

HOUSEHOLD WATER RECYCLING

Going grey to be green

By BRUCE JOHNSTONE
Leader-Post

With up to 60 per cent of our drinking water literally going down the drain, Dr. Stephanie Young, an associate professor of environmental system engineering at the University of Regina, had a better idea.

Why not recycle the 'greywater' — water from sinks, showers and bathtubs — for use in toilets and wash basins and other non-potable purposes?

"I've been working on this greywater reclamation project since 2002," Young told a news conference at her lab at the Research and Innovation Centre at the U of R.

Young said she was motivated by the fact that, while much of the world is facing a shortage of fresh water, North Americans continue to use more than half of their drinking water supplies for non-drinking water purposes.

"Do you know that 50 per cent of the population in the world is facing a serious water shortage in the very near future?" said Young, who was born and raised in China. Even affluent Western Canadian cities like Calgary and Edmonton will run out of freshwater supplies in the next 20 to 30 years, she added.

"As an environmental engineer, I asked myself, What could I do?" said Young, who obtained her master's and doctorate degrees at the University of Alberta in 1996 and 2000 respectively.

She believed if that 'greywater' could be captured and recycled, it could reduce domestic drinking water consumption potentially by half and extend the life of water treatment facilities by years.

So Young and her team of researchers at the Environmental Engineering Systems department have been working for the past eight years, developing membrane filtration and other systems that can remove bacteria and solids from greywater.

The team has developed five

pilot plants that will demonstrate the technical feasibility of the systems as the next step towards commercialization. On Thursday, the projects received \$202,400 from the federal-provincial Western Economic Partnership Agreement (WEPA) and \$75,000 from Communities of Tomorrow.

"The plot testing will ensure the technology is perfected before it reaches the marketplace," said Lynne Yelich, minister of state for Western Economic Diversification, adding the greywater reclamation plant and design components are expected to be "commercialized and marketed in Canada and internationally."

Regina-Qu'Appelle MLA Laura Ross said the province was pleased to support innovative research projects, like the greywater recycling plant, through WEPA and Communities of Tomorrow. "This technology will help us cease some of our wasteful ways and adopt new practices that encourage recycling."

U of R president Vianne Timmons noted that the project "fits very nicely into the U of R's strategic plan where sustainability is the key aspect of our plan." In fact, the U of R is actually using the greywater recycling system in one of its buildings.

"If this technology proves viable, installation in other buildings on campus will happen," Timmons said.

"We not only talk about our strategic plan at the U of R, we live it, everyday."

Following the news conference, Janet Berriman, manager of the University-Industry Liaison Office, said the university has filed for six world-wide patents and believes the technology could have application for remote or northern regions, or in high-rise buildings in large cities.

"We're actually going to China later in May to talk to some of the companies that expressed interest



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Dr. Stephanie Young's research team at the University of Regina will install and test greywater reclamation technology at the campus' Research and Innovation Centre.

in investing in this. So we may create a company in China and we're also going to create a company in Regina," Berriman said.

Young also received the Award

of Innovation at the Regina & District Chamber of Commerce's Paragon Awards last Thursday for her work on wastewater reclamation.