



Copper Development
Association
Copper Alliance

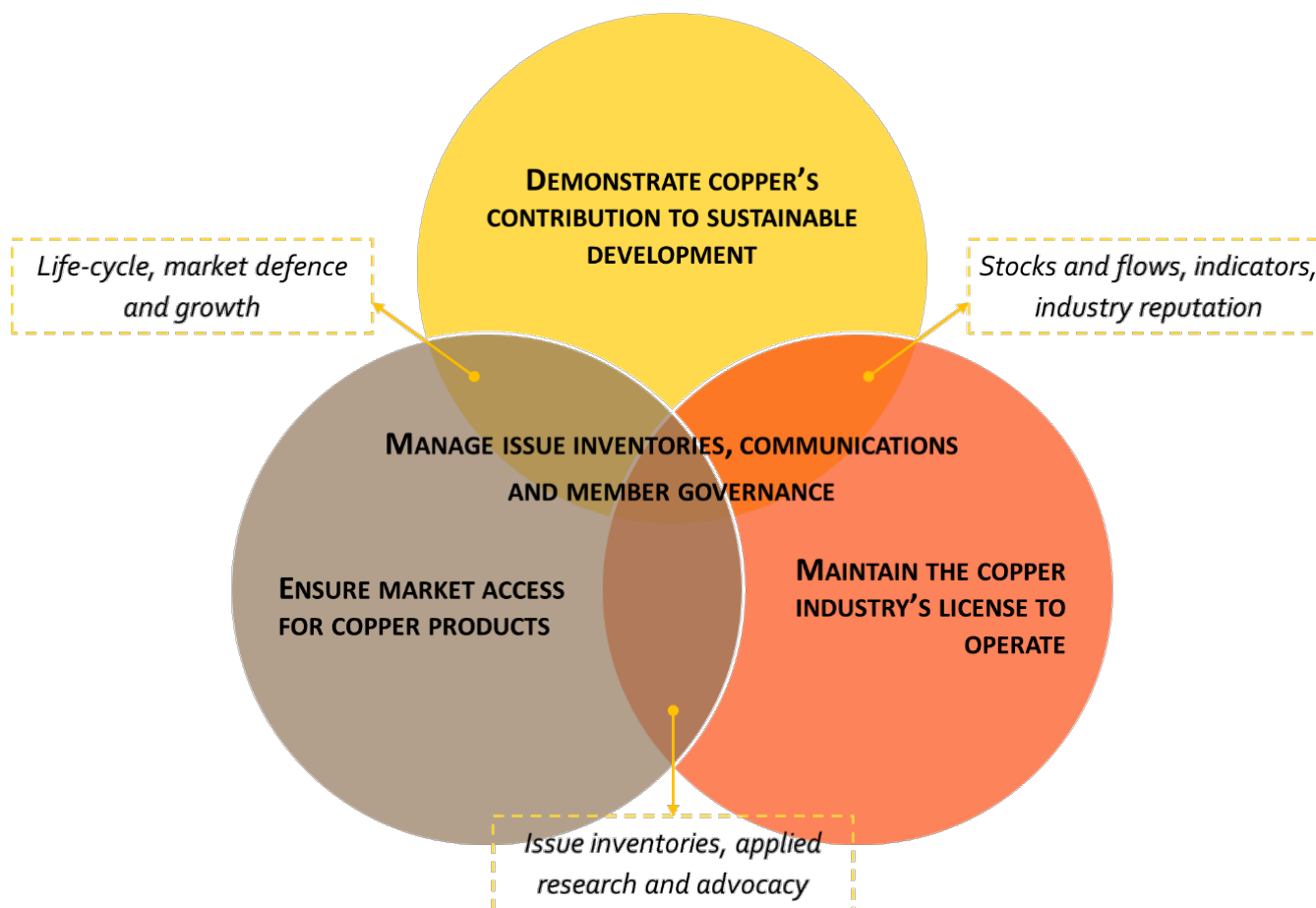
Update of Regulatory Affairs that Concern and Affect Brass and Copper Alloys

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5 April 2017
ASTM B05 Committee, Toronto CANADA



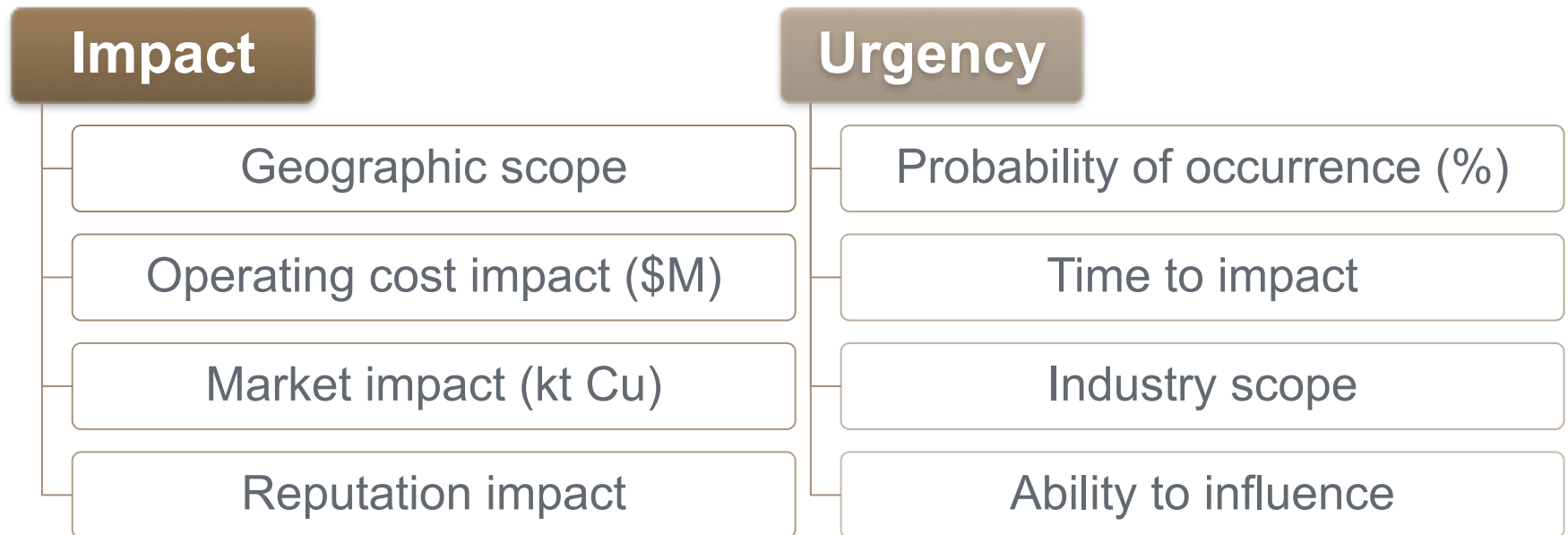
Copper Alliance Health, Environment, and Sustainable Development (HESD) Program

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Approach for Evaluating Risks and Opportunities

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Critical	Immediate action and significant resources
High	Action and resources required
Moderate	Monitor and small amount of resources
Low	Acceptance and little to no resources

Regulatory Issues Map

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CRITICAL



TSCA



IRIS Assessment



Conflict Minerals



Inhalation OEL



Green & Healthy Building

Working together to optimize building performance for *human health* and our *environment*.



GHS Classifications & SDS

HIGH



IMO Corrosivity



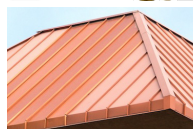
CMP Assessment



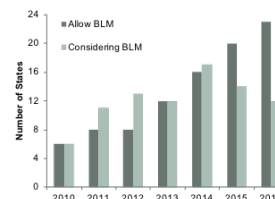
Lead & Copper Rule



Reduction of Lead in Drinking Water Act



MSGP for Stormwater



Water Quality Criteria

Changing Political Climate in DC: Important Considerations for US Regulations

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Rulemakings

- New: Executive Order (EO) mandating that, for every new major rule, agency has to identify 2 they will revoke (*legal challenge pending*)
- In process: Temporary hold on finalizing rules
- Recently finalized: Congressional Review Act, last 60 legislative days

Other Deregulation Initiatives

- White House Regulatory Review Taskforces
- Executive Branch Reorganization EO
- House bills: 5 (and counting)

Major funding cuts to EPA

- 50 programs potentially eliminated



Bennett Chattanooga Times Free Press

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Critical Issues

Toxic Substances Control Act (TSCA)



North American Metals Council

One Nation. One Approach to Chemical Management.

Urging national leadership to provide clarity for U.S. business



US law that regulates chemicals in commerce, reformed in 2016

- Widespread bipartisan support
- Expected to reduce jurisdictional inconsistencies amongst State chemicals management policies
- Important metals-specific provisions in legislative text

RISK

Restrictions of copper (and alloying elements), following assessments conducted under “new TSCA”

- Reviewing and commenting on rulemakings to establish EPA implementation policies
- Ensuring Congressional expectations are met by EPA
 - State-of-science on metals risk assessment used in decision-making

EPA Integrated Risk Information System (IRIS) Assessment for Copper

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Database of human health effects that may result from exposure to substances found in environment

- No direct regulatory implications, referenced by other programs
- Copper profile last updated 1988
- 2015 IRIS agenda included some metals, but not copper

OPPORTUNITY

Positively influence update of copper assessment

- Conducting feasibility study to determine if newer data indicate update possible*
- Pending results: engage EPA to determine likelihood of update and/or independently publish profile

**IRIS program elimination being considered; on hold until EPA budget details released*



Supply chain due diligence requirements

- Historically: 3TG from armed conflict regions of DRC
- Moving towards: any mineral in location with systemic issues
 - EU Conflict Minerals Regulation (conflict areas not defined)
 - OECD Mineral Risk Handbook (MRH) (copper included)

RISK

Jurisdictional inconsistencies causing market confusion and unfavorable policies limiting market access

- Developing strategy based on risk scan conducted by specialized conflict minerals & human rights firm
- Working with ICMM and OECD on MRH to prevent blacklisting, encourage use of reliable information

Inhalation Occupational Exposure Limit (OEL) for Copper

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Proposal to lower OEL 100X by Germany, UK, European Commission

- No indication OSHA or ACGIH moving to lower OELs at this time

RISK

More stringent limit being considered in EU influencing OELs in North America

Requirements for risk reduction measures affecting competitiveness

- Assembled independent panel to recommend research and advocacy needed to resolve uncertainty
- Implementing plan to derive scientifically-based limit



Working together to optimize building performance
for **human health** and our **environment**.

Information on:
product ingredients,
environmental impacts,
potential human health hazards

- Certification schemes driving increased demand

RISK

Barriers to market and training opportunities for copper products

- Encouraging transparency documentation and Environmental Product Declarations (EPDs)
- Evaluating copper's contribution to green & healthy building schemes
- Monitoring and correcting use of inappropriate hazards

Globally Harmonized System of Classification and Labelling (GHS)

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Chemical hazard classification criteria and communication elements for use around world

- Inconsistent information in Safety Data Sheets (SDS)
- Un-harmonized copper classifications (e.g., NZ, Japan)

OPPORTUNITY

Align health, environment, and safety considerations for copper in GHS-compliant SDS

- Developed and maintaining templates for US, Canada

RISK

Identification of copper products as hazardous in green & healthy building schemes

- Re-classifying in NZ, developing strategy for Japan

High Priority Issues

International Maritime Organization (IMO) Regulations



Classifications for cargoes based on environmental and human health considerations

- "Corrosive" classification possible for copper concentrates

RISK

Producer costs for copper concentrate transport increasing, and being passed down to fabricators

- ICMM expert panel convened to discuss needs for research, short term advocacy, long-term advocacy
- Conducting project to evaluate corrosivity test, developing more appropriate method for concentrates

Canadian Chemicals Management Plan (CMP) Assessment for Copper



Canadian Environmental Protection Act (CEPA) initiative

to reduce risks posed by chemicals to Canadians and their environment

- Assessment of copper and its compounds underway
- Concerning precedents for other metals with complete assessments

RISK

CMP assessment resulting in copper being found “CEPA toxic”

Requirement for risk management strategies, which could include bans and/or trade restrictions

- Collaborating with Canadian authorities to provide information and participate in assessment to extent possible

EPA Lead and Copper Rule (LCR)



**Requires monitoring lead and copper in drinking water at taps
→ corrosion control**

- Under the microscope following Flint, MI drinking water crisis
 - More restrictive LCR in MI?
- Long-term revisions expected in 2017

RISK

Use of copper-brass fittings and copper tubes & fittings will be directly or indirectly restricted in updated LCR

- Changes potentially positive for copper, based on health-based benchmark in development for lead
 - Working with ILA to monitor and influence EPA activity

EPA Reduction of Lead in Drinking Water Act (RLDWA) Rule

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COPPER
& BRASS
FABRICATORS
COUNCIL



Establishes labeling requirements to meet RLDWA objectives

- Open for comment until 17 April
- Relates to concerns regarding copper-brass scrap stream contamination

RISK

Decreased ability to recycle copper-brass given increased use of and limited ability to segregate lead-free brass alternatives

- Submitting comments to educate EPA on sorting challenges
 - Help build collaborative relationship to explore potential solutions

EPA Multi-Sector General Permit (MSGP) for Stormwater

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Establishes stormwater limits enforceable in select states, used as template for establishing stormwater limits in others

- Recently revised in 2015
 - CDA/IZA submitted extensive comments; no changes made
 - EPA lawsuit → 2016 settlement agreement requiring National Research Council (NRC) study

RISK

Restrictions or bans of architectural products that contribute to copper in stormwater

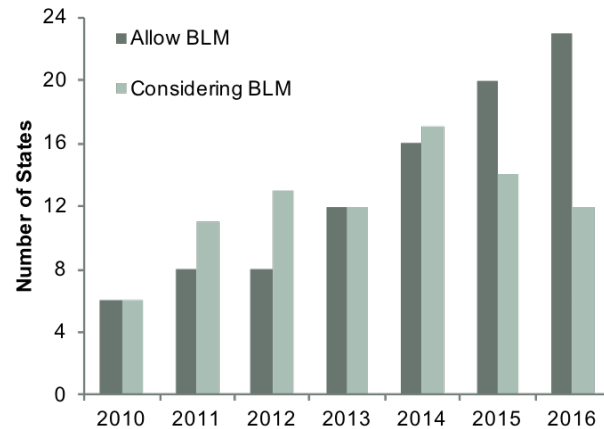
More stringent monitoring and control requirements in industrial stormwater permits

- Engaging members of Congress to advocate for consideration of CDA/IZA concerns in NRC study and next revision

Bioavailability-based Water Quality Criteria for Copper



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EPA-recommended approach for deriving state-of-the-science copper criteria

- Freshwater criteria 2007
- Saltwater criteria (draft) 2016
- Canadian freshwater guideline draft expected 2017

RISK

Copper waste stream handlers applying pressure to limit upstream use of copper in plumbing and architectural applications

OPPORTUNITY

Provide relief to facilities discharging copper

- Continuing outreach to water quality regulators in US and Canada
 - Local and Federal

Moderate and Low Priority Issues

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- **Dodd-Frank Conflict Minerals Regulation**
 - **EPA Water Quality Standards Regulation Update Rule**
 - **Impacts of Copper on Fish Olfaction**
 - **Environmental Effects of Metals Mixtures**
 - **Pacific Rim Initiative to Inform Asian Regulations**
 - **Exemptions of Lead in Copper Alloys under End of Life Vehicle (ELV) and Restriction of Hazardous Substances (RoHS) Regulations**
 - **Health Canada Lead Drinking Water Guideline**
 - **American Fisheries Society (AFS) Mining and Oil and Gas Extraction Policy Statement**
 - **California Environmental Contaminant Biomonitoring Program**
 - **Cooling Tower Regulations for Legionella Monitoring**
 - **EPA Proposed National Rulemaking to Strengthen the Stormwater Program**
 - **Green Chemistry Regulations**
 - **Recyclable Exemption for Metals Waste in California**
 - **Regulations on Copper in Brake Pads**
 - **Washington State Water Quality Issues and Regulations**

Thank you for your time!

For more information please contact:
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