AGENDA: GROUNDWATER SCIENCE, POLICY, PARTNERSHIPS, AND MARKETS

Comparative Groundwater Law & Policy Workshop, June 20-22, 2012

Darlington Centre, University of Sydney, 174 City Road, Darlington, NSW Australia

Note: Discussion papers circulated separately set out suggested points for discussion

Preliminary meeting: Wednesday, June 20: Field trip and dinner

A tour to the World Heritage-listed Blue Mountains area will present a snapshot of groundwater issues in the region, with a focus on groundwater-dependent ecosystems. The excursion dinner will facilitate informal networking before the workshop commences. The tour will be led by a Blue Mountains groundwater specialist and ecologist, and a National Park ranger.

8.30 am	Shuttle leaves Rydges Camperdown hotel – meet in lobby
11.00 am	Meet at Wentworth Falls Lake: issues regarding catchments, groundwater-dependent swamps, and urban impacts
12.00 pm	Wentworth Falls Lookout: Warragamba and cliffline catchment issues and brown bag lunch
1.00 pm	Blackheath National Parks and Wildlife Service Heritage Centre: presentation on groundwater issues in the Blue Mountains catchments and visit to Govetts Leap Lookout (led by Geoffrey Smith)
2.15 pm	Board bus for Katoomba
2.30 pm	Katoomba Falls:
	In case of good weather: Guided walk through the Katoomba Falls area (sandstone, claystone, waterfalls, spray-zones, erosion, catchment quality, threatened species, impacts of tourism) to the base of the escarpment – catch Scenic Railway (steepest incline railway in the world) back to the top
	In case of inclement weather: Vehicle-based visit to the best lookouts (easy access), followed by informal Q & A
4.30 pm	Coffee and closing discussion
5.00 pm	Shuttle departs for dinner venue
7.00 pm	Dinner in Glebe

Day One: Thursday, June 21: Science, Policy and Partnerships

8.00 am	**Registration and breakfast**
8.30 am	Welcome and round-table introductions
	Geoffrey Garrett and Bates Gill (USSC); Buzz Thompson (Stanford)
9.00 am	**Overview of workshop agenda and research program so far**
	Rebecca Nelson (Stanford and USSC)
9.20 am	**Groundwater and the Science/Policy Interface:** How can we ensure that policy better reflects hydrological and ecological knowledge about groundwater?
	Catalyzers: Derek Eamus (AU-NSW), NWC representative (TBC) (AU-Fed); Lester Snow (US-CA), Jennifer Fraser (AU-VIC)
10.40 am	Morning tea break
11.00 am	**Groundwater and Uncertainty:** How should uncertainty in hydrological and ecological knowledge about groundwater be presented to policy-makers and stakeholders, and how should it be incorporated into policy?
	Catalyzers: Barry Croke (AU-ACT), Jackie Peel (AU-VIC), Moya Tomlinson (AU-QLD), David Freyberg (US-CA)
12.20 pm	**Lunch**
1.10 pm	**Communication about Groundwater:** How can we best communicate to stakeholders the nature of groundwater problems—as they relate to water supply, cultural and ecological requirements—to motivate action? What information should be presented, and in what form?
	Catalyzers: Bob Knowles (AU-VIC), Dave Orth (US-CA), Poh-Ling Tan (AU-QLD), Peter Hyde (AU-Fed)
2.30 pm	Afternoon tea break
2.50 pm	**Groundwater Partnerships:** How can the private sector, public interest NGOs, and agencies across government contribute to gathering information and building groundwater tools for use in policy, including tools to monitor and model groundwater resources and dependent ecosystems?
	Catalyzers: Neil Power (AU-SA), Laura Ziemer (US-WA), Clive Strong (US-ID), Maurice Hall (US-CA)
4.10 pm	**Summary and key take-home messages from Day 1**
5.00 pm	Break
6.15 pm	**Reception, dinner (Sancta Sophia College) and keynote dialogue**
	Keynotes: Sandford Clark (University of Melbourne); Joseph Sax (University of California, Berkeley)

Day Two: Friday, June 22: Groundwater and market instruments

8.00 am	**Breakfast**
8.30 am	**Policy frameworks for groundwater trade (groundwater-groundwater and groundwater-surface water)**, i.e. a strategy of allowing a person who pumps groundwater to sell their right/entitlement to a purchaser who will pump groundwater or surface water from a different location, (or vice versa); and source switching, i.e., allowing a person who pumps surface water to switch to groundwater (or vice versa) *Catalyzers: Mark Hamstead (AU-NSW), Buzz Thompson (US-CA), Simon Cowen (AU-VIC); James Skurray (AU-WA)*
9.50 am	Morning tea break
10.10 am	**Policy frameworks for trade in the context of aquifer storage and recovery**: a strategy of allowing a person who owns a right to artificially stored groundwater to sell the right to recover that water to someone else, or to recover the water and sell it to someone else *Catalyzers: Rita Maguire (US-AZ), Jon Parker (US-CA), Greg Thomas (US-CA), John Ward (AU-CSIRO)*
11.30 am	Short break
11.40 am	**Policy frameworks for mitigating the impacts of pumping groundwater**, i.e. a strategy of allowing a person to pump groundwater in an already over-appropriated/over-allocated basin, on the condition that the person takes action to offset the effects of pumping, e.g. by buying and retiring a surface water right/entitlement, or by undertaking managed aquifer recharge *Catalyzers: Richard Evans (AU-VIC), Denise Fort (US-NM), Rachael Osborn (US-WA), Dick Wolfe (US-CO)*
1.00 pm	Lunch
1.50 pm	**Buy-backs in relation to groundwater rights/entitlements**, i.e. a strategy in which a government agency or private party purchases and temporarily or permanently relinquishes a right to: (1) pump groundwater, in order to protect the sustainability of the aquifer or connected surface waters; or (2) divert surface water, to facilitate the continued pumping of connected groundwater *Catalyzers: Clive Strong (US-ID), Tony Slatyer (AU-Fed), Jim Schneider (US-NE), Alex Gardner (AU-WA)*
3.10 pm	Afternoon tea break
3.30 pm	**Summary and key take-home messages from Day 2**
4.20 pm	**Closing round-table discussion**
5.00 pm	**Adjourn to USSC board room: wind-down, cocktails, canapés, and informal discussion**

Quick reference: Panels and Catalyzers

Panel 1, Thursday 9.20am Groundwater and the Science/Policy Interface	*Derek Eamus (AU-NSW), NWC representative (TBC) (AU-Fed), Lester Snow (US-CA), Jennifer Fraser (AU-VIC)*
Panel 2, Thursday 11am Groundwater and Uncertainty	*Barry Croke (AU-ACT), Jackie Peel (AU-Vic), Moya Tomlinson (AU-QLD), David Freyberg (US-CA)*
Panel 3, Thursday 1.10pm Communication about Groundwater	*Bob Knowles (AU-Vic), Dave Orth (US-CA), Poh-Ling Tan (AU-QLD), Peter Hyde (AU-Fed)*
Panel 4, Thursday 2.50pm Groundwater Partnerships	*Neil Power (AU-SA), Laura Ziemer (US-WA), Clive Strong (US-ID), Maurice Hall (US-CA)*
Panel 5, Friday 8.30am Policy Frameworks for Groundwater Trade	*Mark Hamstead (AU-NSW), Buzz Thompson (US-CA), Simon Cowen (AU-VIC); James Skurray (AU-WA)*
Panel 6, Friday 10.10am Policy Frameworks for Trade in the Context of Aquifer Storage and Recovery	*Rita Maguire (US-AZ), Jon Parker (US-CA), Greg Thomas (US-CA), John Ward (AU-CSIRO)*
Panel 7, Friday 11.40am Policy Frameworks for Mitigating the Impacts of Pumping Groundwater	*Richard Evans (AU-VIC), Denise Fort (US-NM), Rachael Osborn (US-WA), Dick Wolfe (US-CO)*
Panel 8, Friday 1.50pm Government Buy-backs of Groundwater Rights/Entitlements	*Clive Strong (US-ID), Tony Slatyer (AU-Fed), Jim Schneider (US-NE), Alex Gardner (AU-WA)*

Wi-Fi Instructions

Windows computer login instructions
1. Enable wireless on your computer
2. Right click on the wireless icon located in the task bar on the bottom right of the screen
3. Select View available wireless networks option
4. Select usyd-guest from the list of available networks
5. Click Connect
6. You should now be asked for a password. Type the password ***Sydney2011***
   You should now be connected to the usyd-guest network.
7. Open an internet browser such as Internet Explorer or Mozilla Firefox, you should now be asked for a username and password.
8. Enter the username ***groundwater*** and the password ***ussc2012***
   You should now be able to access the internet and the webpage you requested should load

MAC login instructions
1. Open your **Apple Menu**, then
2. Click **System Preferences**. Now
3. Double click on the **Network icon** and
4. Select the **Wi-Fi** (Airport, in older versions of OS X) option from the left pane list.
5. Click the **Turn Wi-Fi On** button.
6. Select **usyd-guest** from the Network Name list
7. You should now be asked for a **WPA2 password**. Type the password ***Sydney2011***
8. Click **Join**. You should now be connected to the usyd-guest network.
9. Open an internet browser such as **Safari** or **Mozilla Firefox**; you should be prompted for a username and password.
10. Enter the username ***groundwater*** and the password ***ussc2012***
    You should now be able to access the internet and the webpage you requested should load.