



# **INAP Updates 2017**

**Gilles Tremblay, INAP**

**BC/MEND Workshop  
Vancouver, BC**

***November 30, 2016***

# Summary

- **INAP Members**
- **INAP's Technical Manager**
- **ARD Best Practice Award**
- **11th ICARD/IMWA 2018**
- **Soil Cover Guidance Document**
- **GARD Guide Printable Version**
- **INAP Australia**
- **Global Alliance**



# INAP

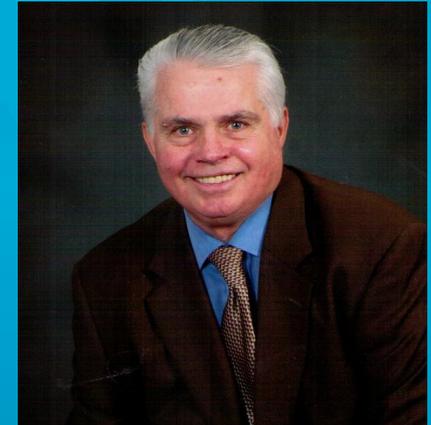


Rio Tinto



# INAP's Technical Manager

- Thanks to Terry Chatwin who retired after 10 year's of being INAP's Technical Manager



# **ARD Best Practice Award**



- **Recognize Outstanding ARD Management Practice**
- **Awarded at 11<sup>th</sup> ICARD**
- **Seeking Candidate Sites**
- **Applications due by 1 May 2017**
- **Information on website**
- **Contact Gilles Tremblay or Dean Williams**

# 11<sup>th</sup> ICARD - IMWA 2018



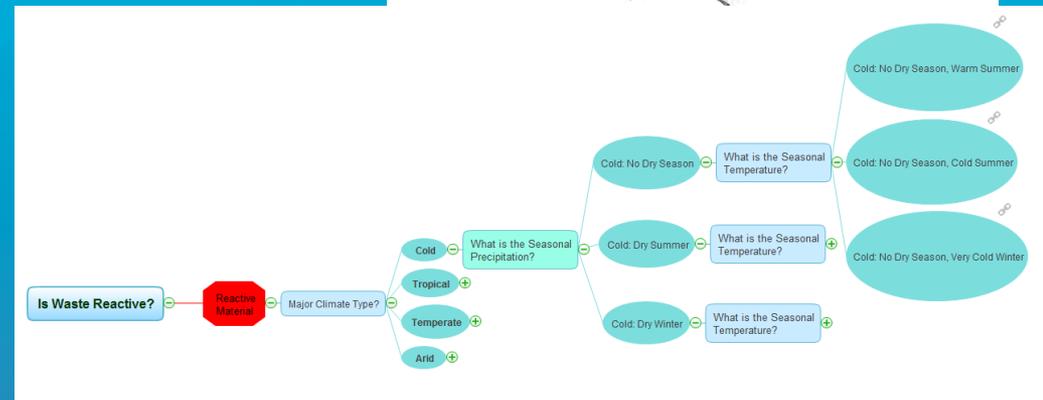
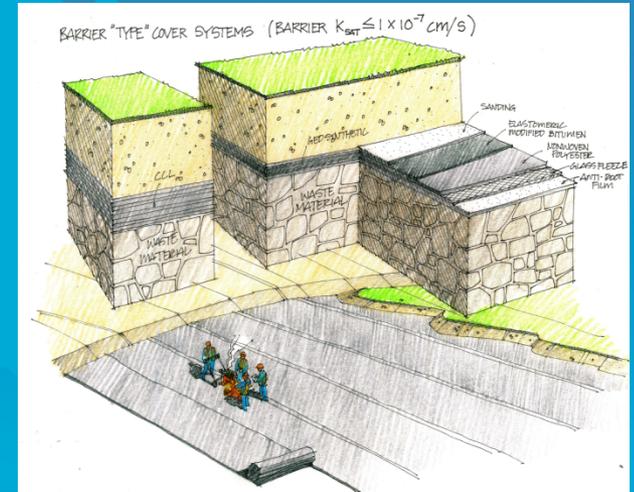
## Pretoria, SA

- September 10 – 14, 2018
- Hosted by Tshwane University of Technology, the Water Institute of South Africa with support from SA Water Research Commission, INAP and IMWA

# Global Cover System Design – Technical Guidance Document



- GARD Guide tool – to advance approach
- Decision tree format - Visual representation of a series of sequential questions and answers
- Context of climate
- Context of oxygen and water
- Context of landform
- Preferred cover system



# Project Activity



- **Soil Cover Guidance Document**
- **Updated INAP webpage**
- **Diavik country rock instrumentation and prediction project**
- **Towards Environmentally Responsible Resource Extraction Network (TERRE-NET)**

# Project Activity



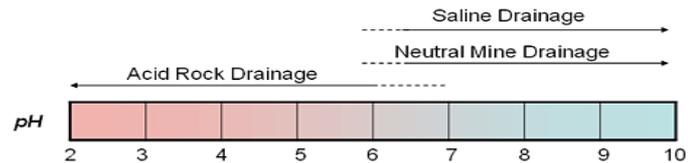
- **GARD Guide Review**
- **INAP Webinar Series**
  - **GARD Guide Chapter Modules**
- **Increased Communications**
  - **Newsletter**

# Printable Version of GARD Guide



[www.GARDGuide.com](http://www.GARDGuide.com)

Typical relation to drainage pH:



Typical drainage characteristics:

<p><b>Acid Rock Drainage:</b></p> <ul style="list-style-type: none"> <li>acidic pH</li> <li>moderate to elevated metals</li> <li>elevated sulphate</li> <li>treat for acid neutralization and metal and sulphate removal</li> </ul>	<p><b>Neutral Mine Drainage:</b></p> <ul style="list-style-type: none"> <li>near neutral to alkaline pH</li> <li>low to moderate metals. May have elevated zinc, cadmium, manganese, antimony, arsenic or selenium.</li> <li>low to moderate sulphate</li> <li>treat for metal and sometimes sulphate removal</li> </ul>	<p><b>Saline Drainage:</b></p> <ul style="list-style-type: none"> <li>neutral to alkaline pH</li> <li>low metals. May have moderate iron</li> <li>moderate sulphate, magnesium and calcium</li> <li>treat for sulphate and sometimes metal removal</li> </ul>
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PREDICTION  
•  
PREVENTION  
•  
MANAGEMENT

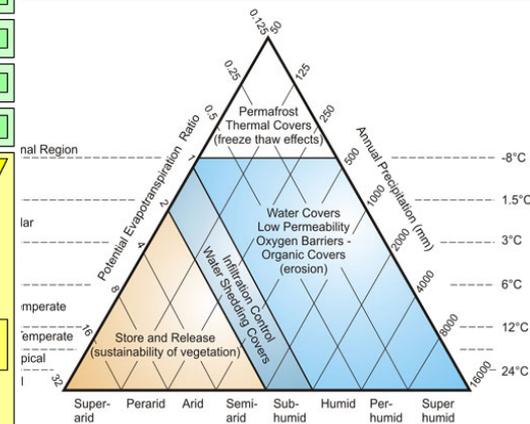
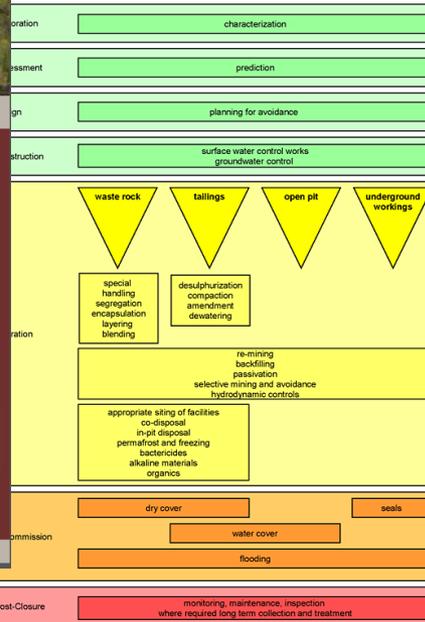
The International Network for Acid Prevention

## Global Acid Rock Drainage Guide

June 12, 2014



Development of the Global Acid Rock Drainage (GARD) Guide was sponsored by INAP with the support of the Global Alliance





# INAP - Australia

- Bruce Kelley Regional Lead
- Successful INAP meeting held August 31 in Perth
- Sustainable Mineral Institute at U of Queensland (SMI) is now the Global Alliance member
  - Presence in Chile and possibly act as a GA node

# The Global Alliance



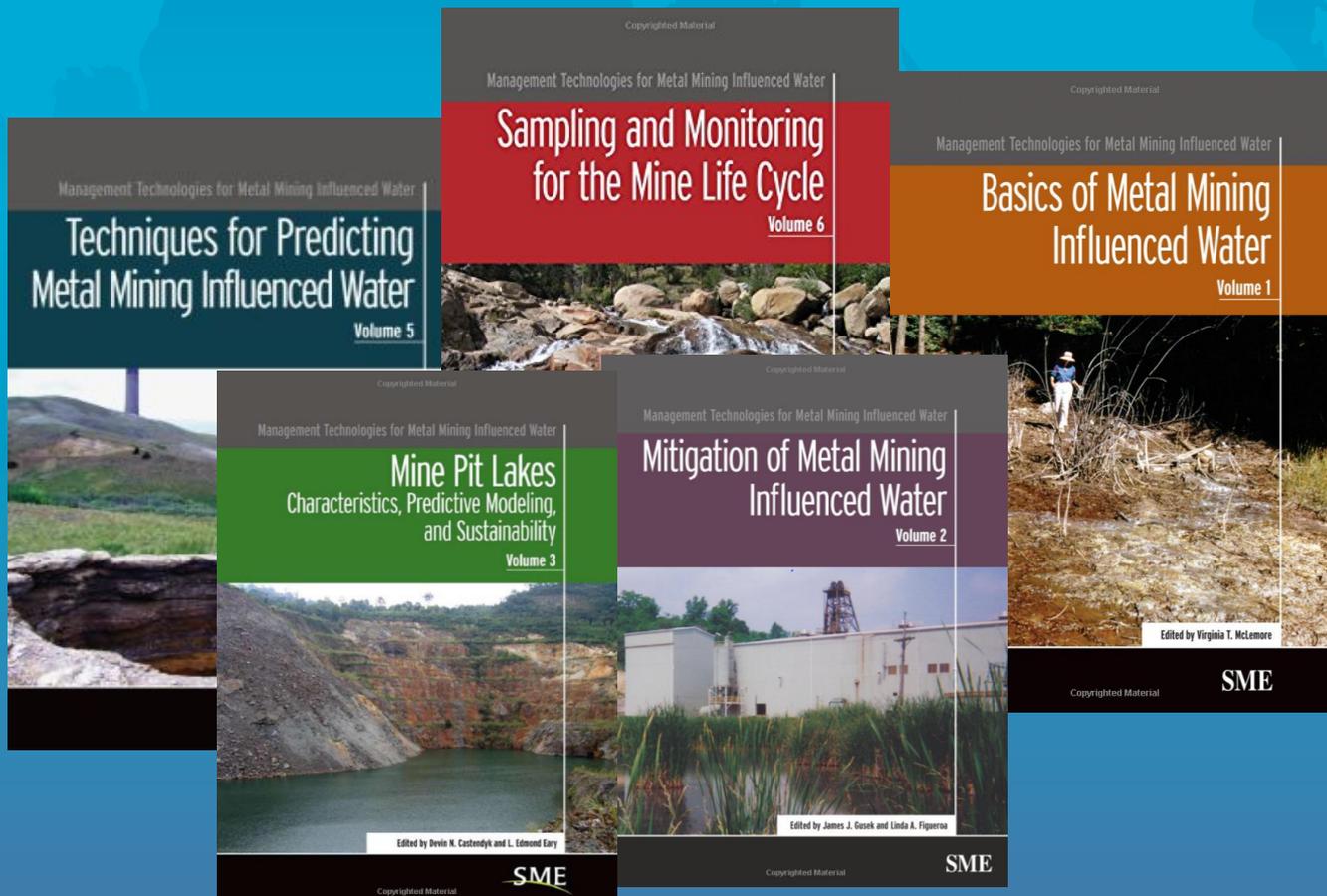
Acid Drainage Technology Initiative



Water Research Commission



# ADTI - Metal Mining Influenced Water Workbooks



# Australian Leading Practice Handbooks



- Preventing Acid and Metalliferous Drainage – just released
- Water stewardship
- Tailings management

[www.industry.gov.au/sdminin](http://www.industry.gov.au/sdminin)



# Contact

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