



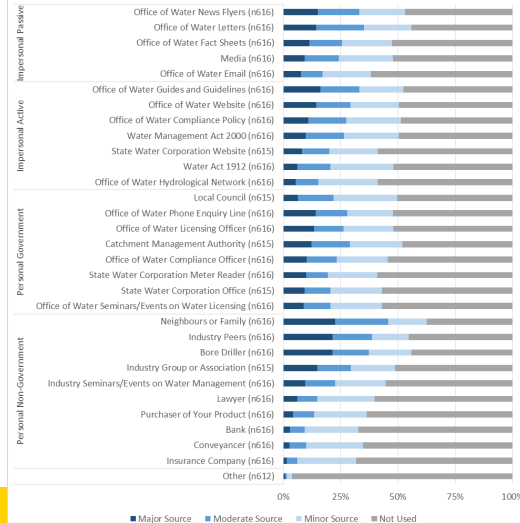
Outline

- Drillers, agriculture & groundwater
- Regulatory challenge of drillers
- Methods
- Compliance & enforcement
- Flexible regulatory solutions



Drilling, agriculture & groundwater

- access water for stock, domestic, irrigation and other commercial purposes
- quality of drilling practices and subsequent bores can have significant impacts – cause groundwater misuse, wastage, degradation, subsidence
- third party (gatekeeper) that act on behalf of farmers/landowners to access groundwater
 - work 12-24 hours, hoses and drills can break, pipes can fall, and whole rigs can slide into holes (Howard & Millsap 2014)
 - tend to be under-examined actor in the groundwater management



Regulatory framework

- licensed and regulated to ensure:
 - protection of the groundwater resource from contamination, deterioration and undue completion
 - long-term economic production of groundwater to best possible quality (COAG 1996)



Millsap 2014

Regulatory framework

- 3 year licence (~\$AU350): qualifications and training, the type of drilling to be performed, equipment capability (make, model), experience, completion of training modules, proof of interstate water licence (118A WA)
- Landholder needs a water supply work approval (90,92 WMA) or a bore licence (part 5, *Water Act 1912*)
- **Before** construction, drillers should sight either the landholder's current *bore licence* or *water supply work approval*.
- **During** construction, the driller must comply with any relevant conditions in bore licence or work approval (112(2) WA; 91A-91B, 91G WMA)
- **After** construction, the bore licence holder must provide the particulars of their completed work to regulator to store on the Groundwater Data System

BUT...

The regulatory challenge

- geographical remoteness
- mobility
- transient nature of the drilling industry
- cross traditional jurisdictions
- the landholder and the driller could have a mutual self-interest in not reporting breaches (except, perhaps, where a bore has not been constructed correctly)



<http://www.mapsofworld.com/australia>



Project and Methods

- 45 interviews in NSW in 2014/2015
 - 26 drillers
 - 3 industry representatives
 - 16 NSW government officers
- 345 drillers licenced in NSW (56 in class 1, 60 in class 2, 59 in class 3, 114 in class 4, 9 in class 5, 47 in class 6)
- ~70 regulators - 8 monitoring, 11 strategic investigators and 50 regulation (where compliance is about 20% of their role)
- What is the extent of non-compliance across the industry (drillers/bores)?
- What are the drivers of compliance and non-compliance?
- When and how breaches by drillers may be identified and the regulatory response?



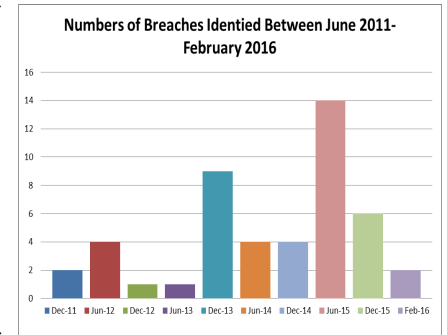
Compliance & non-compliance

- Very few reports of unlicensed drillers
 - [There are a] few cowboys that skip from Queensland down here
 - 'Fly-by-night' activities of some drillers make it difficult to identify illegal bores. The Strategic Investigations Unit does not go driving around and targeting non-compliance
- drilling unlicensed irrigation bores is low
 - irrigation bores are far more obvious and difficult to hide
- procedural noncompliance by drillers may be fairly widespread (e.g. drilling supervision, submission of forms, training)
 - One guy got caught 'cause he said he was in three places at once on different forms, but I think that is just 'cause he is busy and got other people filling in forms, and he probably had some of his crew doing it, even though he is meant to be supervising

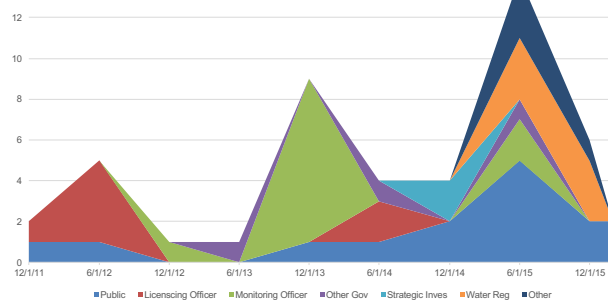


Bores

- 71000 bores under Water Act
- 24 000 surface & groundwater licences under WMA
 - 531 alleged breach reports and 7000 audits of licensed works 2012/13;
 - inspections of 6,500 water approvals in 2013/14
- 47 cases regulator engaged with landholders about unlicensed bores



Sources of reports of potentially unlicensed bores between 2011-2015



Responses

Enforcement action	Unlicensed Bores 07/2011–02/2016	All Offences 2012/2013
Advisory letters	19	257
Warning	8	88
Penalty notices	7	77
Statutory directions (stop work, remediation notices & draft statutory notices)	3	130

- 2 successful prosecutions of drillers since 2009 (out of a total of 21 prosecutions)
 - Re. Mr Gordon Noel Briggs (driller) and Mr Coe (Landholder); Harrison v Dalton Water Drilling Services Pty Ltd
 - ~\$9000 and behaviour bonds
- written warnings, on the spot fines



Stock & domestic bores

- Many unauthorised stock & domestic bores constructed in the past
- Death by a thousand cuts from stock and domestic bores
 - drillers just want the money. ... Some drillers will go out and tell landholders that they don't need to get a licence.
 - You show up to do the bore you contracted for and drill a hole and their neighbour says I want one of those but you have to explain to the neighbour there is a six page form and weeks of delay and that you will have to come back and that could be hundreds of kilometres, so you'll probably have to spend money to do that.
 - so some drillers just go drill holes cause it takes too long. Even if you [are] doing a new bore and there is so much trouble 'round the bore licenses. Got to go through all the forms and the application fee...even if you are putting a new one in a metre away.
 - complete multiple licensing courses and tests in different jurisdictions



A perceived right (not to comply)

- Some landholders know they have a basic landholder right for stock and domestic but don't know they still need a licence to get a bore.
- The attitude is that they can seek approval after the event – it is not going to be a problem, it is just an administrative issue. They justify it by thinking that we're doing the right thing, it is just a stock and domestic [bore]
- The landholder didn't have an approval. ... This was revealed when the driller handed in a Form A with no approval...the driller wasn't trying to hide it, he thought he was doing the right thing".



Summary

- Limited inspectoral resources versus geographical isolation, mobility, transient drillers
- economic pressure (administrative delays) and landholder/neighbour pressure (the right to drill on their land)
- increase in identification of unlicensed bores, but reduced inspection numbers likely to lead to illegal bores/drilling 'falling through institutional cracks'
- Without new resources (which seems unlikely), the *de fault* position is likely to be that drillers and illegal bores will be subject to limited regulatory oversight
- What is to be done?



Regulatory Flexibility

- Opportunity to be accredited as best practice
- exemption from seeking approvals that would normally apply to water bore constructions (may exclude at risk areas)
- but must meet certain obligations
 - being a member of the relevant industry association
 - undergoing training (regulations, communicating obligations to farmers)
 - having a GPS tracker fitted to their rigs.
 - entering drilling data on-line in real-time.
 - submit periodic sample audits (conducted by regulator or a third party).
 - any participants found to have failed to abide by their obligations could have their accreditation removed.
 - having all drillers with a licence
- Non accredited continue under same system and subject to additional regulatory oversight.



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Source of reports of unlicensed bores 07/2011-02/2016

Source	Number
Public	15
Monitoring Officers	11
Water Regulation Officers	7
Licensing Officers	6
Special Investigation Unit	2
Other body (State water, Major Projects, Government Agency)	3
Other source	3

- credibility of DPI Water has increased, but still a lack of trust and perceived as slow and inefficient

