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Investing in Water

Presented by:

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- The opinions in this presentation are those of Paul Short and do not necessarily reflect those of anyone else, including the Verge Fund.
- Do your own homework before you invest in anything. If you invest on the basis of this presentation, you are an idiot.

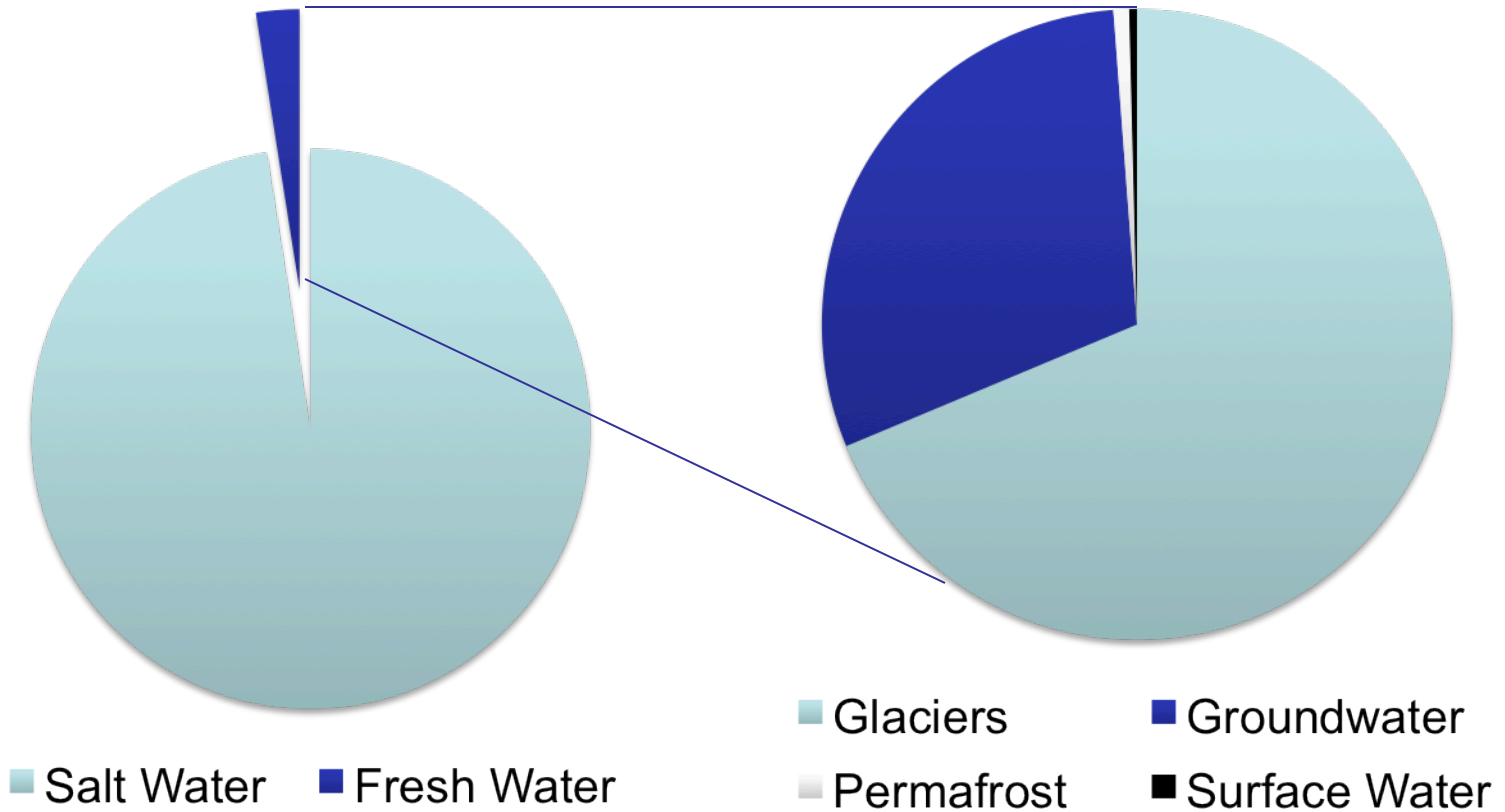
WATER: THE BIG PICTURE

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The World's Water

0.76% of all water is usable



Macro Trends

World-Wide Water Stress

- Infrastructure needs \$300B - \$1T in the US
- US Water use is growing twice as fast as population.
- 1/3 of the world's population is expected to have inadequate drinking water in the near future
- Groundwater is being depleted faster than it is replenished – e.g. the Ogallala has 20-30 years left.
- 20% of irrigated lands have increased salinity
- 45% of lakes and streams are polluted

Macro Trends

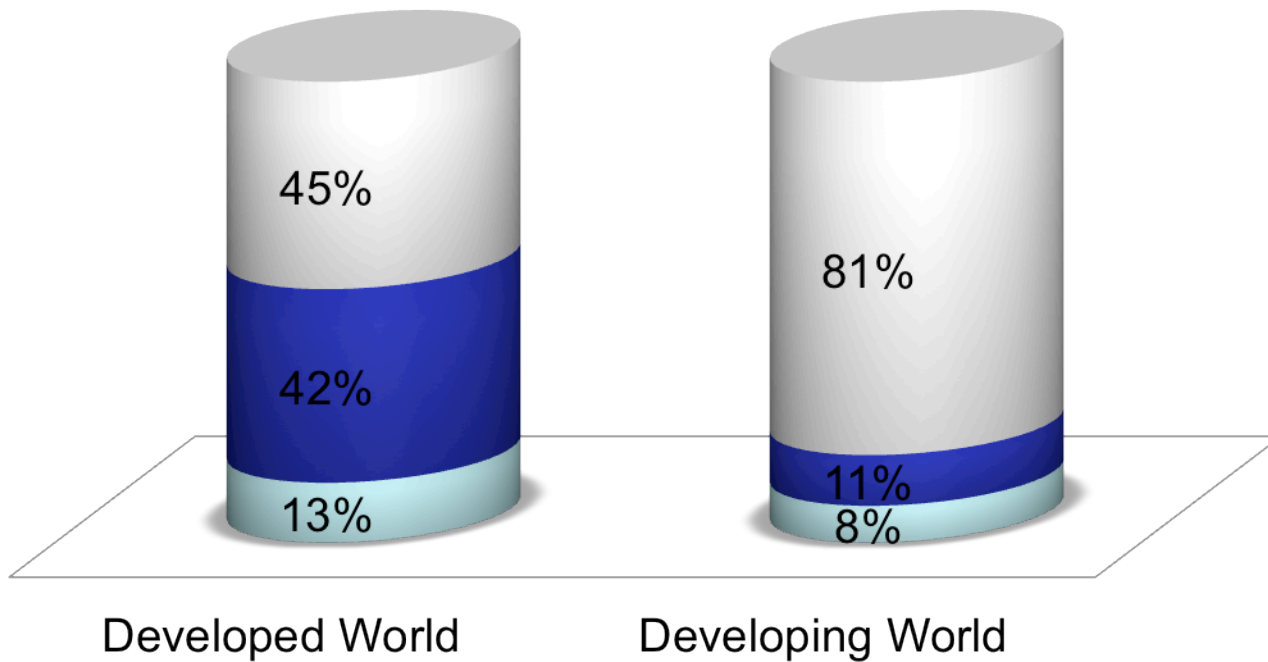
- Regulation is increasing
- Water *costs* are rising
 - 27% US, 45% Australia, 58% Canada, 43% UK
 - Not reflected in prices
- Climate change is changing the situation – worse in some areas, better in others

Energy-Water Nexus

- Energy use expected to increase 2X in 20 years
- Water use for Energy:
 - 50-200 gallons per KWh
 - 170-1850 gallons/barrel of oil
 - 4-1700 gallons of water/gallon of ethanol
 - Up to 2,000,000 gallons of water for a natural gas well.
- Energy for Water Use:
 - Water treatment and pumping consume 4% of U.S. electricity
 - In California, water consumes 19% of the state's electricity and 31% of its natural gas
 - 50%-80% of desalination costs are for energy

How Water is Used

■ Residential ■ Industrial ■ Agriculture



IS WATER THE NEW OIL?

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Water is Unique

OIL

- Oil has substitutes –
Natural gas, solar, etc.

Water

- Water is unique in that it has no substitute for the vast majority of uses

Water Is Forever

OIL

- When a gallon of oil is consumed, it's gone

WATER

- When a gallon of water is consumed, it's still there
- Water is constantly recycled through the evaporation/condensation /rain process

Water is Local

OIL

- Oil found in North Dakota DOES mean additional oil supplies in El Paso
- If you save oil, someone in Africa can get to it

WATER

- A flood in North Dakota DOES NOT mean additional water supplies for El Paso
- If you save water, Africa sees no benefit

Water Use is Not Cyclical

OIL

- Oil demand drops when the economy is bad

WATER

- The demand for water is largely impervious to the economy's ups and downs.

Water is Priced Inefficiently

OIL

- Oil is largely priced by the market
- Prices vary due to supply and demand
- THEREFORE:
- When the price goes up, demand goes down
- Oil seeks the most economically efficient use

WATER

- There is no market pricing – it is almost completely subsidized
- Prices are set politically – and low
- THEREFORE:
- There is no incentive to conserve
- Usage is much greater
- And it is used absurdly – Drinking water in toilets, lawns in El Paso

Is Water the New Oil?

NO!

But there are still huge opportunities

IMPLICATIONS

Prices WILL Rise

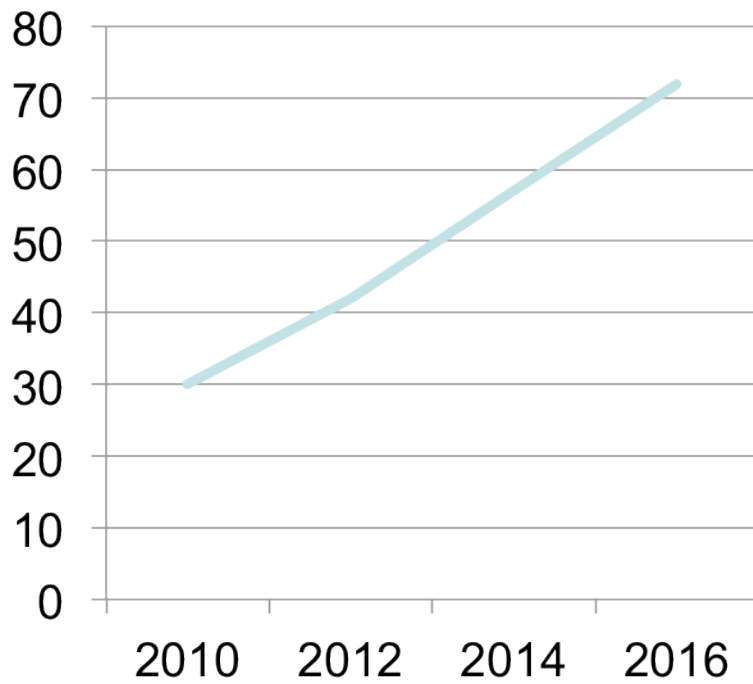
- Directly
 - Rates will go up
 - Large usage will be penalized
- Indirectly
 - Regulation will increase
 - Low-flow in households
 - Reduced inflow and effluent in industry
 - Rationing will be more common
 - Taxes will increase

Industry Will Take The Brunt

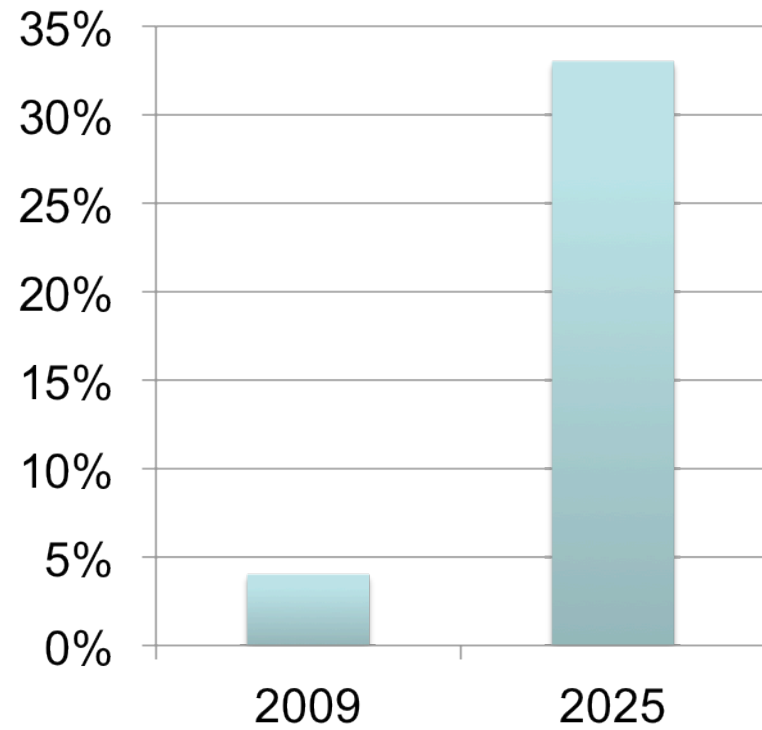
- Households will be protected
- Agriculture will see increased discharge regulation, but little direct cost
- Industry – especially energy – will pay most of the increase
 - Increased Water Rates
 - Rationing
 - Increased Discharge Regulation – fewer contaminants and less volume allowed
 - Increased tax rates

Water Recycling Will Increase

Total Global Reuse Capacity – Million m³/day



% Wastewater Reuse



The Treatment Equipment Market Will Grow

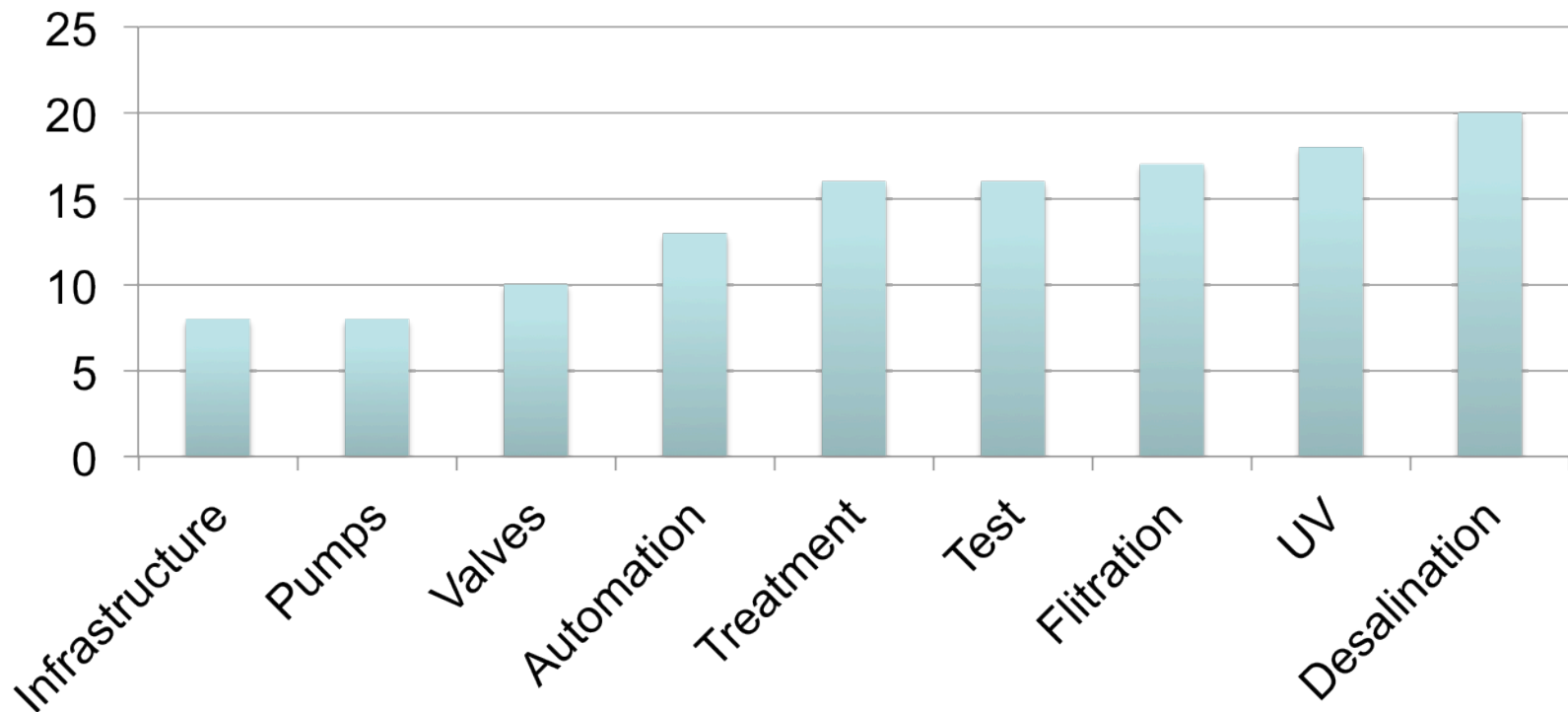
Treatment Equipment	Market \$M	Expected CAGR 2010-2016
Primary Intakes/Screens	\$2,900	7%
Pre-Treatment Equipment	\$10,900	5%
Ultra & micro filtration membranes	\$700	18%
RO & Nanofiltration	\$600	18%
Membrane Bioreactors	\$100	17%
Ion Exchange	\$300	15%
Disinfection	\$3,000	6%
Zero Liquid Discharge	\$400	26%
Sludge Management	\$7,100	9%
Media Filtration	\$3,700	6%
Monitoring control/chemical feed	\$2,300	7%
Specialized Systems	\$2,600	2%
Industrial Treatment Services	\$2,900	5%
Desalination Plants	\$11,000	9%

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Water Company Valuations Will Be Strong

EBITDA Multiples



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Opportunities for Startups

- Industrial Solutions
- Agricultural Solutions
- Recycling Technologies
 - Membranes
 - Desalination
 - Something new?
- Non-Polluting Treatment
 - E.G. UV, Ozone
- Zero Liquid Discharge
- Ion Exchange
- Point of Use

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THANK YOU