Water Infrastructure

Fundamental Elements of Every NM Job

Adapting the Best Strategies for New Mexico's Future

Interim Water and Natural Resources Committee

Office of the State Engineer, Oct 2013, Las Cruces

Examples of Water Infrastructure

- Water Supply
- Water Storage
- Conveyance
- Flood control
- “Recoverable Water”
- Source Water Protection
- Metering, Measurement and reporting – data!
- Watershed Management
- NEPA/ESA Compliance

National Challenges to Water Infrastructure

- *Deferred maintenance* is #1 credit risk
- Less $$ available for capital investment or replacement
- By 2020, the predicted deficit for sustaining water delivery and wastewater treatment infrastructure will be $84 billion.
- This may lead to $206 billion in increased costs for businesses and households between now and 2020.
- **In a worst case scenario, the U.S. will lose nearly 700,000 jobs by 2020**. Unless the infrastructure deficit is addressed by 2040, 1.4 million jobs will be at risk.

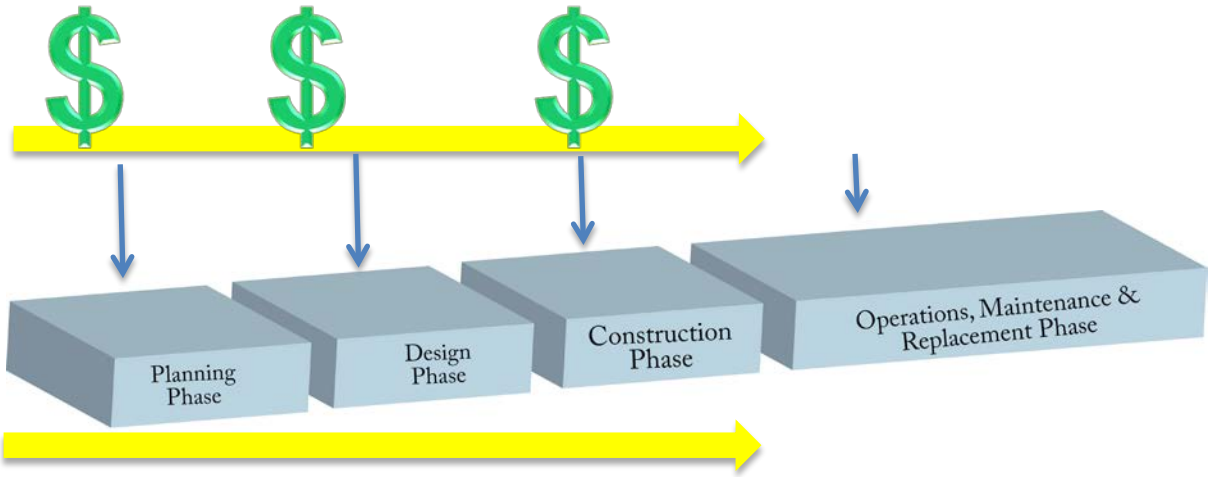
Source: Smart Market Report, 2013

Examples of New Mexico's Challenges to Water Infrastructure Issues

Deferred Maintenance	Prioritization, is Hard Work	Funding Programs Disconnected
Short-Term v. Life Cycle	Who's responsible?	Appropriateness
Balance needs v. wants	Planning valued?	Small systems struggle

What does a typical Public Works project look like?

Funding & Financing

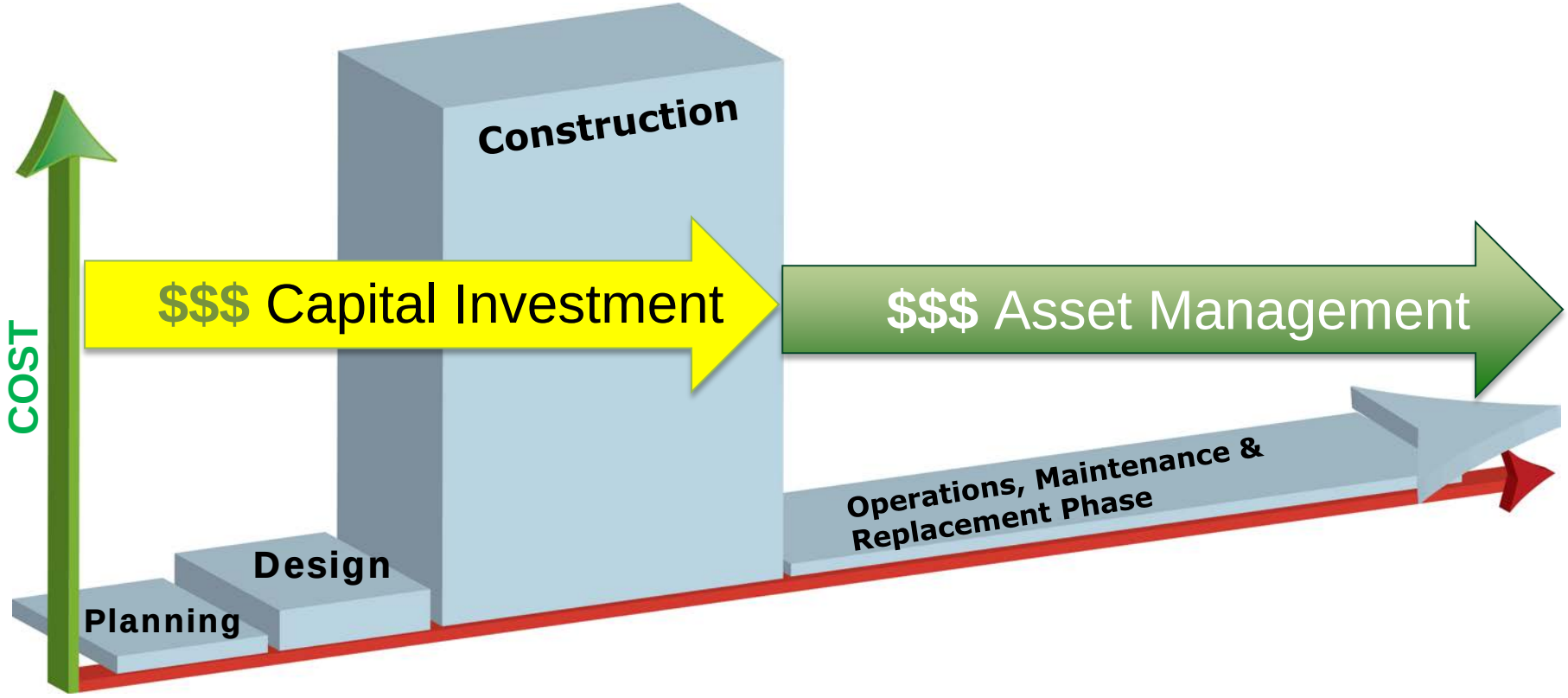


Project Development

Oversight

ICIP PER VA CM

Costs of Infrastructure



Thanks neighbor!

"Asset Management describes a a set of practices and methods for delivering desired services to residents and businesses, at the lowest lifecycle costs, while managing risk to an acceptable level."

-SmartMarket Report 2013

To Utilities, Asset Management can reduce costs with little or no reduction in service levels

To States, Asset Management stretches the impact of dollars spent to maximize long-term performance of infrastructure systems

2013 Smart Market Report:

Asset Management Practices Currently in Use

2013 Smart Market Report:

Some Key Results noted from the survey

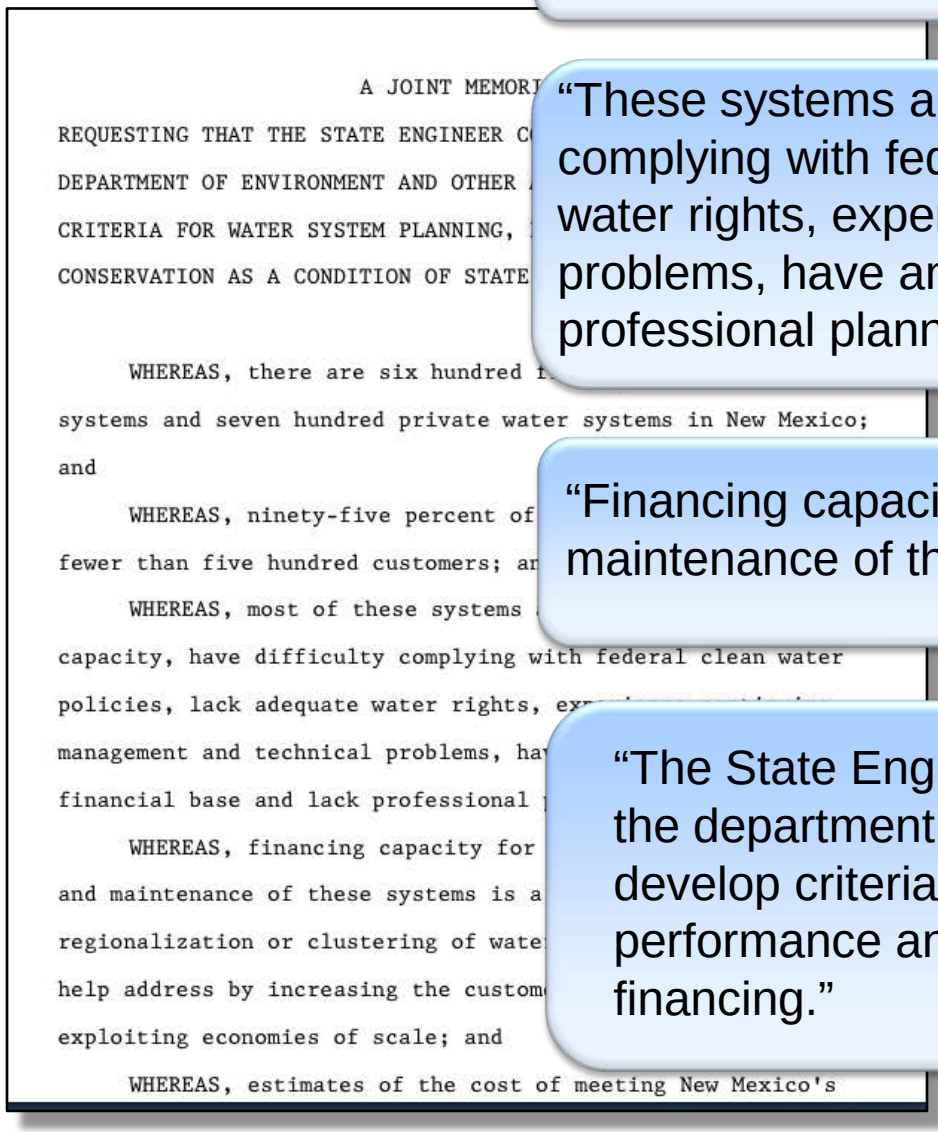
- Larger utilities more likely to use more practices than small ones
- The main drivers are the need to address the poor condition of infrastructure assets and the lack of $$ for investment in infrastructure
- Respondents emphasized that organizational resistance can be a barrier to implementation
- Use of only a few practices see immediate benefits
- A greater commitment to more practices resulted in a greater level of benefits
- More data and education provides for increased adoption
- Gradual implementation more successful
- Emphasis on lowering Life-Cycle costs and risk management

Top Asset Management Benefits

1. Improved ability to explain and defend budgets and investments to governing bodies
2. Better focus on priorities
3. Better understanding of risks and consequences of alternative investment decisions
4. Non-cost savings business benefits
5. Increased ability to balance capital costs and operating expenditures
6. Reduced life-cycle costs without sacrificing service levels

-SmartMarket Report 2013

HJM 86 (2005)



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"There are 650 public water systems and 700 private water systems in NM"

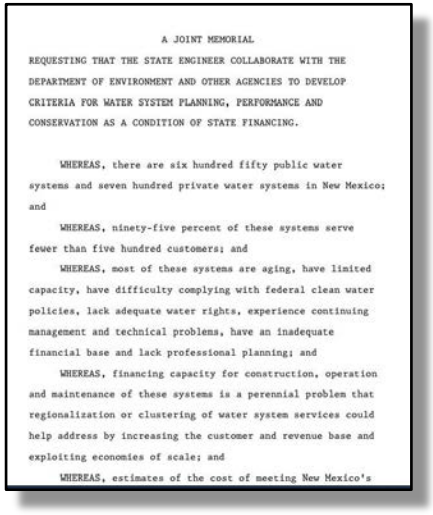
"These systems are aging, have limited capacity, have difficulty complying with federal clean water policies, lack adequate water rights, experience continuing management and technical problems, have an inadequate financial base and lack professional planning."

"Financing capacity for construction, operation and maintenance of these systems is a perennial problem"

"The State Engineer be requested to collaborate with the department of environment and other agencies to develop criteria for water system planning, performance and conservation as a condition of state financing."

HJM 86 in 2005

Led to Creation of these criteria (for public funds)



A JOINT MEMORIAL

REQUESTING THAT THE STATE ENGINEER COLLABORATE WITH THE DEPARTMENT OF ENVIRONMENT AND OTHER AGENCIES TO DEVELOP CRITERIA FOR WATER SYSTEM PLANNING, PERFORMANCE AND CONSERVATION AS A CONDITION OF STATE FINANCING.

WHEREAS, there are six hundred fifty public water systems and seven hundred private water systems in New Mexico; and

WHEREAS, ninety-five percent of these systems serve fewer than five hundred customers; and

WHEREAS, most of these systems are aging, have limited capacity, have difficulty complying with federal clean water policies, lack adequate water rights, experience continuing management and technical problems, have an inadequate financial base and lack professional planning; and

WHEREAS, financing capacity for construction, operation and maintenance of these systems is a perennial problem that regionalization or clustering of water system services could help address by increasing the customer and revenue base and exploiting economies of scale; and

WHEREAS, estimates of the cost of meeting New Mexico's

- A financial plan
- An appropriate rate structure
- An asset management plan
- A water accounting system with full metering
- Full compliance with OSE regulatory requirements
- Full compliance with SDWA and CWA, and NMED regulations
- A legal and adequate governance structure
- Planning to support project development and operations
- Participation in collaboration on regional efforts toward long-term solutions
- An energy efficiency strategy

Value Analysis (VA)

Defn: **Value Analysis** is a systematic process of identifying alternatives that meet **the principle function** while **minimizing the life cycle cost of projects**, processes, programs or products without sacrificing safety or necessary quality.

- The success rate is very high;
- Savings almost always > cost of analysis, usually >>; and
- Sometimes results in increased capital investment to achieve decreased Life-Cycle costs.

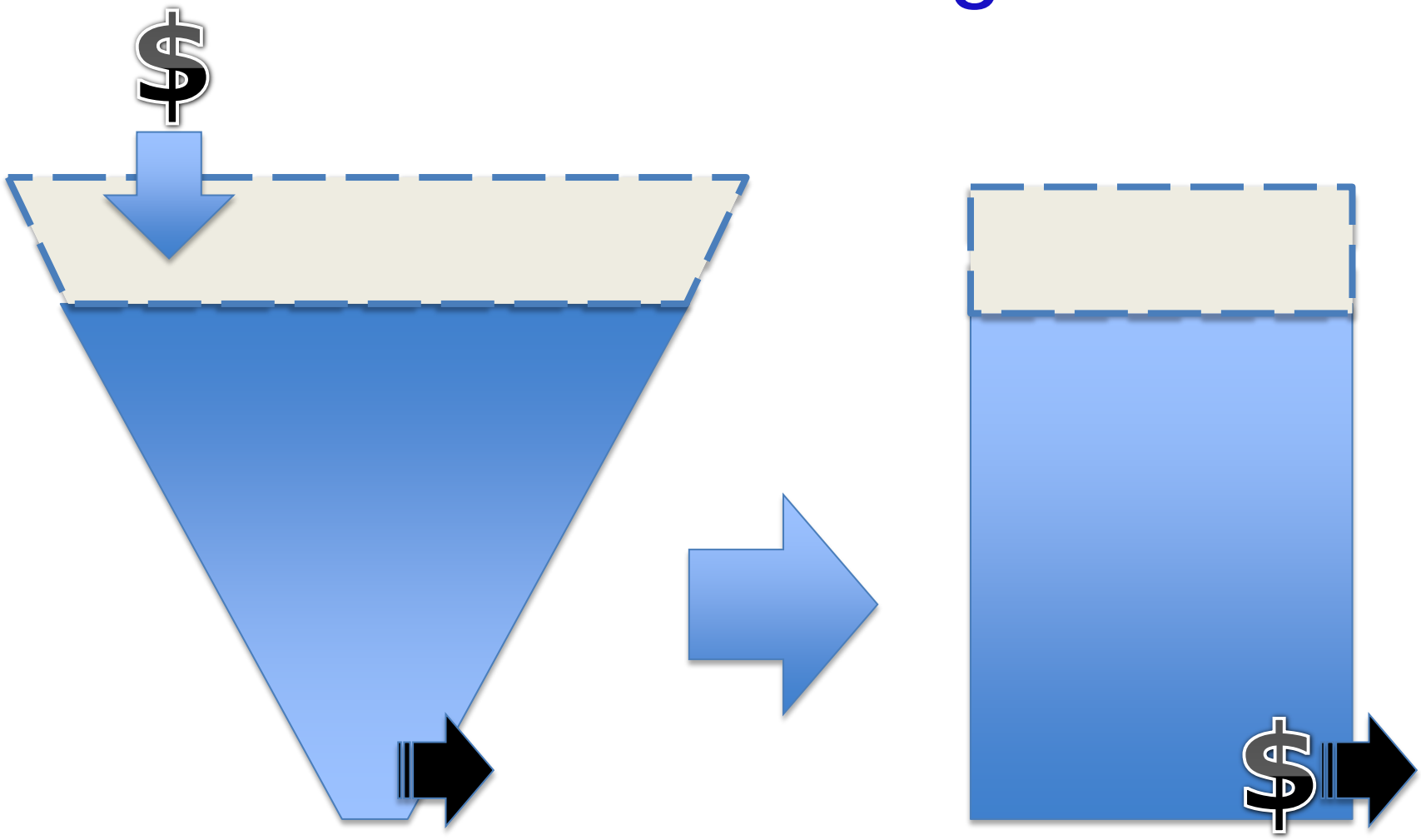
L.E.A.P.

- **L**ife Cycle Approach
- **E**ffectiveness of use of Public Funds
- **A**ppropriateness
- **P**rioritization

Water Trust Board Role and Goals

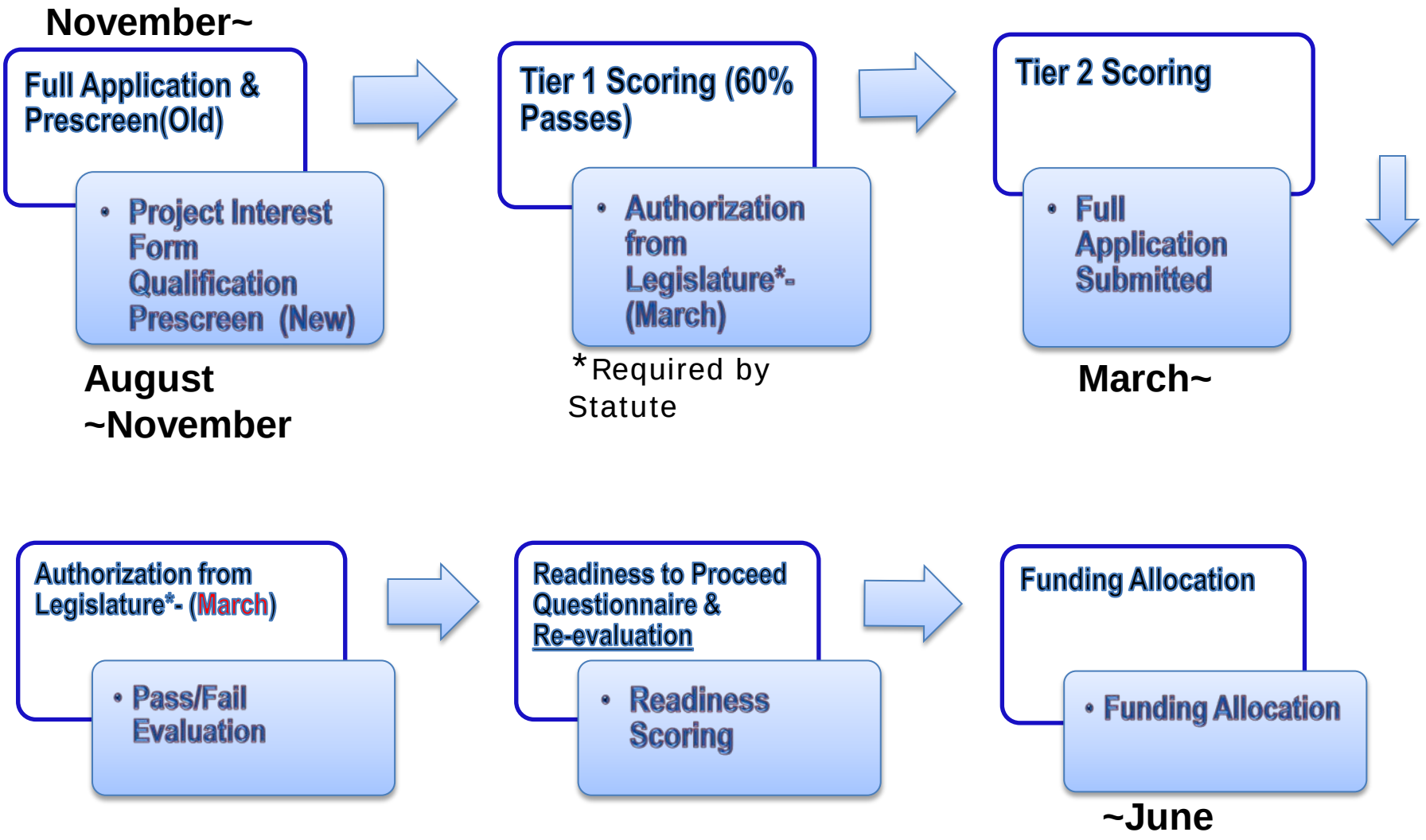
- Capital Outlay Program
- 5 Categories of Eligible Projects
- $25 - $40 Million / year
- Implement State Water Plan goals
- Prioritize Projects developed in Regional Water Plans
- Prioritize *“Urgent Need”*
- Promote Regional Solutions

WTB Challenges



Water Trust Board Process Improvements

WTB Application Process - Old and New



Same overall timeframe, but eliminate additional reviews
More time to work with communities to improve applications

New WTB Application Process

Advantages of Changes:

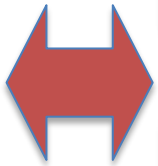
- Identify non-qualifying entities early on and refer to assistance providers to correct deficiencies.
- Work with qualifying entities from November to March to improve quality of applications.
- Eliminate application update and second review in the spring.
- Provide more current information for WTB consideration at time of award.

WTP Policy Changes – Implement HJM86

- Tier 1 Scoring replaced **with Pass/Fail Criteria**
  - ❑ Demonstrated Compliance (as applicable) with: Audit Act, Safe Drinking Water Act, OSE Water Rights, Sanitary Projects Act, Open Meetings Act, Certified Operator, Operating Budget, and Financial Statements for three years.
  - ❑ Additional criteria to be added in future years: Asset Management Plan; Written Personnel Polices, Operating Procedures, and Emergency Plan; Cross Connection and Source Protection Plans; and Planning Study.
- Continuation Policy revised to allow 5% unexpended fund (up from 2%) and still be eligible for funding.
- We are not done yet. The WTB continues to examine policies for improvements, including the match requirements and scoring criteria.

Examples from Other States

- Maine
- South Dakota
- Missouri
- Kansas
- Maryland
- Kentucky
- Nevada
- Washington
- Pennsylvania
- California



Model 1

- Supporting Small Systems
- Through the Drinking Water State Revolving Fund

Model 2

- Encouraging Long View (AM)
- By Allocating Funding
- Priority Points

Model 3

- Diversifying Funding Sources
- To Fund More Projects

Model 4

- Assisting Applicants
- Through Funding Workshops and Third Party Assistance

Solutions for New Mexico

- Reward best practices
- Assist in developing best practices
- LEAP focused approach
- Asset Management
- Value Analysis
- Engage Technical Assistance Providers
- Coordinate Funding Programs
- Water Trust Board as Model

State & Regional Water Planning

New Approach

Support for Planning

- The 2013 legislature appropriated $400,000 to the ISC for state and regional water planning

- The ISC has developed a way to update all 16 regional water plans and the State Water Plan in the same timeframe – by the end of 2015

Key Features

- Common technical platform – enables regions to focus on priorities

- Representative Stakeholder Steering Committees

- Provides Link between regional and State Water Plans

State and Regional Water Plans

- The Water Trust Board is a vehicle for implementing the State Water plan

- Criteria for water projects and programs under the Water Project Finance Act include prioritization of proposals that are in an Interstate Stream Commission-accepted regional water plan.

- There are 16 regional water plans ranging in age from 14 – 6 years old.

Solutions

- Regional Water Plans must “talk to each other” and use a consistent assessment methodology.
- Regional water planning groups must focus on identifying long term planning issues:
  - Projects;
  - Programs; and
  - Funding needs.

Regional Water Plans Implemented through Water Trust Board

- Regions will develop plans through a stakeholder committee that represents water users in region;

- The stakeholders will then identify regional water planning priorities that will be closely linked to the Water Trust Board funding process;

- The Water Trust Board will implement Regional Water Plans by funding well planned applications.