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"Increasing water's contribution to Nevada"

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WATER
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Agenda Item V

Presentation to Legislative Commission's Sub-Committee to Study Water in Dyer Nevada, 7th June 2016

- Senator Pete Goicoechea, Chair
- Assemblyman James Oscarson, Vice Chair
- Senator Aaron D. Ford
- Senator Joseph P. (Joe) Hardy, M.D.
- Assemblywoman Maggie Carlton

Water in the West

Water managers and water users are being challenged by

1. Increasing and changing demands
2. Water scarcity
   - Absolute long-run scarcity
   - Seasonal scarcity (Drought)
3. Over-use and conflict
4. Significant legal and other transaction costs
5. Increasing uncertainty about the capacity of the prior appropriation system to keep use within reasonable limits

The result is impacting adversely on communities, the environment and the economy

Water markets and trading

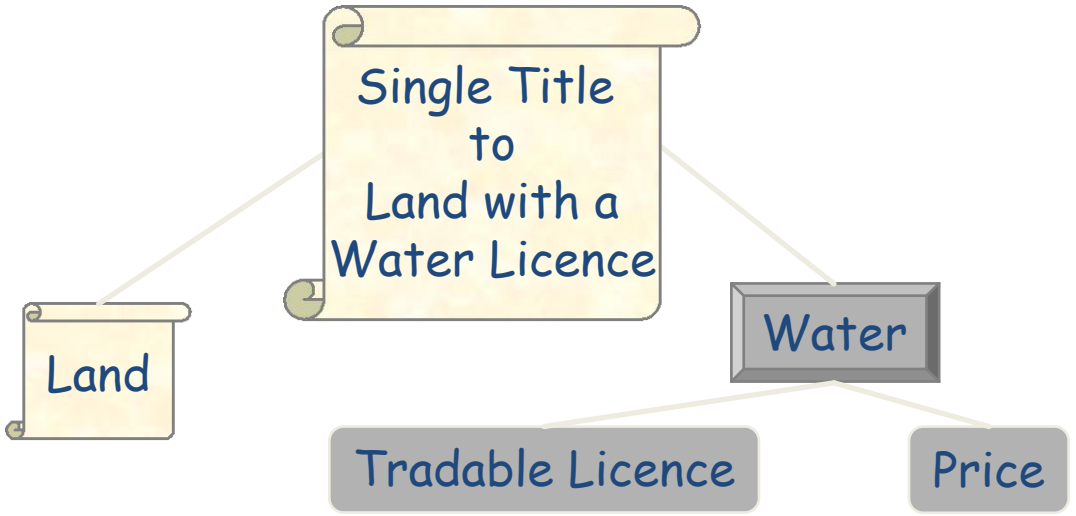
- Western Governors have called for the increased use of water trading arrangements as a means to manage scarcity
- Australia has gone down this route with considerable success
  - Communities are wealthier
  - Water dependent environments are improving
  - Use is being kept within sustainable limits
  - The pace of innovation has been and continues to be rapid
- Today, in nearly every Australian water user is better off than they were 20 years ago

The Australian approach

- Encourage efficient and equitable use by building robust water entitlement, allocation and accounting systems
  1. Set limits and enforce limits on use
  2. Unbundled sharing and accounting systems
  3. Statutory water resource plans
  4. Efficient governance
  5. Low cost administration

Australian Water Reform

In the early stages made lots of mistakes because we naively tried to bolt markets onto water right and allocation systems that lacked hydrological, environmental & economic integrity



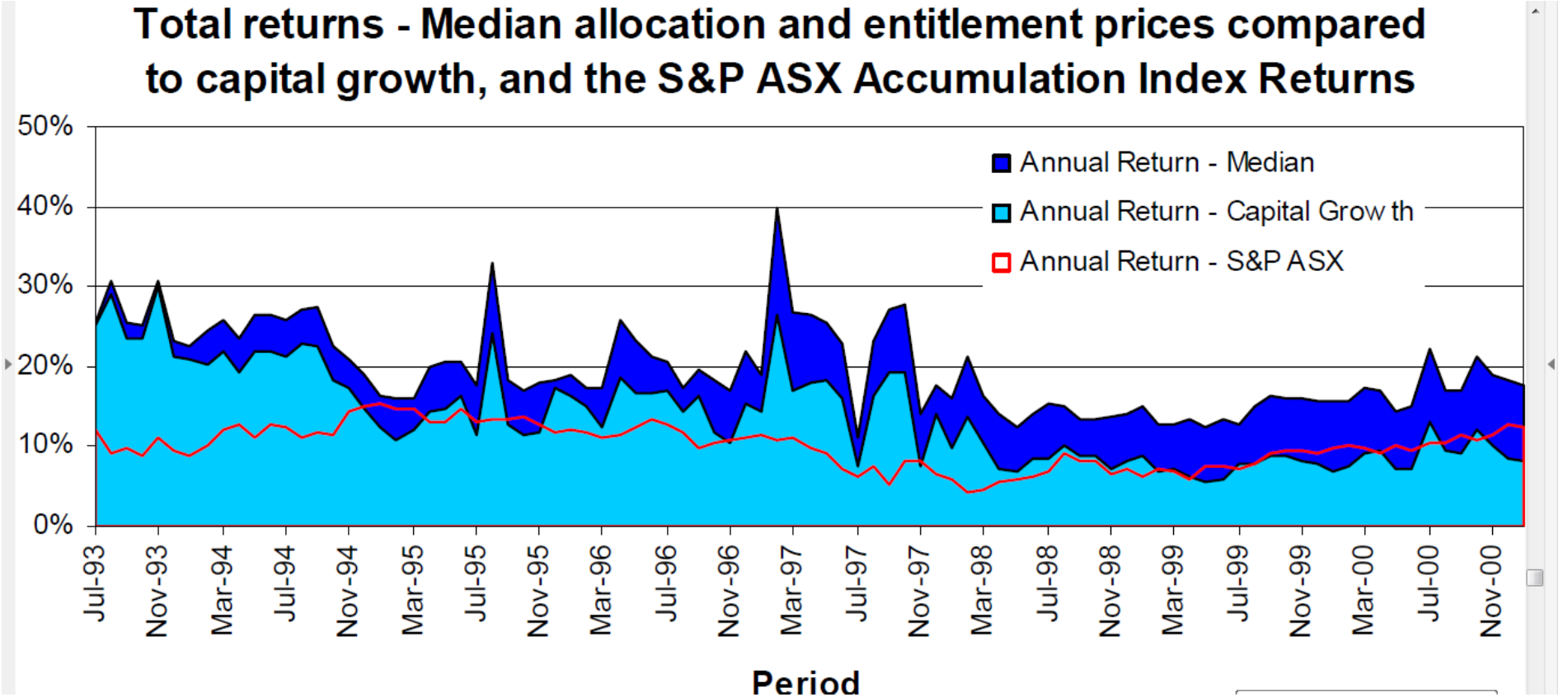
National Competition Policy 1993/94 Plus Cap

National Water Initiative 2004

Robustness

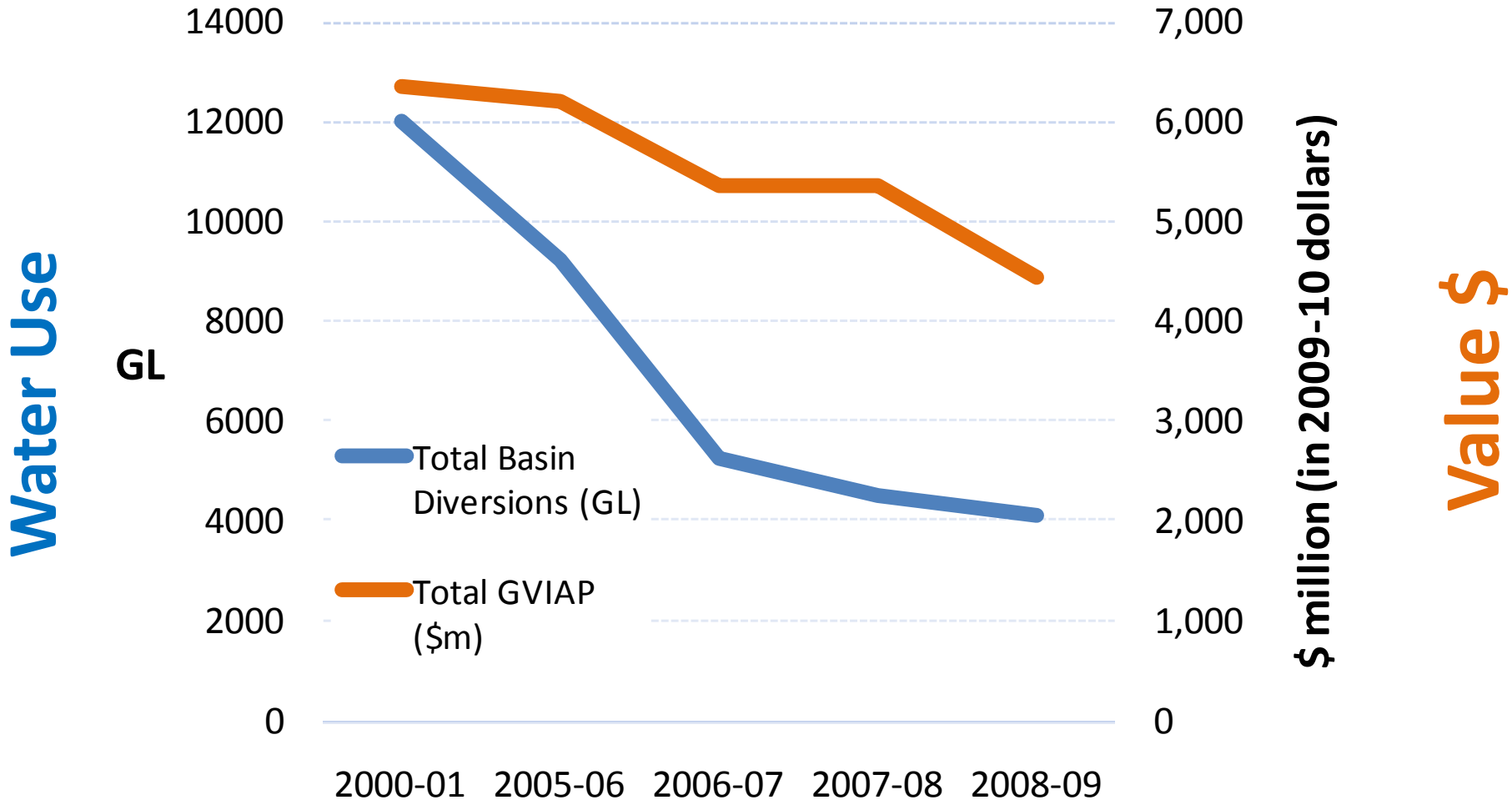
- **Robust** (adj.) Said of a system that has demonstrated an ability to *recover gracefully* from the whole range of exceptional inputs and situations in a given environment.
    - One step below *bulletproof*.
    - Carries the additional connotation of *elegance*
    - Compare *smart*, oppose *brittle*
    - Simple to explain
- Robust systems
    - Endure without the need to change their foundations.
    - They last for centuries.
    - Inspire confidence.
    - Deliver efficient and politically acceptable outcomes in an ever changing world.

Water policy reform ing water rights created wealth



After Bjornlund & Rossini 2007

The millennium drought



After Gooday, ABARE 2011

Sharing water

Most water debates in the west tend to focus on arguments over priority.

The value of each water right is determined by the value of the opportunities and risks associated with it.

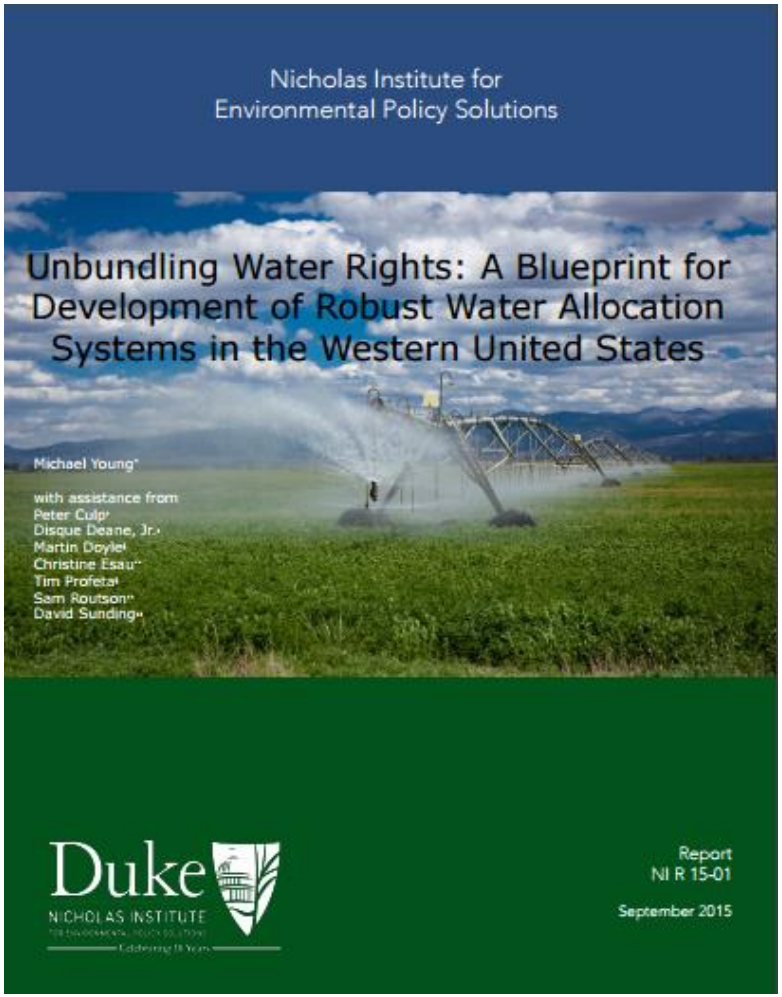
The narrative needs to change to include discussion of the opportunities that arise from increasing

- the value of water rights; and
- the contribution water makes to Nevada's communities

Not a zero sum game ➔ although this is the way most discuss water policy choices.

Increasing the value of opportunities to use water in Nevada

1. Water Resource Plans approved by the Legislature
2. Unbundled water rights
3. Guaranteed Registers
4. Trusted water accounting systems
5. Rigorous planning coupled with speedy allocation decisions and approvals

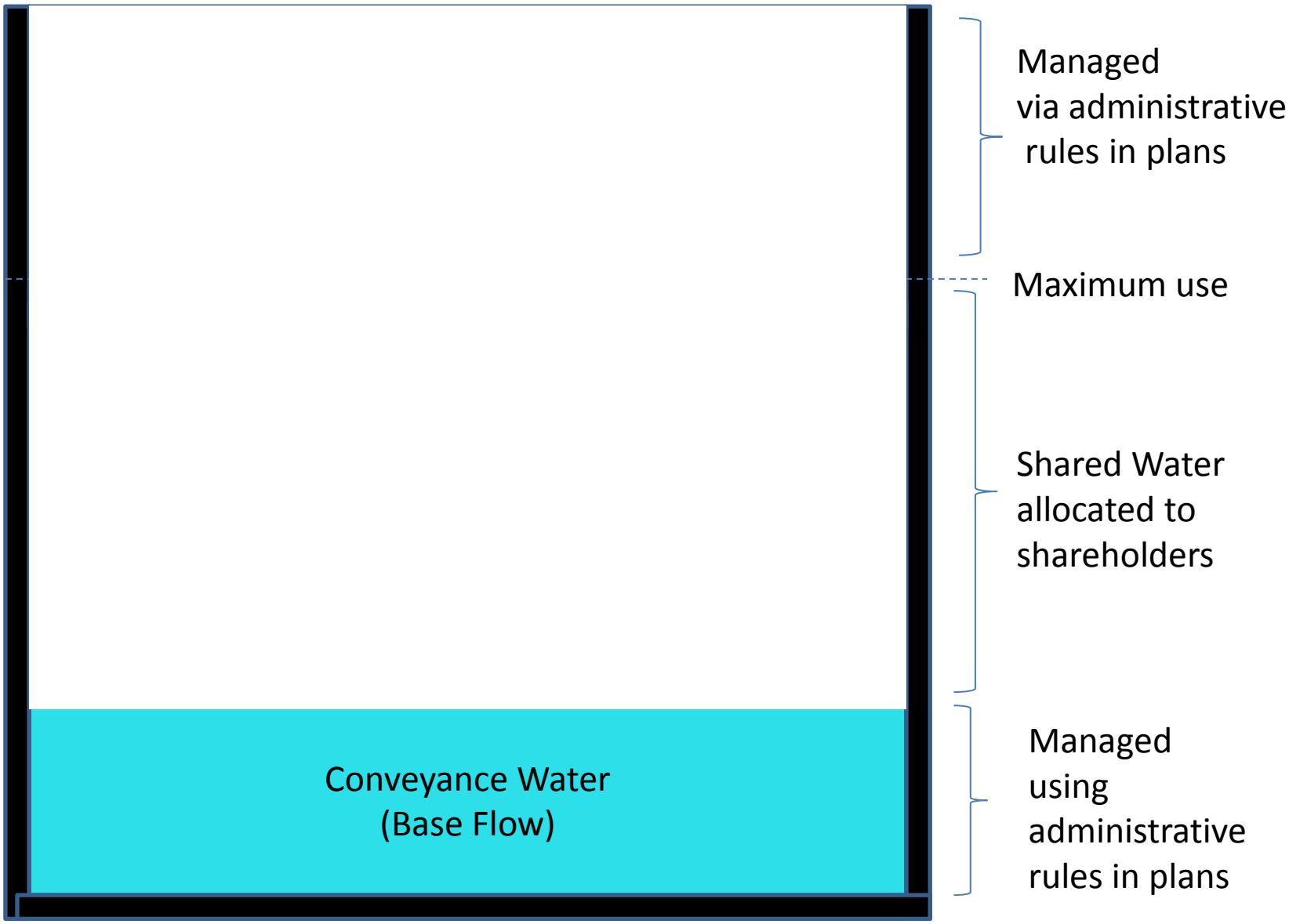


Statutory Plans

- Approved by Legislature
- Differentiate between planned & shared water
- Number of share types
  - High, general and low security shares?
- Require towns to hold shares on behalf of their residents
- Define process for making allocations, tracking consumption
- Establish exchange rates, carry-forward rules, use controls, etc
- Nominate Process for appointing management board and water master

Value => from clarity, simplicity and investment certainty. Legislative approval reduces legal risk.

Sharing water



Unbundled water right systems

1. Perpetual entitlements to share of any allocations made to a water resource. (Permanent)
2. Periodic seasonal allocations (Temporary)
   - Recorded in individual water accounts
   - Announced by year, season or flow condition
3. Use approvals
   - All use must be metered and recorded in a water account
   - Maximum pumping rate

Increased Value => from fungibility and standardised procedures.

Share mechanism to encourage efficient investment and long term risk management.

Seasonal allocations to encourage efficient use within a season

A new water register

- Nevada needs to **validate,** not adjudicate**, all water rights** issued or created by the State.
- These Torrens-Title like registers
    1. Guarantee that the person whose name is recorded against a name in a register is its owner
    2. Provide that the only way a person may acquire a new right is to contract to change the register
    3. Provide that any recorded financial interest must be cleared before ownership change

With a new water right register in place, the holder of any validated right, would be able to apply to have their right re-issued as a “new” water right

Each new water rights would

1. Specify a water body
2. Nominate its owner
3. Record all financial and other interests associated with it
4. Link to a water account that would record any annual or other allocations made.

During the process of re-issuing a water right, all use-specific conditions associated with an old right would be re-issued separately using permit and works approvals.

Increase in Value => from security, low cost engagement with financial industry

A new water accounting system

- Every water-right holder is given a water account
  - Allocations are credited
  - Use, as it occurs, is debited
- Every account is accessible over the internet
- Trading involves debiting one account and crediting another at an appropriate exchange rate
- Anyone including a broker or tenant can hold a water account

Expertise-based Boards

- 5 – 7 Member Independent Boards responsible for overseeing each water resource
- Assisted by Community Reference Panels
- Required to engage and retain confidence of all stakeholders
- Responsible for preparing and periodically revising plans
- Ensuring allocations are made in a timely and equitable manner

Value => from timely decision-making without opportunity for courts to intervene

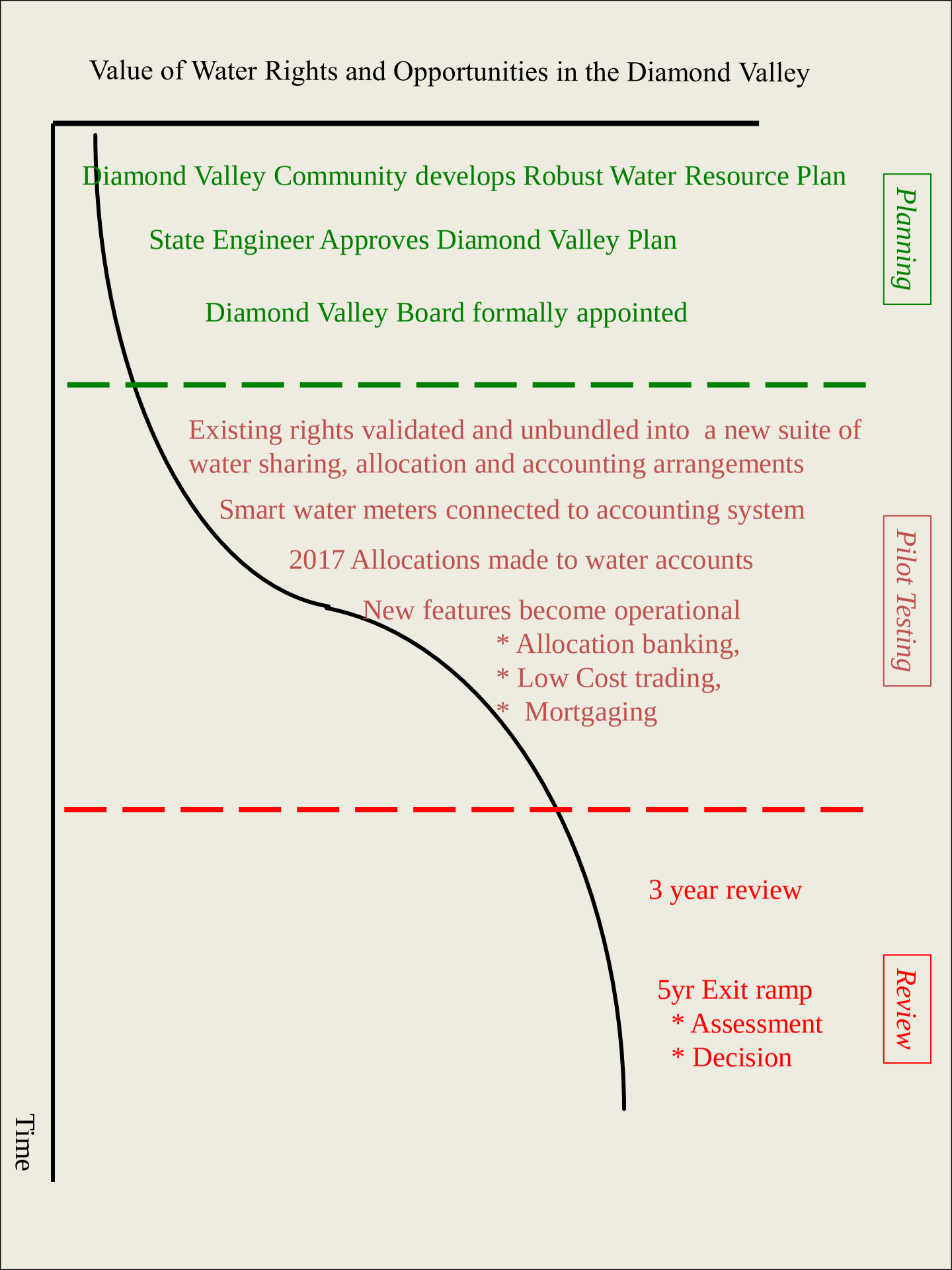
Pilot testing

Nevada
Diamond Valley then Humboldt

California
?????? then ?????

Diamond Valley Proposal

- State Engineer has declared the state of this resource to be critical
- Validation process has started
- Shares issued in proportion to seniority and acre feet held
- Allocations will be announced annually
- Any unused water can be saved for use in subsequent years.
- Robust management plan is being prepared.
- Will require the annual allocations per share to be reduced until water levels the decline in this water resource stops
- Penalties for over-use defined as allowing your water account to remain in a negative balance for more than, say, one month.


Value of Water Rights and Opportunities in the Diamond Valley
Diamond Valley Community develops Robust Water Resource Plan
State Engineer Approves Diamond Valley Plan
Diamond Valley Board formally appointed
Planning
Existing rights validated and unbundled into a new suite of water sharing, allocation and accounting arrangements
Smart water meters connected to accounting system
2017 Allocations made to water accounts
New features become operational
* Allocation banking,
* Low Cost trading,
* Mortgaging
Pilot Testing
3 year review
5yr Exit ramp
* Assessment
* Decision
Review
Time

Application to the Humboldt

- Connected ground and surface resources need a single over-arching plan that is approved at the highest level possible.
- The entire resource needs to partitioned into it components
- Shares need to be issued in each zone
- Respect and trust in the new management regime needs to be established as it emerges
- Robust accounting systems need to be put in place
- Incentives to save, innovate and invest need to be put in place

Legislative Opportunities for Commission Consideration

1. **Connected management** - Expand the State Engineer's powers so it is possible to declare the status of any river or any connected ground and surface water resource to be critical.
2. **New water rights** - Enable the State Engineer to validate a water right and then re-issue it as a new validated water right whose ownership is defined by reference to a state register.
3. **Water accounts** - Authorise the State Engineer to establish robust water accounting systems designed to track and report on use as it occurs

New precedents and

new systems

are waiting

to be

born

Acknowledgements

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