

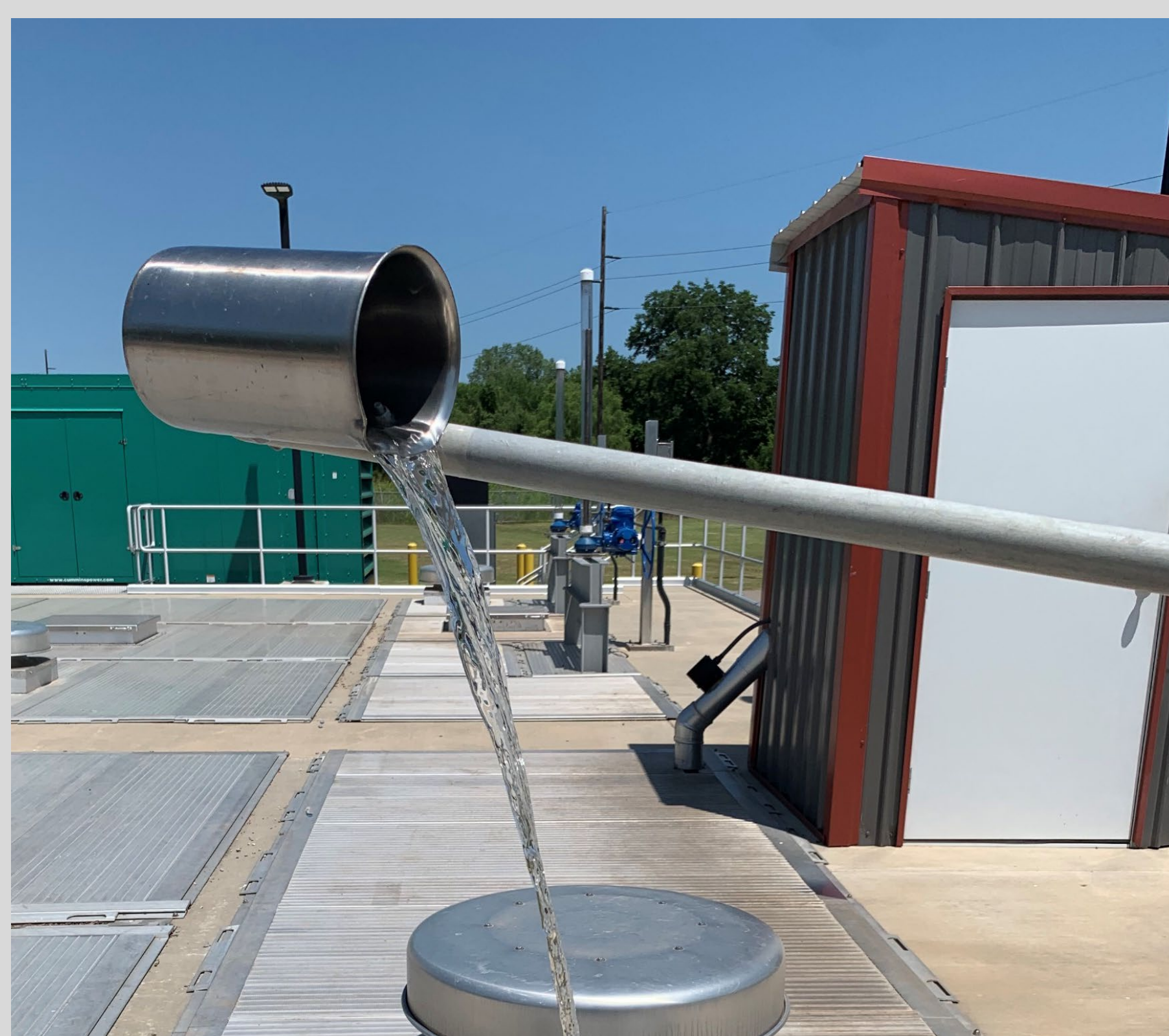
# Public Perceptions of Water Reuse in Norman, Oklahoma

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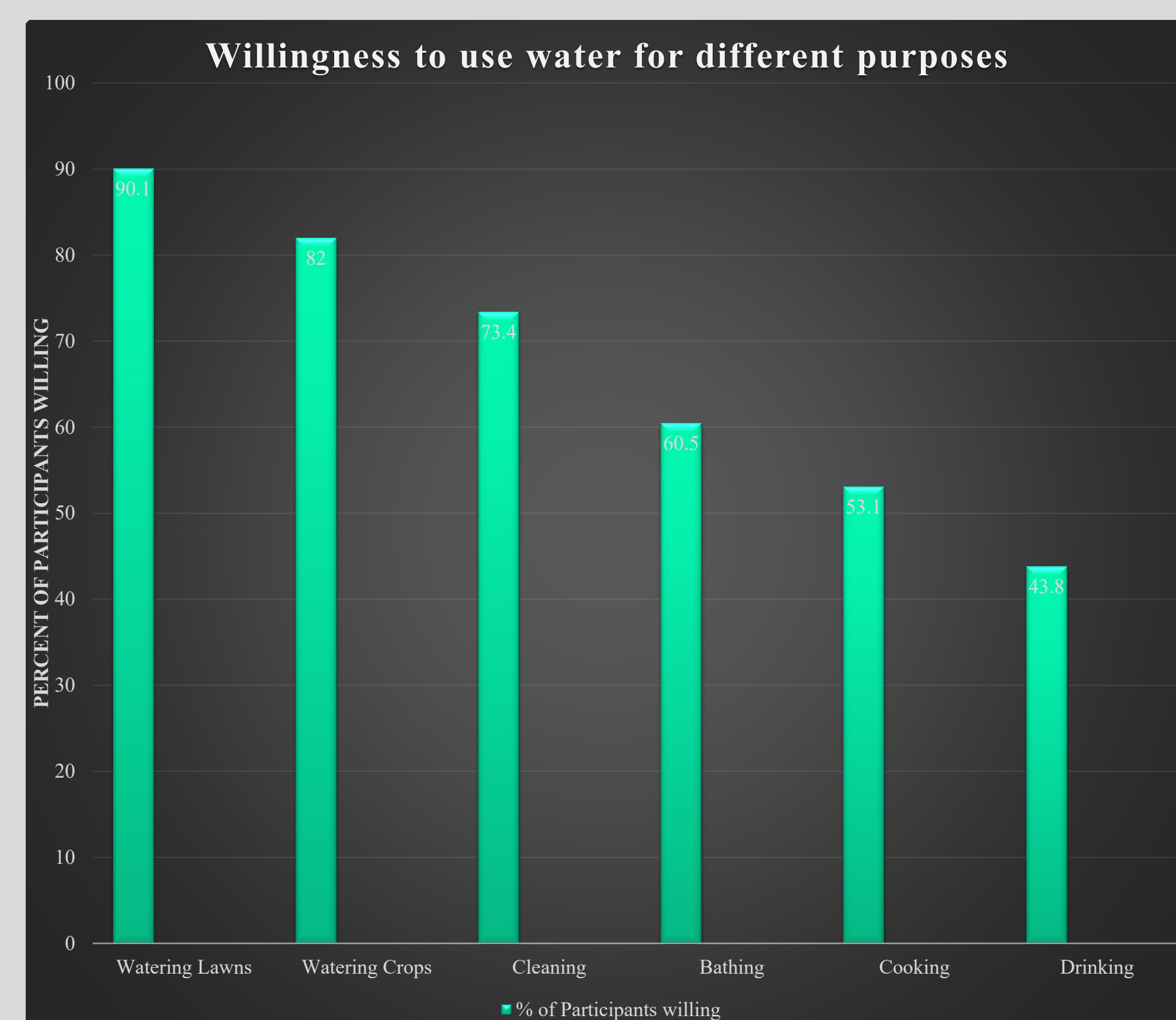
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Left: Water pulled directly from Lake Thunderbird, Norman's primary drinking water source



Above: Municipal wastewater after it has been treated at Norman's reclamation plant. Does it look disgusting?



Above: Study participant willingness to use recycled wastewater for different purposes.

## Introduction

Recycling wastewater is a valuable method of water conservation and reuse (Wester et al., 2016).

There is a strong tie between public support for wastewater recycling and project success. Psychological reactions can predict public acceptance (Hui & Cain, 2018; Wester et al., 2016).

Contributors to behavioral intention (Dolnicar & Hulimann, 2009):

- **Trust** – the extent to which people believe public officials will do the right thing
- **Risk Perception** – Related to pathogen consumption
- **Emotion** – Disgust is in this case the most powerful, automatic
- **Attitudes** – Previous conceptions of reuse

## Objectives

### Research Questions

- What is the relationship between disgust and behavioral intention/ decision making?
- What conditions can overcome this disgust (information, education, political affiliation)?
- Is Norman a viable community for wastewater reuse, and will a project for water reuse have support within the community?

### Research Significance

Overcoming public resistance to wastewater reuse is a primary goal of psychologists and water managers alike (Wester et al., 2016).

The results of this study will be shared with Norman wastewater management to help inform their decisions.

## Methods

### Participants

Participants consisted of 83 residents of Norman, OK. Surveys were distributed both in person and online in summer 2019.

### Study Design

Participants were given a survey that defined common water reuse terms.

Half of participants received more in-depth information about Norman's plan for Indirect Potable Reuse. This information highlighted the natural cycle of water and wastewater and the advancement of treatment technology.

Participants were asked about their level of education, political affiliation, age, and whether they had previous knowledge of Norman's water reuse plan.

## Results

### The Role of Disgust

There was a strong inverse relationship between willingness to use recycled wastewater and associated disgust ( $p < 0.01$ )

Disgust increased for potable uses (drinking, cooking, bathing)

### Sociodemographic Information

Political affiliation, level of education, and previous knowledge of the project all had a significant effect on willingness to use recycled wastewater

- More liberal – more willing
- More education – more willing

Information provided about Norman's water treatment process did not influence willingness or disgust.

## Discussion and Future Implications

### Discussion

- No difference between willingness for Direct and Indirect Potable Reuse
- The significance of political affiliation shows a need to depoliticize environmental issues
- Previous knowledge tied to higher willingness means education programs may be effective at reducing disgust
- Education level reflects more accurate ideas of water treatment processes – may be tied to trust

### Future Research Plans

We plan to investigate other contributors to behavioral intention by measuring:

- Risk Perception
- Trust of Public Officials

## References (Selected) & Thanks

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- Hui, I., & Cain, B. E. (2018). Overcoming psychological resistance toward using recycled water in California. *Water and environment journal*, 32(1), 17-25.
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