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DRAFT Minutes of Meeting No. 5
CSA/ICC B805 Joint Technical Committee on Rainwater Collection
System Design and Installation
Monday, December 1, 2014
 Teleconference and Web
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Action Items		
No.	Action, Person Responsible	Status, Due Date
AI.5.1	Insert task force draft material into master document (Shawn, Paul)	Ongoing, no later than 2/1/15
AI.5.3	Research definitions and diagrams to identify key system components - e.g. "distribution" "plumbing" etc. (Judy)	2/10/2015



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Name	Affiliation	Pres	Abs
Voting members			
Alf Durnie (Co-Chair)	Alberta Municipal Affairs, Edmonton, AB	✓	
Philip F. Parisi (Co-Chair)	Jaros Baum & Bolles Consulting Engineers, New York, NY	✓	
Dave Cantrell	Public Health-Seattle & King County, Seattle, WA	✓	
Justin DeWitt	Illinois Department of Public Health, Springfield, IL		✓
Russell Jackson	RainHarvest Systems, Cumming, GA	✓	
Robert M. O'Donnell	Aquanomix, LLC, Davidson, NC		✓
Doug Pushard	HarvestH2o.com, Santa Fe, NM	✓	
Nancy Springer	Butte County Dept. of Development Services, Oroville, CA		✓
Mike Warren	Watertronics, Hartland, WI	✓	
Chris Despins	Credit Valley Conservation, Mississauga, ON		✓
Pieter DeVries	UV Dynamics, London, ON	✓	
Duncan Ellison	Cheffell Associates, Rockland, ON	✓	
Khosrow Farahbakhsh	University of Guelph, Guelph, ON		✓
Judy MacDonald	Health Canada, Ottawa, ON	✓	
Ken Nentwig	Canadian Association for Rainwater Management (CANARM), Victoria, BC	✓	
Joe Rogers	Ontario Ministry of Municipal Affairs and Housing, Toronto, ON	✓	
Penh Tov	Interpump Supply Ltd, Fergus, ON	✓	
Troy Vassos	Water Treatment Group, Golder Associates Ltd, Burnaby, BC	✓	
	Total Voting Members:	13	
Alternates			
Associates			
Nick Ashbolt	University of Alberta, Edmonton, AB		
Reuben Butterfield	RHo Solutions, Victoria, BC		
Wayne Galligher	City of Guelph, Guelph, ON		
Jeffrey M. Hugo	National Fire Sprinkler Association, Essexville, MI	✓	
Glenn MacMillan	Toronto and Region Conservation Authority, Woodbridge, ON		
Linda Maley	Atlantis Water Management, Vancouver, BC	✓	
Zachary May	Ministry of Natural Gas Development & Responsible for Housing, Victoria, BC		



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Anthony Oosterveld	VIQUA - a Trojan Technologies Company, Guelph, ON		
Robert Rubin	North Carolina State University, Pittsboro, NC		
Shawn Strawsbaugh		✓	
Guests			
Mihailo Mihailovic	NBC Part 9 - Housing and Small Buildings Canadian Codes Centre NRC Construction, National Research Council Canada		
Diane Green	Canadian Codes Centre NRC Construction, National Research Council of Canada		
Bert Van Duin	City of Calgary, Calgary, AB		
James Little	Student, Executive Intern, Lake Stevens, WA		
Sandra Underson	University of	✓	
Bob Krugram		✓	
CSA/ICC Staff			
Shawn Martin	ICC, Pittsburgh, PA	✓	
Paul Gulletson	CSA Group, Mississauga, ON	✓	
Ed Wirtschoreck	ICC, Country Club Hills, IL		
Franco DiFolco	CSA Group, Mississauga, ON		
Vicki Worden	ICC, Maine	✓	

Notes:

(1) All individuals participated via teleconference and web conference.

M.5.0 Call to Order

Co-chairs Alf Durnie and Phil Parisi welcomed the committee members and associates and called the meeting to order at 11:00 AM EST. Members introduced themselves and housekeeping comments were made.

M.5.1 Quorum

At the time of this meeting, the Joint Technical Committee (JTC) had 18 voting members; 13 were present at the meeting and therefore minimum quorum requirements (at least 50% of the voting members) were met. A maximum of 13 votes could be cast at the meeting and the minimum number of affirmative votes required for approvals was the greater of:

More than 50% of the voting membership: $1/2 \times 18 = 9 \rightarrow 10$, or
 2/3 of the votes cast: $2/3 \times 13 = 8.6 \rightarrow 9$ if all votes were cast

M.5.2. Review and approval of agenda for the meeting

Joe Rogers moved to adopt the agenda for the meeting; Russell Jackson seconded the motion and it was carried unanimously. A copy of the agenda can be found in Appendix C.

M.5.3 Approval of the minutes of last meeting



The committee reviewed the minutes from Meeting No. 4 held on November 5, 2014 by teleconference. A correction was made to M.4.9 which read Feb 2016 rather than Feb 2015. Doug Pushard moved to adopt the minutes of Meeting No. 4; Judy MacDonald seconded the motion and it was carried unanimously.

M.5.4 Membership review

At the time of this meeting, the JTC matrix was balanced; therefore, the committee could make formal, binding decisions and cast votes. The following table shows the JTC matrix and membership by category:

CSA/ICC B805 JTC Matrix & Membership		
General/Regulatory Interest (G)	Producer Interest (PI)	User Interest (UI)
Min: 6, Max: 6	Min: 6, Max: 6	Min: 6, Max: 6
1) Dave Cantrell	1) Russell Jackson	1) Chris Despins
2) Justin DeWitt	2) Ken Nentwig	2) Duncan Ellison
3) Alf Durnie	3) Robert M. O'Donnell	3) Khosrow Farahbakhsh
4) Judy MacDonald	4) Ms. Penh Tov	4) Philip F. Parisi
5) Joe Rogers	5) Pieter DeVries	5) Doug Pushard
6) Nancy Springer	6) Mike Warren	6) Troy Vassos

M.5.4.1 Membership changes since the last meeting

No membership changes since the last meeting.

M.5.5 Report on outstanding action items

Outstanding Action Items		
No.	Action, Person Responsible, Report	Status, Due Date
AI.1.7	<p>Seek participants for task forces from stormwater industry, experts (Justin DeWitt – MWRD, Shawn Martin – NOWRA, EPA)</p> <p>Report: Rob Rubin, Bert Van Duin, Neal Shapiro recruited and participating in task forces. Shawn has Justin Dewitt's report. Chris reached out to some staff at Credit Valley Conservation but no response yet.</p> <p>Report: No responses from these individuals. Ongoing.</p>	Ongoing, ASAP



	<p>Report Nov '14: Open</p> <p>Report Dec '14: No report</p>	
AI.3.3	<p>Determine whether it is possible to upload a document to the COA by means of e-mail. (Paul Gulletson)</p> <p>Report Nov '14: Paul is still looking into this. Open</p> <p>Report Dec '14: The system may have this functionality. Paul to investigate further. Open.</p>	Ongoing
AI.4.1	<p>Determine ability of the committee to submit changes to the IPC and IRC for the 2018 code cycle (Shawn Martin)</p> <p>Report Dec '14: Shawn Martin reported that our committee is precluded from submitting proposals to the ICC codes as an entity. It is perfectly appropriate if the members or non-ICC staff do so. Shawn Martin can provide guidance to committee members but cannot specifically engage in efforts to make any code changes.</p> <p>Task Force Chairs will identify changes that could be submitted. Other committee members should review the documents against code holistically as well to see where opportunities exist to make the align code change proposals with the impending release of the future rainwater harvesting standard.</p>	Complete
AI.4.2	<p>Paul to initiate a poll to determine location of the next fact-to-face meeting (Vancouver or Victoria)</p> <p>Report Dec '14: The results of the poll are: 44% Victoria, 55% Vancouver, with a few comments, e.g. Vancouver is logistically more convenient for travel, whereas Victoria weather is generally better. The poll results are included in Appendix D.</p>	Complete
AI.4.3	<p>Paul to initiate a poll to determine the date of the next face-to-face meeting (to take place in February 2015)</p> <p>Report Dec '14: The most popular dates are February 10 and 11, 2015 (Tues-Wed). Second most popular is February 4 and 5 (Wed-Thu). The results of the poll are in Appendix D.</p>	Complete
AI.4.4	<p>Paul to initiate a poll to establish a date for a teleconference to identify IPC code changes to align with our standard.</p>	Complete



	Report Dec '14: The most popular date is Tuesday, January 6, 2015. Second most popular date is Thursday January 8. The results of the poll are in Appendix D.	
AI.4.5	All task forces to begin to gather proposed changes to put forth as code changes to the IPC code to align it with the relevant sections in our draft standard Report Dec '14: Open, Ideas for code proposals should be sent to task force chairs no later than February 1, 2015.	Ongoing, ASAP
AI.4.6	Shawn Martin to review appropriate indicator organisms for rainwater with water quality experts (e.g. Dennis Lye, Nick Ashbolt, Robert Rubin and Water Quality TF). Report Dec '14: Open	Ongoing, Jan. 12

M.5.6 Feedback from ARCSA conference

- Shawn Martin and several other members of the committee attended the ARCSA National Conference in Phoenix, AZ to provide and update on the work of the committee and receive feedback. Following the summary, several comments were received: 1) the commercial representatives in attendance were generally supportive of the establishment of water quality criteria for various end uses 2) the residential representatives were less enthusiastic about water quality criteria approach and concerned that it would be too costly and burdensome. The residential representatives were concerned that it would price them out of the market. 3) A single standard for the industry was preferred. Several individuals noted that ASPE/ARCSA 63 presently provides step-by-step, prescriptive approach to compliance that residential people want but is not robust enough for the commercial people.
- Mr. Martin and Mr. Jackson indicated that it may be possible to use a prescriptive approach for residential or smaller systems, while retaining the performance-based water quality criteria approach for larger, commercial systems.
 - NSF – potable uses for harvested rainwater. If it's a potable system, potable standards are going to apply.
 - Water Quality Task Force to investigate the potential for two different performance/prescriptive compliance paths.
 - Troy Vassos requested to be added to water quality group.

M.5.7 Task Force Report, Discussion, and Committee Feedback

The committee chairs requested brief updates on the status of the Task Forces.

M.5.7.1 Controls Task Force

Doug Pushard provided a document for review prior the meeting.

- The first section is alarms, this is a grouping of what exists in other standards with some small changes. The second section discusses what's appropriate. Third section discusses controls for each category, broken down by commercial and multi-residential and residential and four water quality levels with controls for

each. The only two now in there are potable for commercial and potable for residential. Everything gets dialed back from there. Water quality treatment and risk become less after that. That is the format so far. We will accept feedback offline. During next call we'll start fleshing out other ones. Based on previous discussion residential vs. commercial, we welcome feedback on the current thinking on this issue. I thought about trying to do it per treated water disinfection type. This document doesn't reference NSF standards in treatment types but it should. That specification doesn't discuss controls, neither does ASBI document.

- People would need to understand critical control points. Have general information on that.
- For potable water, I've recommended continuous disinfection controls, has to be working 100% of the time.
- For residential skill units – what about solid accumulation and identification of how often people should be cleaning tanks. Most people don't clean their hot water tanks. No sense in having an indicator microorganism if that microorganism doesn't exist in the first place.
- In the case of rainwater where we hope for minimal contamination (birds and animals can contribute to contamination), in the case, the indicator organism may not exist. We need to identify other methods for identification. Ultraviolet light is a parameter, but is not the only means that can be considered. That's what the critical control point is.
- Potable – test filtration and chlorine or UV lights.
- Technology failure detection mode – must be used to pass the test – how it does that depends on the technology used for detection.

M.5.7.2 Water Quality Task Force

Russ Jackson indicated the task force would meet this Thursday to get back on track. There is the Water Safety Plan approach, different inputs on thresholds. Boiling those ideas into single document is our challenge. If we do this, it may make what we've already done irrelevant.

M.5.7.3 System Components Design and Materials

Dave Cantrell indicated that his Task Force just need to make recommendations to the full committee in the next draft. He indicated that they are covering system components design and have created a sub-group headed by Dana Schmidt of the Steel Tank Institute to specifically address tanks.

M.5.7.3.1 Tanks

The Tanks Sub-group will hold a conference call on Dec. 11.

M.5.8 Review of Schedule

The co-chairs then led a discussion of the overall project schedule and next meetings. It was agreed that additional time and discussion would be required before the document was suitable for public comment.



- Jan 6, 2015: Conference call for IPC code Change submission
- Feb 10-11, 2015: **Meeting #6 (face-to-face)** to develop draft and finalize for Public Review
- Mar 2015: Release draft for Public Review and Comment – round 1 (60 days)
- May 2015: **Meeting #7** to review and resolve PC 1 comments
- June 2015: Release draft for Public Review and Comment – round 2* (45 days)
- Aug 2015: **Meeting #8** to review and resolve PC 2 comments
- Sept 2015: Comprehensive edit formatting of the draft by CSA Editorial Services
- Nov 2015: 30-day ballot to approve the standard
- Dec 2015: Draft submitted to CSA Editorial Services for final production
- Jan 2016: Publication

**Note: ICC's ANSI process requires any changes to the draft to be posted to public review until no further comments are received. It is anticipated that at least two rounds of public review will be required.*

M.5.10 Date and Location of Next Meeting

Conf. Call to discuss potential IPC code change submissions relating to rainwater harvesting – Tuesday, January 6 – at 11 am to 2:00 PM ET (unofficial meeting). Next IS-STSC in-person committee meeting is scheduled February 10-11, 2015.

M.5.11 Adjourn

The meeting adjourned at 1:30 pm EST.

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Appendix A

Task Force Open Projects



Open Task Force (TF) Projects — CSA/ICC B805 JTC		
Project No. & Title	Task Force (TF) Members	Mandate, Actions, Status
2014 Projects		
<u>RWH-14-01</u> Storage sizing	Chris Despins (Chair) Nancy Springer Joe Rogers Penh Tov Russ Jackson Jeff Hugo Justin Dewitt Doug Pushard	<ul style="list-style-type: none"> • Apr 2014: New project to investigate storage sizing. Include firefighting concerns (see Hawaii, p., 45). Sizing for water storage (short/long term, water efficiency target, fire reserve, etc), sizing for stormwater management (volume target, draw-down rate, mass balance). Yield coefficients. Reliability. • June 2014: Action items: Add day tank sizing, Demand calculations (informative), Tank sizing methodologies (informative), System supply calculation (informative) • August 2014: Action items: Add sizing for firefighter reserve, referencing NFPA standards, add provisions for stormwater treatment/storage. • Nov 2014: No update. • Dec 2014: Chris Despins, who was not in attendance, provided an interim draft in advance. He invited comments and plans to submit text for inclusion in the working draft prior to the next meeting.
<u>RWH-14-02</u> Water quality (source and output)	Russ Jackson (Co-chair) Penh Tov (Co-chair) Mike Warren Rob O'Donnell Pieter Devries Chris Despins Judy MacDonald Dave Cantrell Duncan Ellison Wayne Galliher Ken Nentwig Robert Rubin Nancy Springer Khosrow Farahbakhsh	<ul style="list-style-type: none"> • Apr 2014: New project to investigate treated water quality (output), applications, and end use. Categorize by application/use. Data centre cooling, cooling tower makeup, landscape irrigation (surface/subsurface), toilet/urinal flushing, pool/spa fill, hose bibbs, vehicle washing, trap priming, automatic fire sprinklers, clothes washing • June 2014: Merge with Source Water Quality Group, scope revised to include both source and output waters. • August 2014: Refine usage tiers, combining evaporative cooling with non-potable, human contact applications. Review use of e. Coli as an indicator microorganism, seek input from microbiologists on criteria for usage tiers.



Open Task Force (TF) Projects — CSA/ICC B805 JTC		
Project No. & Title	Task Force (TF) Members	Mandate, Actions, Status
	Linda Maley	<ul style="list-style-type: none"> • Nov 2014: Review usage tiers with water quality. • Dec 2014:
<u>RWH-14-04</u> Control systems and design	Doug Pushard (Chair) Mike Warren Pieter Devries Ken Nentwig Chris Despins Rob O'Donnell	<ul style="list-style-type: none"> • Apr 2014: New project to investigate control systems and design. Include safety, listings • June 2014: The task force met and developed a draft framework for the section. The group also focused on a definition for control. The TC discussed controls for fire suppression systems, which the task force will look into further in their work. • August 2014: Action items: Convert approach to code text and locate appropriate provisions for each. • Nov 2014: Action items: Draft provisions for Section 10, establish approach for residential vs. commercial. • Dec 2014: Task force continues to refine the point-of-use water quality criteria and is investigating a prescriptive set of criteria to use as an alternate for smaller residential systems.
<u>RWH-14-06</u> System components design and materials	Dave Cantrell Alf Durnie Judy MacDonald Phil Parisi Joe Rogers	<ul style="list-style-type: none"> • Apr 2014: Outlined, but not started. • June 2014: New project to address collection systems, piping, tanks, etc. Merge in backflow and cross-connection control. • August 2014: Action items: Continue to review language, incorporating information from other sources. Setup sub-groups to address specific issues such as tanks as needed. Review and refine committee feedback from Meeting #3. • Nov 2014: Action items: Continue to review, revise and draft language. Initiate work of new sub-groups (the



Open Task Force (TF) Projects — CSA/ICC B805 JTC		
Project No. & Title	Task Force (TF) Members	Mandate, Actions, Status
		<p>working group on tanks led by Dana Schmidt was activated).</p> <ul style="list-style-type: none"> Dec 2014: Task force continues to develop and refine the text for system components based on committee feedback and resource documents. Sub-group for tanks headed by Dana Schmidt is working to develop text specific to tanks using CSA B126 and IPC material to begin.

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Appendix B

Committee Member Coordinates

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Appendix C

Agenda for the Meeting

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Appendix D

Meeting #6 Survey/Polling