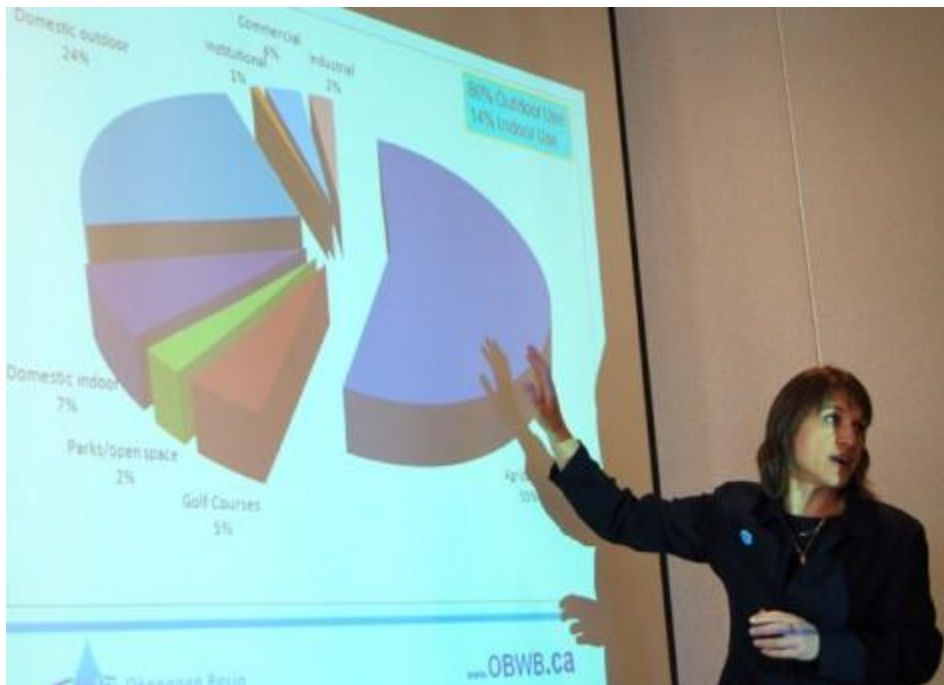


News

WATER MANAGEMENT AND LAND-USE PLANNING NEEDED TO MEET RISKS OF FUTURE WATER SHORTAGES: STUDY

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Anna Warwick Sears, executive director of the Okanagan Basin Water Board, explained the key findings from Phase 2 of the Okanagan Water Supply and Demand Project on March 26. The project took a close look at the valley's available water and how it is currently used and made some projections for the future water supply and demand in the Okanagan basin. Photo by Laurena Weninger - Click on picture for larger image

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By Laurena Weninger - Osoyoos Times

“We need a major shift in how we think and deal with water,” said Osoyoos Mayor Stu Wells on March 26, as he was introducing the public release of the **Okanagan Water Supply and Demand Project**.

The release was held in Kelowna at the Manteo Beach Club on Okanagan Lake – and the 135-kilometre-long lake was visible outside the window of the packed meeting room.

“When you look at Okanagan Lake out there, it’s hard to believe that’s been oversubscribed,”

Wells said.

The [project](#), which has been underway for roughly three years, is being touted as the most advanced water resource assessment ever conducted in Canada.

It is an assessment of the “water budget” in the Okanagan Basin.

Essentially, the project is an estimate of Okanagan water availability and a look at how supplies will be affected by future climate change and population growth.

The study broke down current water use into different categories.

“Across the Okanagan Basin, indoor domestic use averages 150 litres per person per day – about the same as the North American average,” states a list of the project’s key findings.

But it’s outdoor domestic landscaping use that drives the Okanagan averages way up.

That year-round average is 675 litres per person, per day – and that doesn’t include agriculture.

That figure is way above the B.C. average of 490 litres per day and also way above the Canadian average, which is 329 litres/per day.

Eighty-six per cent of water used in the Okanagan is for outdoor purposes – agriculture is 55 per cent, domestic outdoor is 24 per cent, golf courses use five per cent and parks and open spaces use two per cent.

Fourteen per cent is used indoors – seven per cent in homes and seven per cent for commercial and institutional buildings.

“The agriculture industry is a relatively efficient user of water compared with the other outdoor users,” states the report.

Agriculture uses 120,000 million-litres of water per year to irrigate 18,300 hectares, an average annual use of 660 millimetres per hectare.

The other three main outdoor uses – golf courses, parks and domestic landscaping – use a total of 68,000 million-litres to irrigate 7,585 hectares, an average of 900 millimetres per hectare.

But in addition to looking at the water supply and how it is used, the study looks at water licensing, groundwater supply, surface storage and flow.

The study also looked at some future scenarios, simulating different possibilities, including the effects of a potential three-year drought similar to the one that hit the Okanagan Valley from 1929 to 1931.

None of the scenarios are “predictions,” said Anna Warwick Sears, executive director of the Okanagan Basin Water Board (OBWB), the main body behind the study.

“We can’t predict the weather,” she said, explaining different climate-change scenarios were looked at and one was used as a model.

“The greatest concern is a multi-year drought,” Warwick Sears said.

If three dry years occur in a row, the water use during these three years could be 40 to 50 per cent higher than an average year today, depending on the agricultural land base and population at the time they occur.

The study also projects that if the climate and population both change as expected, and all reasonably irrigable land is developed between now and 2040, annual water use would average 19 per cent higher than it is today, even if we continue to introduce water use efficiencies at the same rate as we do today.

The climate change model used for the project suggests the average total annual precipitation won’t change significantly in the future – but when that water is accessible will change.

There will be less snow and the air will be warmer, meaning it will melt sooner.

That will increase the amount of water available in the early spring and decrease the amount available in the hot, dry summer months.

Ultimately, said Warwick Sears, there will be some drier years and some wetter years. But it's likely we will have more dry years more often.

"Overall, the results of the scenarios do not point to a sudden, dramatic decline in water availability," states the report's key findings. "Risks of water shortages for human use and environmental needs are increasing, but it is possible to compensate for many of the consequences through land-use planning, careful water management and by reducing demand." Phase 3 of the project will be to get the word out to the public.

There are information meetings planned – Osoyoos will likely host a meeting on May 21 but the details have not yet been announced – and various web-reporting tools have been established to get the word out to the general public.

"The goal of Phase 3 is to take the information and put it to use," said Warwick Sears, adding that includes getting this information into the hands of planners and having it available for public policy recommendations.

The project is being led by the [Okanagan Basin Water Board](#) and the B.C. Ministry of Environment and was funded by grants from the ministry, the Canada-BC Water Supply Expansion Program, the Gas Tax Fund and Natural Resources Canada.

The total project cost was close to \$2.3 million, with an additional \$900,000 of in-kind support.

Phase 1 started in 2005 and identified available data and information.

Phase 2 started in 2007.

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