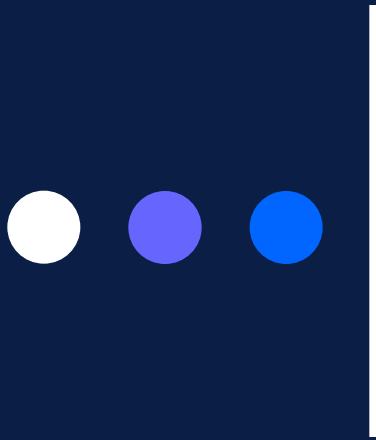


# This presentation premiered at WaterSmart Innovations

[watersmartinnovations.com](http://watersmartinnovations.com)





# Capitalizing on Behavioral Economics to Save Water and the Planet

2009 Water Smart Innovations  
Conference

Linda Dethman

Dethman & Associates 

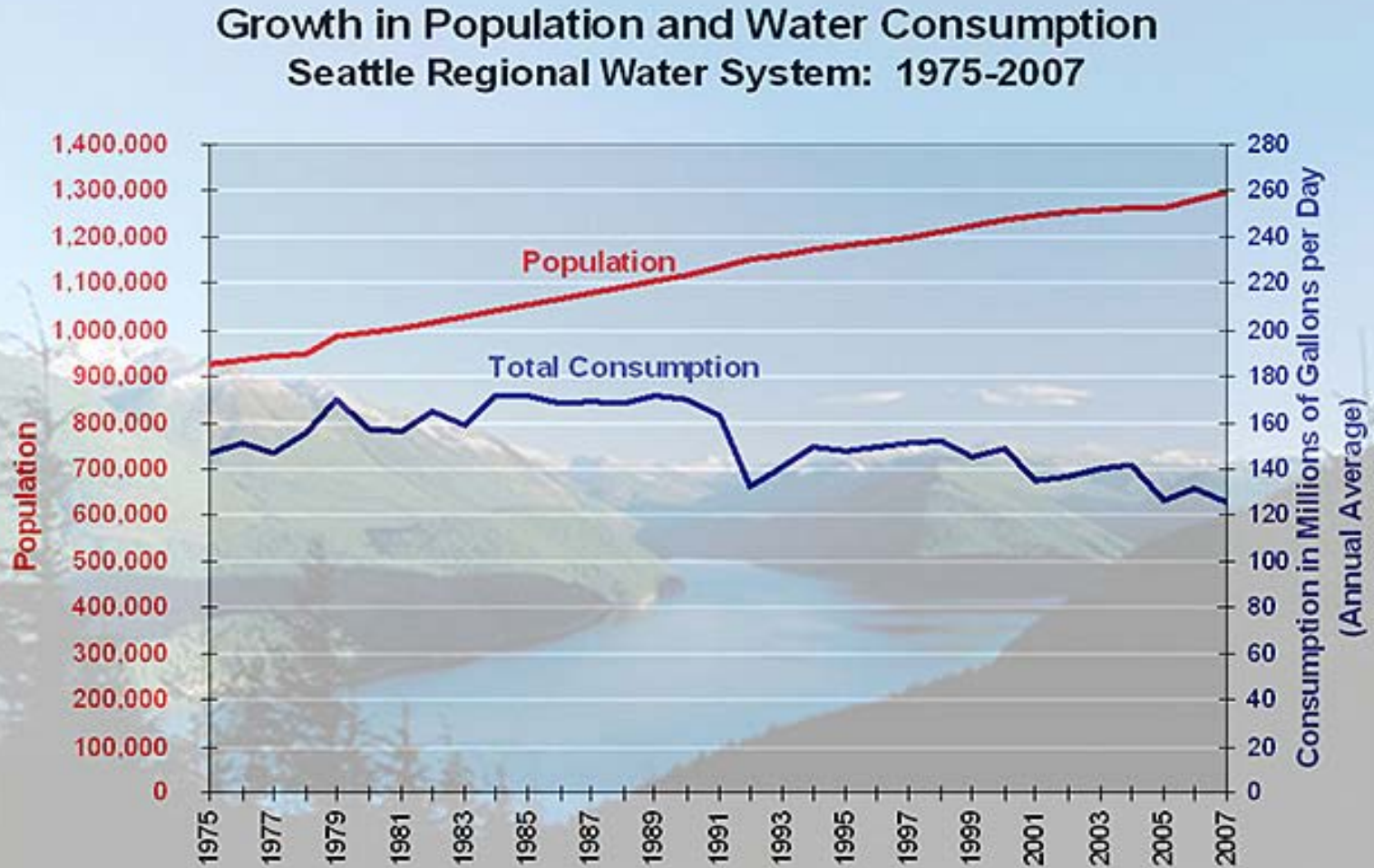


# Why save water?

- Well, it's a low cost:
  - Source of supply (if needed)
  - Insurance against drought and climate change
  - Way to manage the resource
  - Way for customers to save

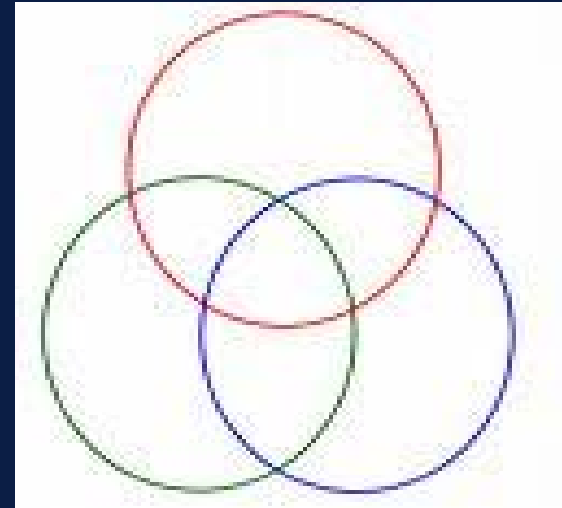
# Seattle: Since 1990

## Use down 26%, population up 16%



# Intersecting Opportunities of Influence

- Technologies
  - Can't fix everything
- Behavior/culture changes
- Policy changes



**Insights about customers and behavior affect all savings opportunities**

# The Time is Ripe for New Approaches

- “. . . *financial crisis is . . . a coming-out party for behavioral economists and others. . . bringing sophisticated psychology to the realm of public policy.*”  
-- David Brooks, *New York Times* Op-Ed, October 28, 2008
- “. . . *sustainability is going to be shaping individual and public-policy decisions.*”  
-- Kurt Andersen, *Time*, March 26, 2009





# Why This Talk Is Important

- Expands (changes?) our assumptions
  - Beyond “rational man” economic models
  - Beyond ourselves and people like us
- Reminds us to reach people as they are, not as we want them to be
- Helps us design better programs and marketing



# What this talk is based on. . .

- Market research

- Quantitative – statistical surveys
- Qualitative – focus groups, key informants, observational
- Experimental – controlled manipulation of variables to discover causal relationships

- Neuroscience

- Behavioral Economics

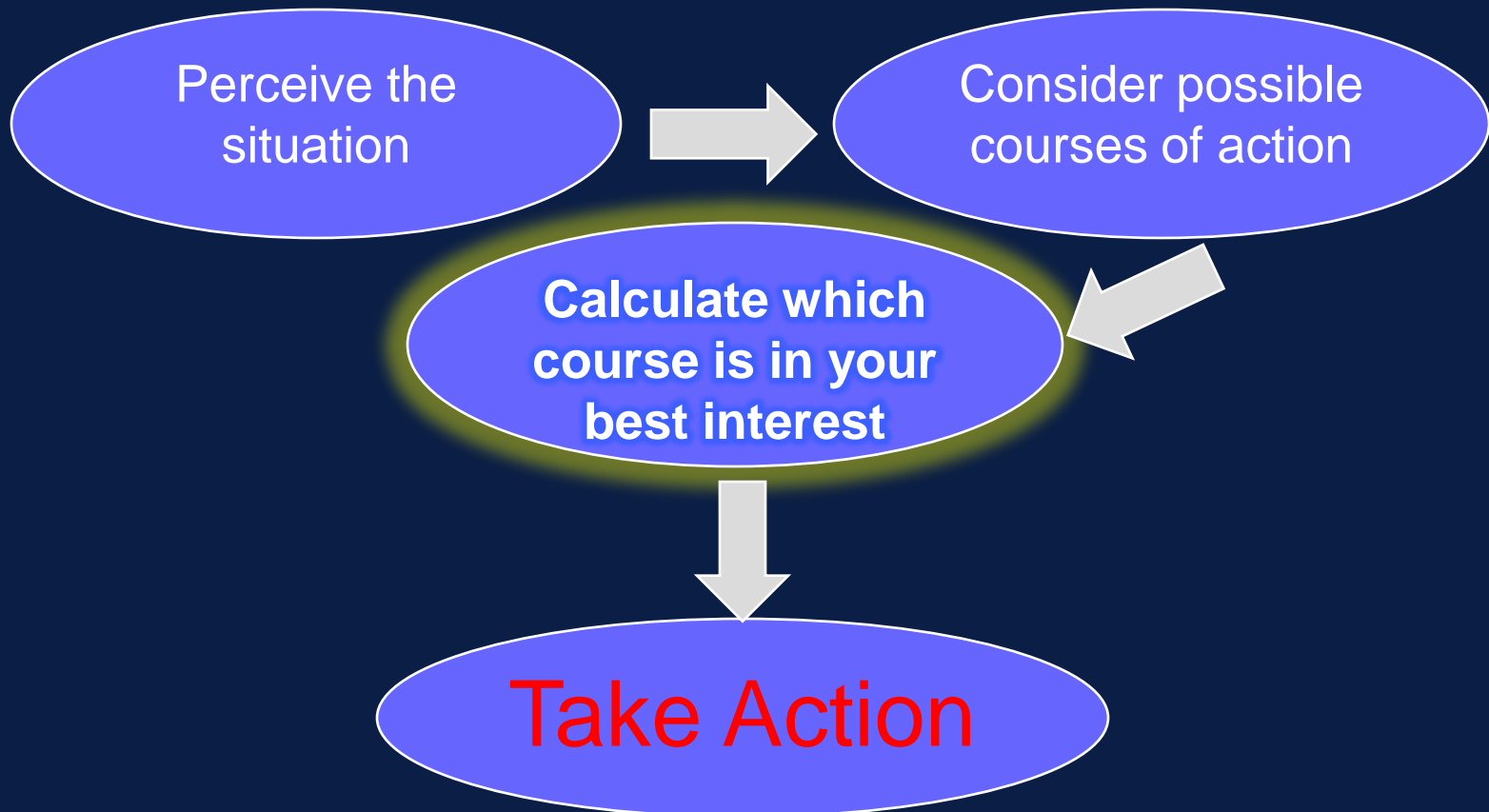




# Special thanks to . . .

- *My clients and their customers*
- *Predictably Irrational* – Dan Ariely (MIT)
- *Nudge*, Richard H. Thaler, Cass R. Sunstein (U. of Chicago)
- *Habit*, Neale Martin
- *Sway*, Ori Branfman and Rom Branfman
- *Influence: The Psychology of Persuasion*, Robert Cialdini
- Various articles (e.g., *New Rules: New Game* – Futerra)
- Current crises

# Default **Rational** Decision-Making Assumptions



● ● ● | But most of the time we. . .

Perceive the  
situation



Take Action



“Let’s be blunt. . .”

*“ . . . We must stop searching for the sparkly magic bridge that leads from values to action or attitudes to behavior.” – Futerra, New Rules: New Game*

# ● ● ● | But we have “tendencies”

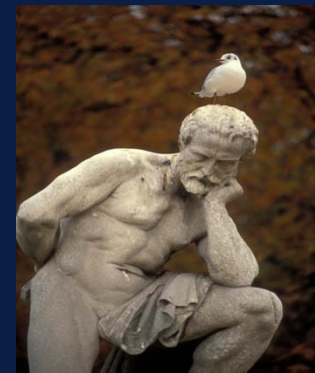
- Segmentation studies suggest some groups
  - “The Choir” – concerned consumers, actively green – but may be high users
  - “The Stumblers” – green, but can’t “walk the talk,” like \$ savings and convenience
  - “The Low Consumers” – due to income or circumstances (like renters), use less
  - “The Comfort Consumers” -- Have more resources, use more resources, like comfort, home improvement
  - “The Tuned-Out” – blissfully disconnected or disbelieving



# And, Powerful Forces Drive Us

- **Two states of mind**
- **Anchoring**
- **Fear of loss**
- **The power of FREE**
- **Inertia and status quo**
- **Relativity and comparisons**
- **The power of norms**

# Two States of Mind



## Habitual

- Lizard/puppy brain
- **Unconscious**
- **Uncontrolled**
- Associative
- **Rapid fire**
- Skilled
- **Multi-tasking**

## Executive/Rational

- New/adult brain
- **Self-aware**
- **Controlled**
- Deductive
- **Slow**
- Rule-following
- **Single minded**



# Who's in Charge?

- **The habitual mind has to rule**
  - The “operating” system we avoid
  - Visuals are important (seeing is believing)
- We like to think our executive mind rules
  - Have you ever “reconstructed” a story?
  - The “rational” worker and the habitual consumer



# What mind do we market to?

The image shows a yellow EnergyGuide label for a refrigerator-freezer. At the top, it says "U.S. Government" and "Federal law prohibits removal of this label before consumer purchase." The word "ENERGYGUIDE" is written in large, bold letters with a downward-pointing arrow. Below this, the appliance type is listed as "Refrigerator-Freezer" with features: "Automatic Defrost", "Side-Mounted Freezer", and "Through-the-Door Ice". The manufacturer and model are "XYZ Corporation Model ABC-L" with a "Capacity: 23 Cubic Feet". The central part of the label is titled "Estimated Yearly Operating Cost" and shows a price of "\$67" with a downward arrow. Below this is a horizontal line representing the "Cost Range of Similar Models" from "\$57" to "\$74". The "Estimated Yearly Electricity Use" is shown as "630 kWh". At the bottom, there is a note: "Your cost will depend on your utility rates and use." followed by a list of three bullet points: "Cost range based only on models of similar capacity with automatic defrost, side-mounted freezer, and through-the-door ice.", "Estimated operating cost based on a 2007 national average electricity cost of 10.65 cents per kWh.", and "For more information, visit www.ftc.gov/appliances." The Energy Star logo is in the bottom right corner. Surrounding the label are seven callout boxes with dotted borders, each containing explanatory text.

Lists key features of the appliance you're looking at and the similar models that make up the cost range below.

The maker, model, and size tell you exactly what product this label describes.

What you might pay to run the appliance for a year, based on its electricity use and the national average cost of energy. The cost appears on labels for all models and brands, so you can compare energy use just like you would price or other features.

The cost range helps you compare the energy use of different models by showing you the range of operating costs for models with similar features.

An estimate of how much electricity the appliance uses in a year based on typical use. Multiply this by your local electricity rate on your utility bill to better judge what your actual operating cost might be.

If you see the ENERGY STAR logo, it means the product is better for the environment because it uses less energy than standard models.

U.S. Government Federal law prohibits removal of this label before consumer purchase.

**ENERGYGUIDE**

Refrigerator-Freezer

- Automatic Defrost
- Side-Mounted Freezer
- Through-the-Door Ice

XYZ Corporation Model ABC-L Capacity: 23 Cubic Feet

**Estimated Yearly Operating Cost**

**\$67**

Cost Range of Similar Models

\$57 \$74

**630 kWh**

Estimated Yearly Electricity Use

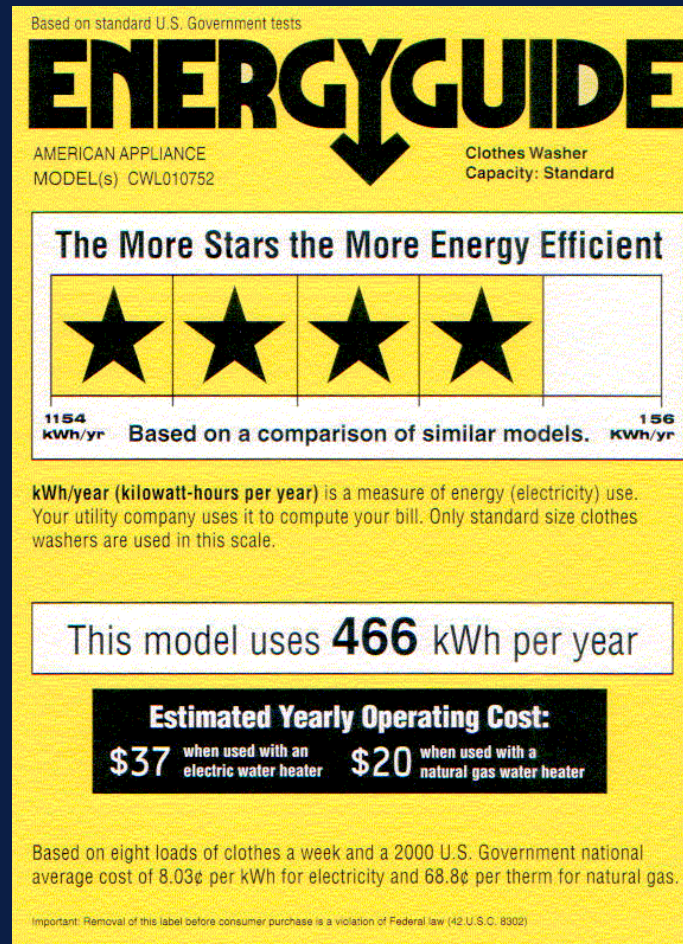
Your cost will depend on your utility rates and use.

- Cost range based only on models of similar capacity with automatic defrost, side-mounted freezer, and through-the-door ice.
- Estimated operating cost based on a 2007 national average electricity cost of 10.65 cents per kWh.
- For more information, visit [www.ftc.gov/appliances](http://www.ftc.gov/appliances).

energy ENERGY STAR

# Changing to international label format

*“could have estimated savings of close to 100 billion kWh per year.”* (ACEEE)





# Brain State Marketing Insight

EITHER

- o Be able to wake up and reach consumers when their executive brain is turned on

OR

- o Be clear, simple, direct about what you want them to do

# Anchoring



- We are tied to the past, to starting points
  - Whether it's washing machines, water rates, or charitable contributions
    - “We were hoping you could afford \$500” tries to reset anchor to higher giving
- What anchors do we use for water conservation?





# Anchoring Insights

- How do consumers understand terms?
  - Efficiency
  - Low-flow
  - H-axis washers
  - Mulch
  - GPD
  - Irrigate
- “Twisty/swirly bulb example

# Fear of Loss



- *“Losing something makes you twice as miserable as gaining the same thing makes you happy” (Nudge)*
  - Does conservation evoke loss?
    - Thank you Jimmy Carter
    - Technologies (e.g., low-flow toilets) not quite ready for prime time
- **Loss more persuasive, but must give solutions**



# The Uber-power of **FREE**

- My dad
- Hershey kisses and Lindt truffles
- Amazon



vs.



## Time One

- Kiss 1¢
  - 27% picked this
- Lindt 15¢
  - 73% picked this

## Time Two

- Kiss **FREE**
  - 69% picked this
- Lindt 14¢
  - 31% picked this

Results  
reversed





# Amazon

- Buy second book, get **FREE** shipping
  - Dramatic sales increase
- **Except in France**
  - Charged 20 cents – no increase
  - When changed to FREE, sales skyrocketed



# “Free” Successes

- Showerheads and aerators mail outs and swaps
- Information
- Classes
- Others?

# • • • | Status Quo & Inertia

- Opting in versus opting out
- People stick with “default” options
  - Retirement plan evidence
  - Auto-pay
  - Green options as “default?”
    - Marketing and program approaches?
    - May require policy changes



# Relativity and Comparisons

- **Feedback is crucial** (information  $\neq$  feedback)
  - Reduces anxiety, reinforces choice, people see things add up
  - How much do I use/did I use? (Water Pebble)
- Need to have better “equivalents”
  - Make them visual, relevant, sympathetic (love those polar bears?)

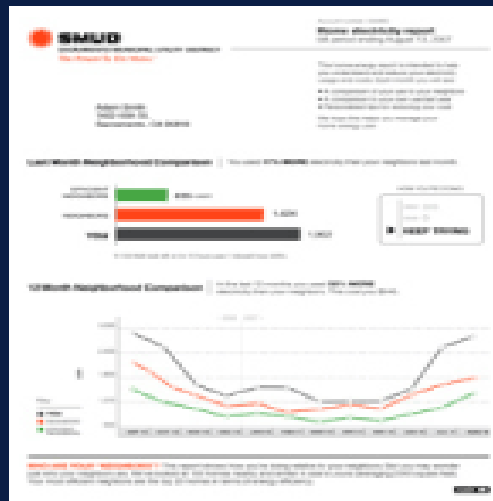


## Norms (briefly)

- “The only way to change behavior is to change what is socially acceptable”
- Most people say they trust family, friends
- **A powerful force we don't cop to**
  - Cialdini's “hang up your towel” experiments
  - Highest rate of change when guests told X% *of guests staying in this room hung up their towels*

# Norms continued. . .

- P. Wesley Schulz – “Power of Norms” presentation
  - BECC Conference <http://piee.stanford.edu>
- Positive Energy’s normative feedback looks promising





# Program/Marketing Implications

- Find ways to reach beyond the Choir
- Assume habit brain with executive back-up
  - Focus on simple, convenient, visual, empathic
  - Remember those labels
- Pricing
  - How can we capitalize on **FREE**?



# Program/Marketing Implications (2)

- What anchors do people have?
  - How do we reset them?
- How can we use fear of loss?
- What feedback works?
- What comparisons work?
- How do we create norms?





# Policy Implications

*Given that we can't avoid meddling, let's meddle in a good way.*

—Richard Thaler, *Nudge*



# Policy Implications, con't

- Support technology & feedback that
  - Simplifies
  - Anchors
  - Honors human reality: “perception rules”
- Enable programs where default is “opting in”
- Support programs to build stronger community norms

# ● ● ● | Policy Implications, con't

- Support youth education (anchoring, values, transformative experiences?)
- Explore “drivers” through research
  - Watch NYSERDA’s \$400K experiments
- **Be sure to ask** “*Are there moral implications, limits of using these drivers?*”



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