

The Queensland Water Directorate

IPWEAQ SE Branch Conference
Logan March 2005



Synopsis

- **The Queensland Water Industry**
- **The Water Directorate – Who are we?**
- **The Key Stakeholders and Supporters**
- **Opportunities**
- **Queensland Water Projects**
- **QWD Project Summary**



The Queensland Water Industry

- **Services over 3 million customers**
- **\$12 Billion in water and wastewater infrastructure**
- **Local Government Water Service Providers – Councils (125)**
- **Water Boards and Corporations, Remote and Indigenous Communities, Mining and Energy companies and private operators (e.g. resort islands etc)**



The Water Directorate – Who are we?

- **Members – Local Government Water Service Providers throughout Queensland**
- **Executive Committee (IPWEAQ,LGAQ,LGMA,AWA)**
- **Technical Reference Group (Elected Council Reps)**
- **Executive Officer**



The Key Stakeholders and Supporters

- **Founding Members IPWEAQ, LGAQ, LGMA, AWA**
- **Other State Water Directorates (WSAA, NSW, VIC, TAS)**
- **State Government Agencies (EPA, DNRM, DLGP, Q-Health, DIR, Public Works etc)**



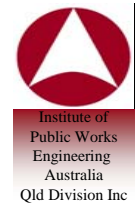
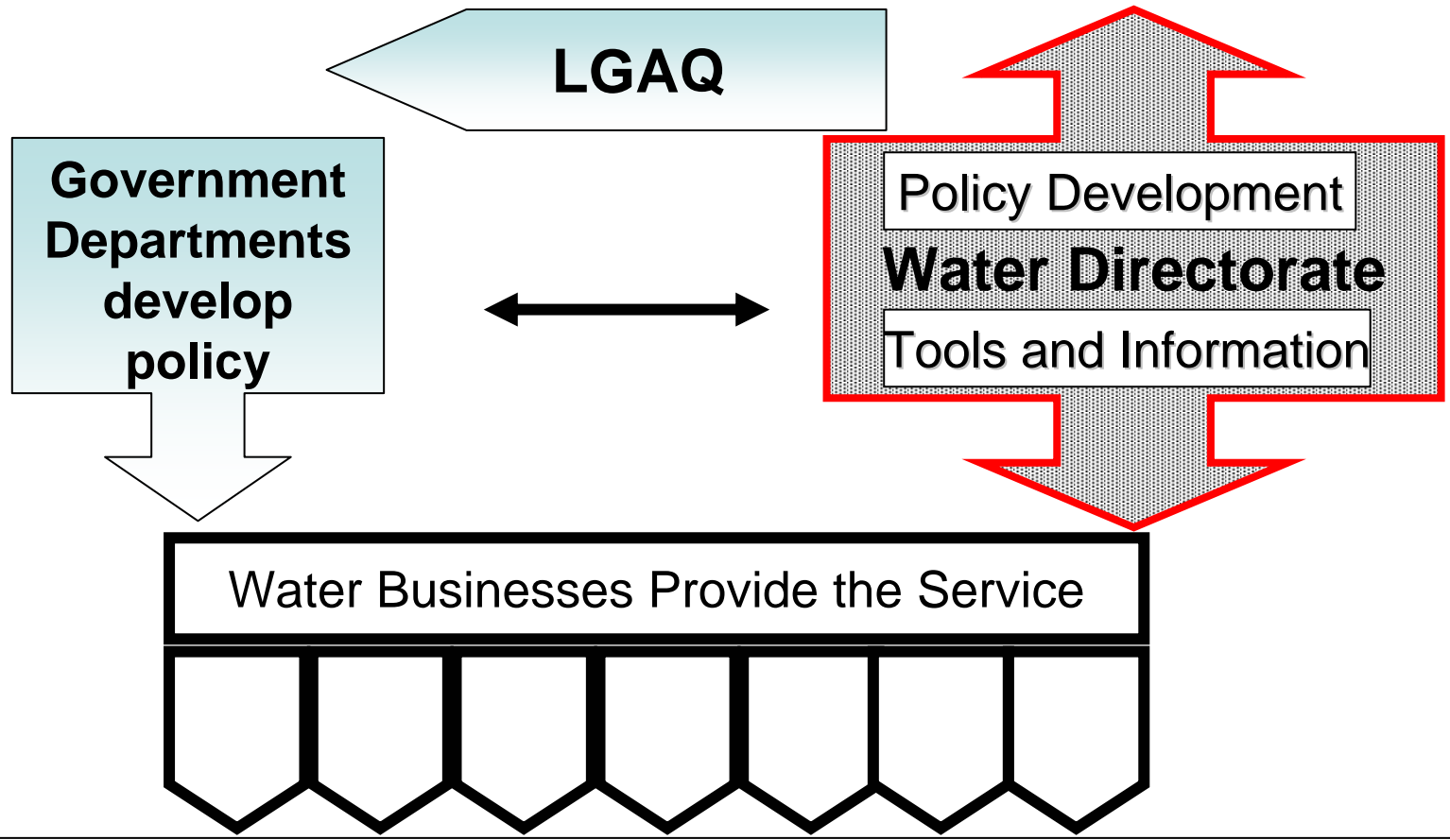
The Opportunity - A New Leadership Role

The Industry needs:

- **One voice to influence policy and subsequent regulations**
- **A common approach to interpretation and implementation of policy and regulations (templates and guidelines)**
- **Alliances for beneficial outcomes**
- **Higher performance at lower cost**



Assisting the Policy Development Cycle



The Story So Far.....

- IPWEAQ initiate the QWD in early 2004
- IPWEAQ, LGAQ, LGMA and AWA partnership accepted
- QWD voluntary subscriptions issued in June 2004 (45% membership)
- IPWEAQ constitution amended to include QWD in July 2004
- Executive Officer appointed in October 2004
- Membership in February 2005 at 60%



Queensland Government

AGENCIES

Sustainable Housing Framework
(EPA, Housing, DLGPSR)

Stage 1

- Rainwater Tanks (ability to mandate)
- AAA rated showerheads (mandatory)
- 6.2L dual flush toilets (mandatory)
- Pressure limiting devices (mandatory)
- Housing only

Stage 2

- Other water efficient devices
- All housing and renovations

SEQ Regional Plan (OUM)

Water consumption targets for SEQ
Infrastructure Plans
Institutional Arrangements
SEQ Recycled Water Action Plan

Queensland Water Efficiency Taskforce

Minister Boyle
Minister Robertson

QWET

Dual Reticulation Working Group
(NR&M)

- Policy and legislative framework
- Standards - O&M and design
- Community perception (includes fire-fighters and recycled water, community title, aquifer storage recycled water)

Rainwater Tank Working Group
(EPA)

- Policy and legislative framework
- Model code
- Sustainable Housing

Queensland Water Recycling Strategy
(EPA) Steering Committee

- Review of current strategy
- Draft Queensland guidelines for the safe use of recycled water

Making Better Use of Water in Our Urban Communities Possible Projects (NR&M lead)

- Targets for water consumption based on population growth rates
- Mandatory installation of water efficient devices in all buildings
- Water efficiency certificate at point of sale for all houses
- Provision of water use information on customer's water bills
- Implementation of water sensitive urban design
- Water tariff structures
- Water pricing to allow for conservation
- Permanent low level water restrictions

Water Information Reporting
(DLGPSR, LGAQ)

- Streamlining reporting of water information to Queensland Government agencies by water service providers

SEQ QRWSS Stage 2

Queensland Government
SEQROC

- Information, Communication, Co-ordination
- Water Needs and Accounting
- Water Availability
- Water Balance
- Water Infrastructure
- Water Recycling, IUWM, Demand Management
 - Potable water, substitution opportunities report
 - SEQ Water Use Efficiency Report
 - Report on constraints and proposed means of resolving those constraints to IUWM and water use efficiency
 - SEQ assessment framework for IUWM and water use efficiency projects
 - IUWM and Water Use Efficiency Guidelines for SEQ
 - Implement of IUWM and water use efficiency

Central RWSS
Centred on Rockhampton

North RWSS
Centred on Cairns

Healthy Waterways Moreton Bay Waterways and Catchments Partnership

Federal Government
Queensland Government

Policy Board (Minister Boyle)

- **Water Sensitive Design Project**
 - Water sensitive design strategy for SEQ
 - Water sensitive design policy for SEQ
 - Planning Guidelines for WISD
 - Technical design guidelines for WISD

Queensland Urban Drainage Manual
(NR&M, Stormwater Institute, IPWEA)

Best practice engineering guidelines for stormwater management

National Water Initiative
(NR&M Lead)

Federal Government
Queensland Government

- Pricing review - recycled water, stormwater, trade wastes
- National water accounting, performance monitoring and benchmarking systems
- Water efficiency labelling scheme
- Smart water mark
- Review of effectiveness of temporary water restrictions
- System losses
- National guidelines for water sensitive urban design (design elements and evaluating options)
- Evaluate icon urban water sensitive development
- Review institutional and regulatory models for achieving integrated urban water cycle management and prepare best practice guidelines
- Review incentives to stimulate innovation

EXTERNAL ORGANISATIONS

UDIA
Enviro development

AWA

WSAA
Smart water mark
National guidelines on recycled water

Water Directorate
(LGAQ, IPWEA, AWA)

Technical guidelines and water related advice

- System Leakage Management Plans
- Drought Management Strategies

Local Governments

Studies
Incentives/rebates
Pricing
Infrastructure
Waterwise

Planning Guidelines for Water Supply and Sewerage
(NR&M)

Integrated planning guidelines for water, sewerage and stormwater.

Greywater
(DLGPSR)

Legislation for greywater use in sewer areas.

Urban Price Elasticity
(NR&M)

QUT research project

System Leakage Management Plans
(NR&M)

Legislation and regulatory guidelines
Water Directorate - "Howto Guidelines"

Waterwise
(EPA)

Water Resource Planning
(NR&M)

Developing Water Resource Plans etc.

Local Governing Bodies Capital Works Subsidy Scheme
(DLGPSR)

Under Review

Plumbing and Drainage Regulation 2003
(DLGPSR)

Being amended to bring up to current version of AS3500
On premises plumbing

ECO BIZ
(EPA)

Subsidies for water efficiency projects

WELS
(EPA)

Water Efficiency Labeling Scheme - National

Drought Management Strategies
(NR&M)

Legislation and regulatory guidelines
Water Directorate - "Howto Guidelines"

Queensland Urban Water Policy Projects

Current Water Projects in Queensland - QWD

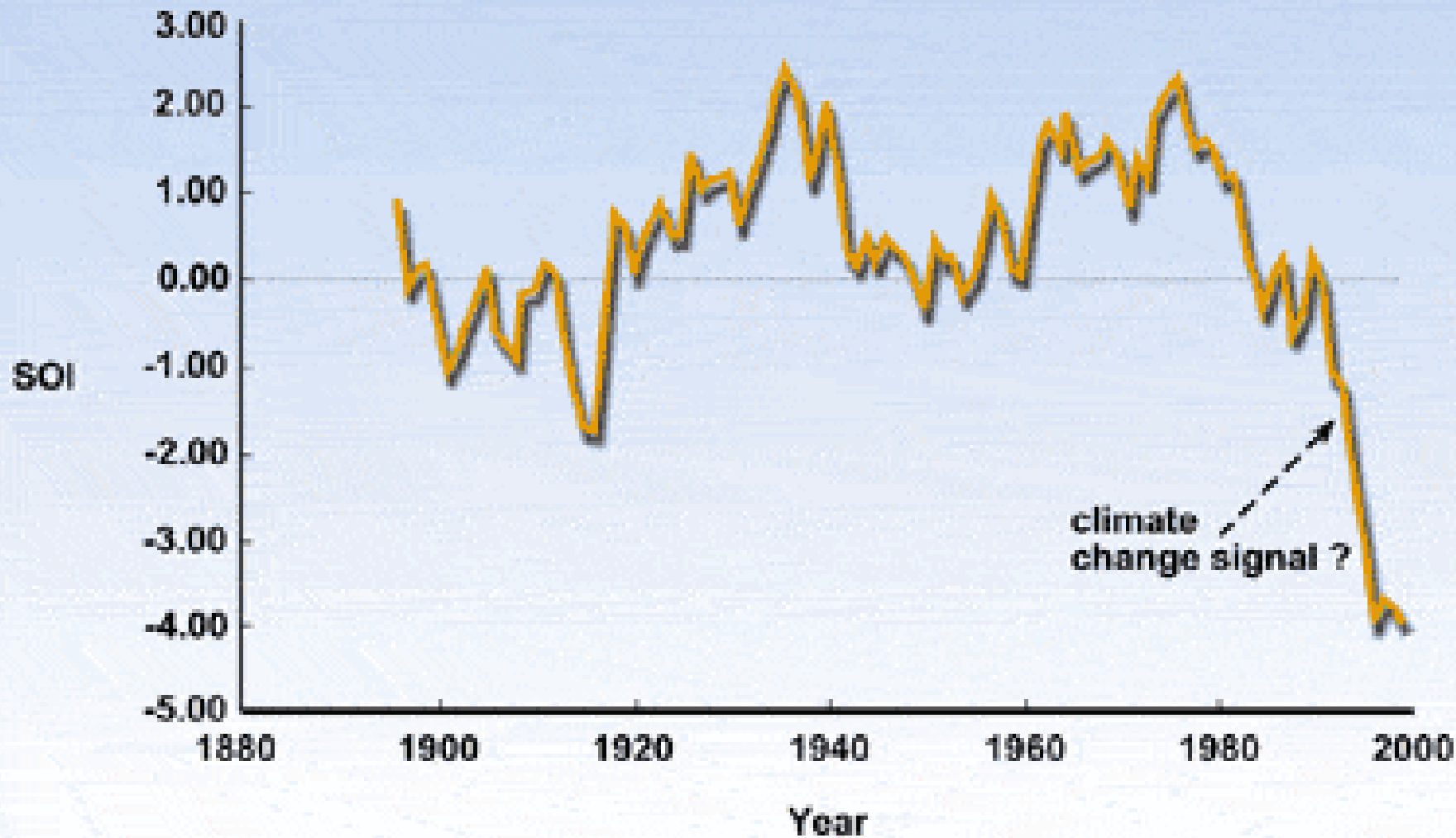
- Treasury – Rationalised Water Industry Reporting System
- EPA – WWTP license policy and model WWTP licenses
- EPA – Biosolids Management Guidelines
- DLGPS&R – Capital Works Subsidy Schemes
- DLGPS&R – Sustainable Housing Code
- DLGPS&R – Grey water reuse policy and guidelines
- DNRM – Water and Sewerage Planning Guidelines
- DNRM - Drought Security Plans and Water Loss Management Plans
- DNRM – Proposed Water Charges
- DNRM – QWET (Rainwater Tanks & Dual Reticulation)
- SEQ RWSS – Stage 2 group for WSUD (IUWM and Accounting Streams)
- Q-Health – Drinking Water Quality Guidelines



20 YEAR MOVING AVERAGE OF MEAN YEARLY SOUTHERN OSCILLATION INDEX (SOI)

A graph from the 'Climate Change' website
and the Department of Natural Resources

S. J. Frang 1998
Department of Natural Resources

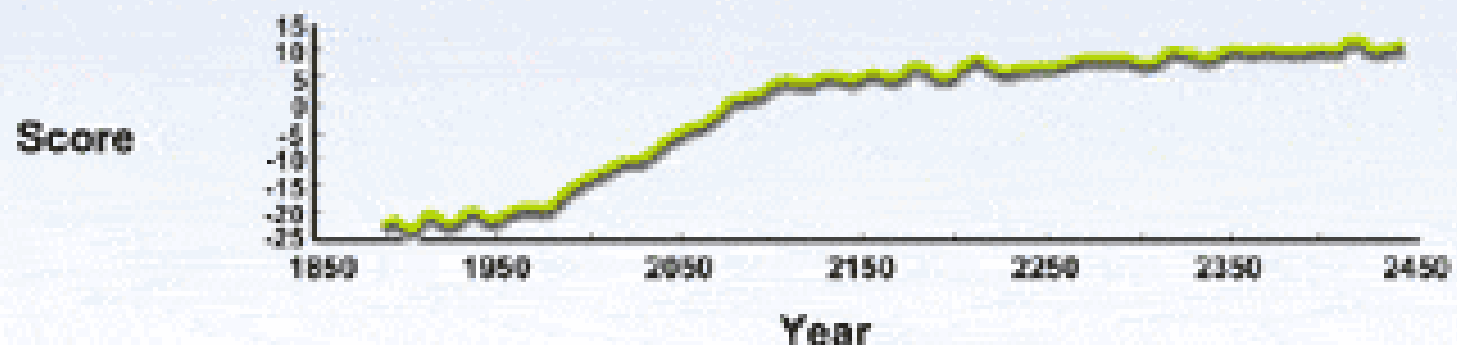
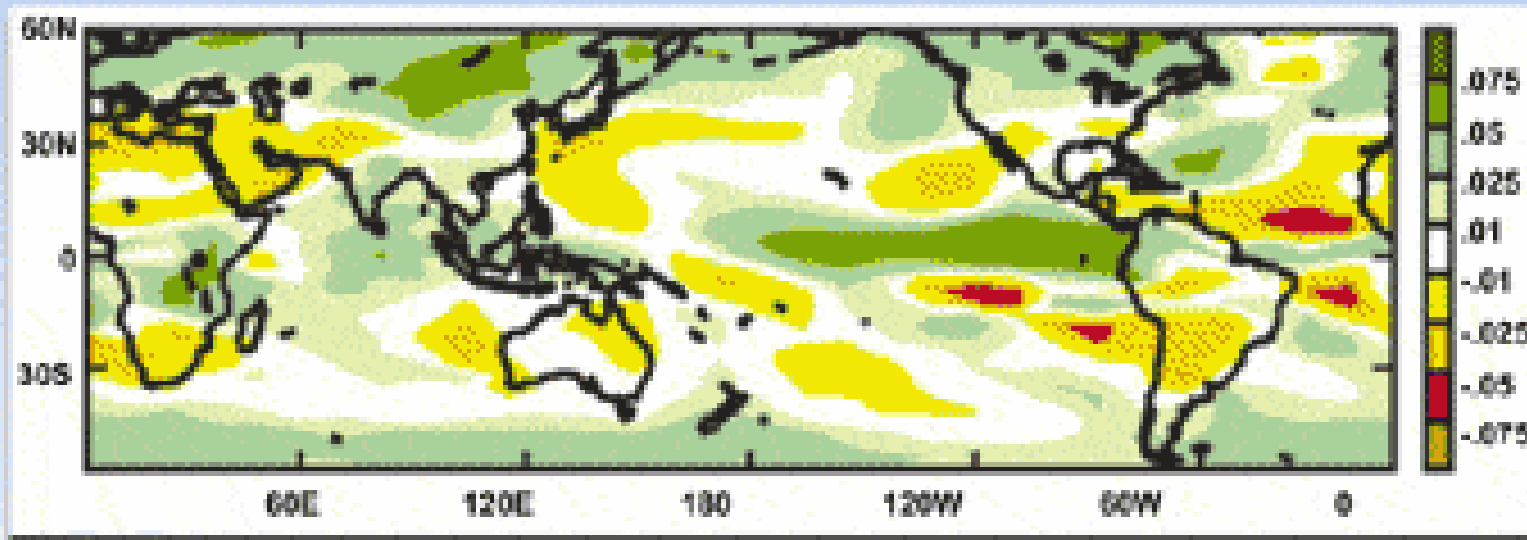


PRINCIPAL EOF* PATTERN - PRECIPITATION (56.2%) VARIANCE December, January, February

A project from the 'Climate Change' initiative
with funding from the Queensland Government

Dr. Chris King
Department of Natural Resources

(data from CSIRO)

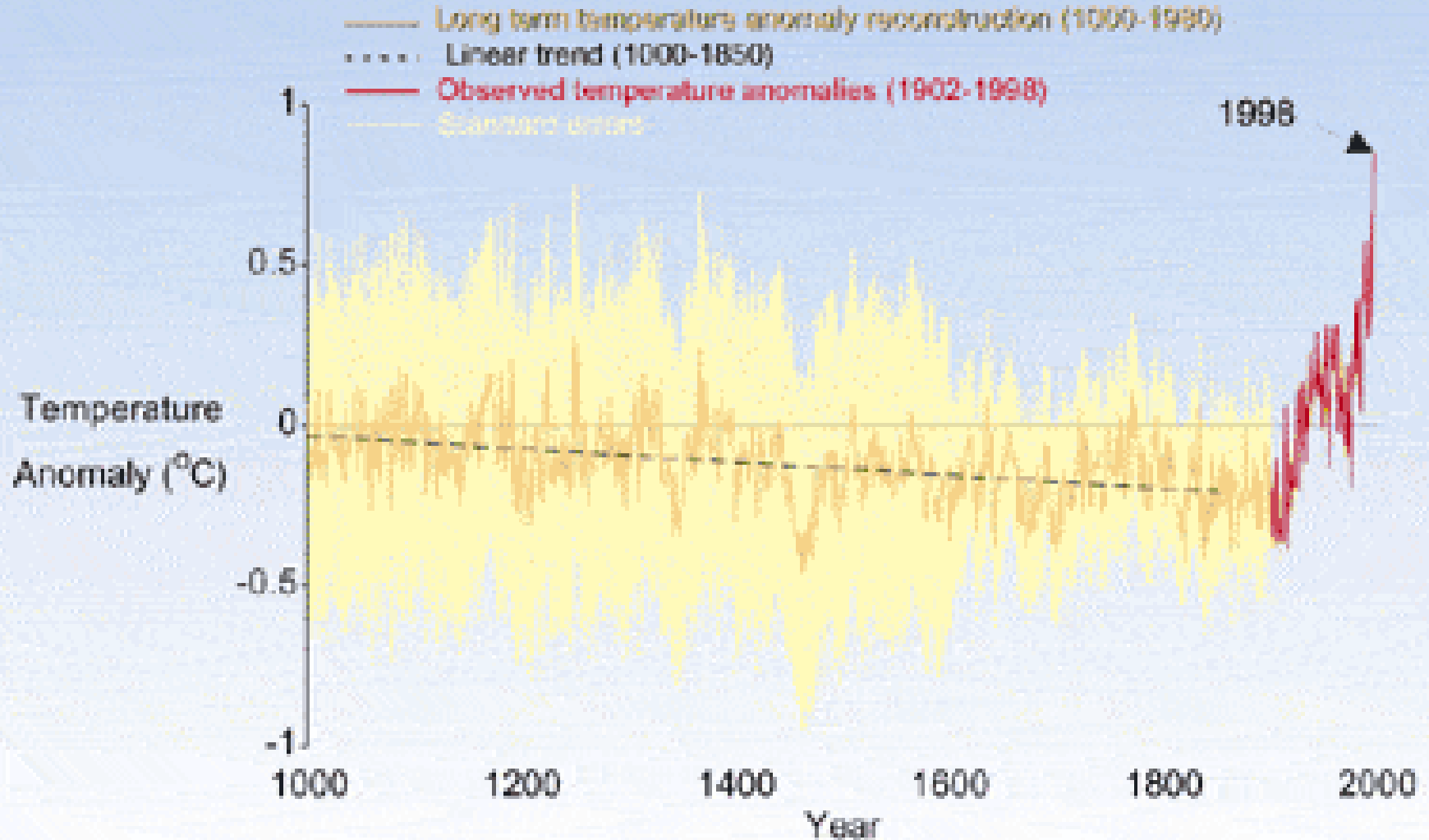


* Empirical Orthogonal Function

NORTHERN HEMISPHERE MILLENNIAL TEMPERATURE RECONSTRUCTION

A graphic from the 'Climate Change' website
www.environmental.qld.gov.au/ClimateChange

N.S. Green 1999
Department of Natural Resources
1000 Years Warm, M. et al 1999



The Impact of Climate Change

- Argument to date = GHG Induced Climate Change vs Natural Variation
- Roger Stone (DNRM) climate predictions report to Premier and Cabinet
- Basis of report includes:

Global Warming

- Global Warming is having an impact on QLD
- Inland regions will be affected worse than coastal regions

Temperature

- By 2030 average temperature increase of 0.3-2.0°C
- By 2070 average temperature increase of 0.8-6.0°C
- Less days below 0°C and more above 35°C

Evaporation

- 18% greater evaporation by 2030
- 55% greater evaporation by 2070



The Impact Of Climate Change

Rainfall

- 15% decrease in rainfall by 2030
- 40% decrease in rainfall by 2070
- Shortening of rainfall duration (wet spell length)
- Enhancement of rainfall intensity

Adapting to Climate Change

- enhanced water use efficiency
- evaporative loss inhibitor technology
- greater water reuse/recycling

The solution is diversify supply options



Current Water Projects in Queensland - QWD

- Treasury – Rationalised Water Industry Reporting System
- EPA – negotiating technical aspects of WWTP license policy and developing new model WWTP licenses
- EPA – Biosolids Management Guidelines
- DLGPS&R – Capital Works Subsidy Schemes
- DLGPS&R – Sustainable Housing Code
- DLGPS&R – Grey water reuse policy and guidelines
- DNRM – Water and Sewerage Planning Guidelines
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- SEQ RWSS – Stage 2 group for WSUD (IUWM and Accounting Streams)
- Q-Health – Drinking Water Quality Guidelines



Rationalised Water Industry Reporting System

- Currently up to 25 individual regulatory and voluntary water industry reports
- Impost on local government human and financial resources
- Joint QWD and LGAQ letter to responsible ministers
- Project Confirmation from Hon. Minister Terry Mackenroth
- DLGPS&R appointed the lead agency (Hon. Minister Desley Boyle)
- DLGPS&R Project Manager and Treasury Statistician appointed
- Cornerstone project for the water industry over the next 3-5 years



Queensland Biosolids Guidelines

- EPA Sustainable Industries lead agency since 1999
- SEQROC and National Biosolids Management Group research
- Findings include:
 - Potential economic benefits from drying biosolids
 - Potential use of biosolids as an alternative to chemical fertilisers
 - Increased crop yields from biosolids applications
 - No detrimental effect from heavy metals to crop production or food safety in broad acre crops
- QWD proposal to the EPA to develop the QLD Biosolids Guideline
- Queensland Biosolids Guidelines by December 2005
- QWD and EPA to negotiate conditions of the proposal in February

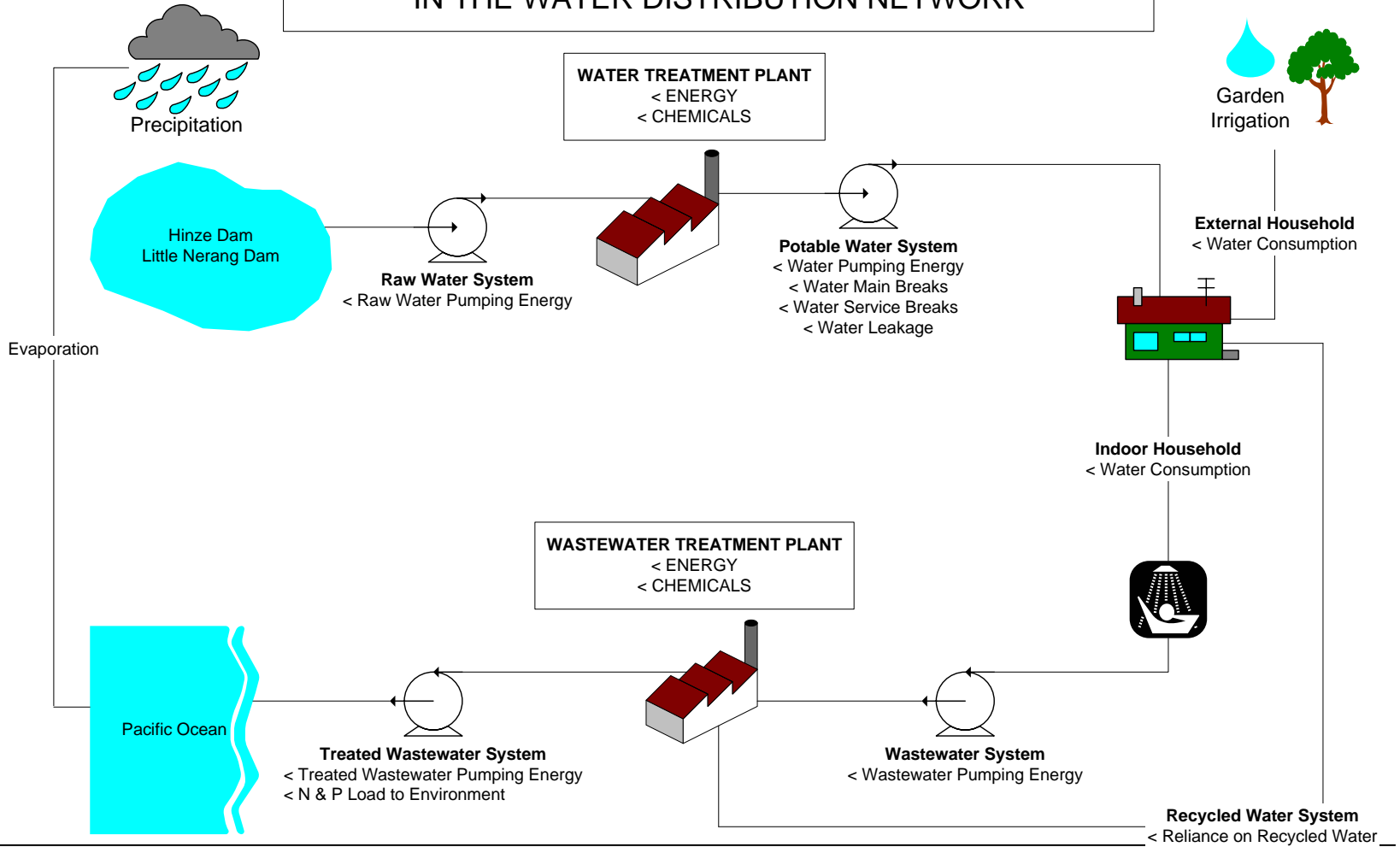


Capital Works Subsidy Scheme - post 2006

- QWD submission on scheme in November 2004
- Key issues for DLGPS&R to resolve
 - Focus on need and prioritise subsidy spending
 - Provide rural communities with the resources to develop subsidy applications
 - Align subsidy funding with Government policy initiatives (recycling schemes, demand management, desalination etc)
- QWD pressuring DLGPS&R to commit to scheme post 2006 and the conditions proposed in the QWD submission



TOTAL WATER CYCLE IMPACT OF REDUCED PRESSURE IN THE WATER DISTRIBUTION NETWORK



Sustainable Housing Code

- QWD submission on code in February 2005
- Key issues for DLGPS&R to resolve Stage 1
 - AAA rated Shower roses – expand to all fixtures throughout home
 - Pressure limiting devices – vs flow limiting devices
 - Dual flush toilets – retrofitting programs
 - Rainwater Tanks – connect to toilet, laundry, garden taps, they work everywhere (dry tropics for e.g.)
 - Greywater reuse – onerous, maintenance, identify schemes
- Stage 2
 - Importance of Brownfield sites - Retrofit schemes
 - Develop a Communication Strategy
 - Tell them what they can do and ask if they want to help!



Strategic Direction in 2005 and 2006

2004/2005

- Initiate high priority/profile projects
- Deliver key projects early in 2005 (AC Guidelines, DMS and SLMP, STP Manual)
- Focus on Customer Service for current members
- Commence Strategic Planning for 2005-2010 (Exec Committee and TRG)
- Establish the TRG election process and election boundaries (IPWEAQ model)
- Website Development (due March 2005)
- Membership Database (complete)

2005/2006

- Pursue Coordination role for all Queensland Water Projects
- Establish QWD role in the National Water Initiative and Australia Water Fund
- Pursue and strengthen links with each State and Territory Water Directorate
- Secure project officers to deliver key projects



More Information

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Questions ?

