## Meeting Agenda

<table>
<thead>
<tr>
<th>#</th>
<th>Item</th>
<th>Time</th>
<th>Duration</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Welcome &amp; Introductions (Simon Wilson &amp; Gareth Roeszler)</td>
<td>9.45</td>
<td>15</td>
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<td>2.</td>
<td>Yuan Wang UNSW - ARC Linkage project on optimisation of nutrient</td>
<td>10.00</td>
<td>15</td>
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<td>removal, membrane fouling and sludge dewaterability of MBRs</td>
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<td>3.</td>
<td>Rita Henderson UNSW – Water Research Centre &amp; ARC Fluorescence</td>
<td>10.15</td>
<td>15</td>
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<tr>
<td></td>
<td>project</td>
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<td>4.</td>
<td>WQRA Update (Simon Wilson &amp; Gareth Roeszler)</td>
<td>10.30</td>
<td>20</td>
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<td></td>
<td>Long Nghiem UoW – Membrane Bioreactor work at University of Woolongong</td>
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<td>20</td>
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<td>5.</td>
<td>Round table industry input and research update (All)</td>
<td>11.10</td>
<td>30</td>
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<td>6.</td>
<td>General Business (All)</td>
<td>11.40</td>
<td>25</td>
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<td>7.</td>
<td>Stuart Khan – Extreme Events</td>
<td>12.05</td>
<td>10</td>
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<td>8.</td>
<td>Meeting Close &amp; Lunch</td>
<td>12.15</td>
<td>45</td>
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In the room:
Simon & Gareth

Other key contacts: Jodieann Dawe (Mat. Leave), David Halliwell, Michael Moore, Peter Brass, Carolyn Bellamy, Fred Fleuren, Claire McInnes, Tracie Sanim and Susan Spragg
Perth Members Meeting Update – 22 Feb
Member Survey - Key findings

- 106 WQRA responses, 48 non-WQRA members
  - 88% were either somewhat, mostly or completely satisfied with WQRA as an independent scientific research organisation that supports the water industry
- Top three benefits WQRA membership offered included:
  - Collaboration (76%) and Networking (60%) opportunities
  - Access to technical publications (55%).
- Focus for WQRA into the future should include:
  - Research communication (67%)
  - Technical workshops (59%)
  - Growing research partnerships (49%)
- 67% supported WQRA broadening its research scope
Increasing Visibility

- Findings from the Member survey – increase visibility
  - Increase the communication for each project
  - Increase use of the WQRA website
  - Increase regular news to members
  - Extend into general news media
  - Profile student research projects
  - Project Communication plans
  - Increase dialogue - Blog
Research Scope

- Main focus is Water Quality & Public Health
  - *Although current project topics are significantly broader*
- Does this mean we don’t tackle some of the ‘bigger impact’ R&D issues – should we?
  - *Customer value (social research)*
  - *Energy*
  - *Assets*
  - *Others?*
Research Initiatives
Initiatives

• Annual research blueprint review
• Impact Studies
  • Cyanobacteria
  • Membranes
  • DBP
• Science quality framework
  • including publication output
• Project delivery performance assessment
• Research member in-kind contribution survey
• Maintain high leverage of member funds through effective collaborations
Research Initiatives

- Global Water Research Coalition
- Review of the *Research Blueprint*
- Contributor to other initiatives:
  - WSAA, AWA newsletters
- Impact Studies
  - Gayle Newcombe – Cyanobacteria
  - DBPs
  - Membranes
Measuring Science Quality

- Draft Science Quality Framework developed
  - For review / approval through Scientific Advisory Committee
- Elements of the draft Science Quality Framework are –
  - WQRA internal review and approval of milestones and reports
  - Peer review and acceptance of reports
  - Review and approval of reports by Project Advisory Committees
  - Publications in peer reviewed journals
  - Conference papers
  - Citations
  - National collaboration
  - International collaboration
Publication Output

• Aim is to understand the output of projects
• 25 projects have produced
  • 73 Journal Papers
  • 47 Conference Papers
• A measure of project quality
• Data is still being compiled
  – 50% complete
• Rely on Project Leaders to provide updates
Snapshot from EDOS

- Total Number of Projects: 130
  - Research: 95 (Total Value $65,616,428 – WQRA Contribution $6,914,725)
  - Education: 29 (Total Value $572,328)
  - Corporate: 2

- Number of Project by Management Type
  - WQRA Managed: 95
  - Externally Managed: 35 (WQRA does not administer funds)

- Number of Projects by Status
  - 6 Draft/For Decision
  - 14 in contract negotiation phase
  - 72 are underway
  - 34 completed
Projects per financial year

- Completed
- Commenced

WQRA
water quality research australia
Projects per financial year - commencing
Projects per financial year - completing
New opportunities and focus

- Emerging steady state of project start up and completion
- EDOS project administration system implemented
- Full complement of staff (Simon, Gareth and Claire)

This enables an improved focus on:
- R&D Management – Measuring and improving performance
- Research Communication
- Facilitation of member involvement
- New funding opportunities

A key challenge is to grow the research funding pool through demonstrating the value of WQRA.
Research Projects
Recently Published Reports

- Establishing Australian Health Based Targets for Microbial Water Quality
  - *(Sinclair – WQRA 1004/08)*
- Are there more toxin genes than cyanobacteria? Implications for enumeration, toxicity and bloom formation
  - *(Monis – WQRA 1006-09/WaterRF 4060)*
- Characterisation of DBP Formation for Water Quality Management
  - *(Drikas – WQRA 1041/10)*
- NDMA Minimisation : Guidance Manual
  - *(Newcombe – WQRA 1018/09)*
- Use of On-Line Surrogate Parameters for Rapid Hazard Detection and Improved System Performance Project
  - *(Chow – WQRA 1020/09)*
- Nanoparticles Literature Review Project
  - *(Hermann – WQRA 2025/11)*
Selected projects on the go...

- Tool box development for Microbial Source Tracking Water: Sources and Catchments (*Stratton – WQRA 1056/11*)
- THM formation – Stage 2 (*Drikas – WQRA 1061*)
- MT-PCR Project (*Jex – WQRA 1043/10*)
- Ultrasound for control of Cyanobacteria (*Howard – WQRA 1031/09*)
- Low maintenance chemical free recycling of effluent by ceramic membranes (*Duke-WQRA 3017/11*)
- Urban Stormwater Harvesting (*Townsend – WQRA 3016/11*)
Selected projects on the go...

- Climate change...reservoir water quality impacts (*Burch – WQRA 1050/12 with Water RF*)
- Transformation chemistry of EDCs/PPCPs from water disinfection (*Leusch – WQRA 1051 with WaterRF*)
- Inactivation of Cryptosporidium across the wastewater treatment train: Recycled water fit for purpose (Phase II) (*King – WQRA 3013 with SWF*)
- Destruction of toxicity and reduction of organic content of municipal wastewater reverse osmosis concentrate (*Roddick – WQRA 2023 with SWF*)
Research for 2013
Core Projects

• 3 industry core funded projects announced for 2012
  • Evidence based approaches to monitor and manage chlorine and chloramine residual (Chow – WQRA 1064/12)
  • Identify and assess the water quality risks from extreme events (Khan – WQRA 1063/12)
  • Human health risks of micropollutants in stormwater (Humpage – WQRA 3023/12)

• 1 RFP topic deferred – Health Based Targets

• Possibilities
  • OLV funding - NatVal II – Implementing the Road Map
  • Partnership with AWRCoE & many collaborators / stakeholders
ARC Linkage

- Will happen in 2013?
- Beyond 2013 – Maybe replaced with research hubs
- Remains a significant opportunity for leverage of Federal government funding for water research

Collaborative projects

- Opportunistic
- Always within scope of Research Blueprint
- Seek to achieve priority issues
- PRT review
ARC Linkage

WQRA is now required to provide a Partner Investigator for ARC Linkage applications

Current Applications

• Understanding wastewater treatment technologies for alternative water use: transformation of inorganic and organic nitrogen (Joll, Charrios, et al, Curtin)
• Understanding and limiting the public health risks of Cryptosporidium and Giardia in animals in Australian catchments (Ryan et al, Murdoch)
• Taste and odour in drinking water: A systematic analysis of community perceptions to inform appropriate management guidelines (Fielding et al, UQ)
• On-line Monitoring of Cyanobacteria to predict coagulant doses and powdered activated carbon application in water treatment (Henderson et al, UNSW)
• Innovative hybrid membrane-based pre-treatment strategies for remote community groundwater supplies (Waite et al, UNSW)
Collaborative Projects

• Inter-laboratory Comparison Testing for Nitrosamines in Drinking and Recycled Water *(Culbert – WQRA 1071/12 with multi-collaborators)*

• EDC Toolbox II - Analysing more than just estrogenic activity in environmental waters: androgenic, progestagenic, glucocorticoid, RXR, PPAR and thyroid activity *(Leusch – WQRA 2034/13 with GWRC)*

• Development and Application of a Geo-Reference Chemical Inventory *(Lim – WQRA 2032/12 with AWRCOE)*

• Optimizing Conventional Treatment For Removal Of Cyanobacteria And Their Metabolites *(Newcombe – WQRA 1033/10 with WaterRF)*
RFP Process for Core Funded Projects

- Critical for ‘value proposition’ of WQRA

- Focus for 2013
  - 2 day industry workshop in Melbourne 19-20 June to shortlist and develop 6-8 Blueprint issues into RFPs
  - Aim of the industry workshop is to leave with certainty around the RFP topics and indicative funding for each RFP topic

- For INDUSTRY MEMBERS to start thinking about......
  - Identifying priority issues from Research Blueprint
  - Consider Priority Issues from 2012 that were not shortlisted
    - these will be provided
## RFP Process for 2013 Timeline

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<tr>
<th>Date</th>
<th>Activity</th>
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<tr>
<td>1st March 2013 to 1st May 2013</td>
<td>Industry Members Identify Priority Issues from the Research Blueprint</td>
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<tr>
<td>1st May 2013 to 18th June 2013</td>
<td>WQRA Collate and Sort Industry Issues and Distribute to Industry Members</td>
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<tr>
<td>19-20th June 2013</td>
<td>Conduct 2 Day Industry Workshop to Develop 6-8 Draft RFPs</td>
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<td>24th June 2013 to 9th August 2013</td>
<td>WQRA Committee Review and RFP Finalisation</td>
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<td>12th August 2013</td>
<td>Member Voting on Priority RFPs</td>
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<td>30th August 2013 to 4th September 2013</td>
<td>Member Voting Concludes and Results Disseminated to Members</td>
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<td>13th September 2013</td>
<td>Ratify RFPs</td>
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<td>16th September 2013 to 15th November 2013</td>
<td>RFPs Advertised to Members</td>
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<tr>
<td>18-29th November 2013</td>
<td>Review and Ranking of RFPs by PRT</td>
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<td>13th December 2013</td>
<td>Board Decision</td>
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<tr>
<td>16th December 2013 to 28th February 2014</td>
<td>Contracting</td>
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<tr>
<td>1st March 2014</td>
<td>Projects Commence</td>
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Education Program
UNSW focus...

- 4025-10 Russell Yap [UNSW]
  Optimising dissolved air flotation (DAF) for algae removal by bubble modification in drinking water and advanced wastewater systems

- 4030-10 Anna Yeung [UNSW]
  Physico-chemical controls on growth, toxicity and succession of Microcystis and Anabaena species in water supply reservoirs

- 4038-11 Trang Trinh [UNSW]
  Process robustness and impact of hazardous events on membrane bioreactor (MBR) treatment performance

- 4039-11 Yulia Shutova [UNSW]
  Monitoring organic matter removal in drinking water systems using fluorescence spectroscopy
Education Program Flowchart

1. **External Sponsor**
   - Intention to sponsor form
     - Own project
     - Identify topic
     - Project from the pool

2. **WQRA Sponsor**

3. Call for Projects and available scholarships advertised
4. Researchers submit project proposals
5. Projects assessed and shortlisted
6. Call for student applications
7. Student applications assessed and shortlisted
8. Projects and students selected and funded

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Water Quality Research Australia (WQRA)
The Process

External Sponsor

Intention to sponsor form

Own project

Identify Topic

Project pool

Project Outcomes

Researchers submit project proposals

Call for Projects and available scholarships advertised
Contact Details ...

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