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Minutes of Meeting No. 2
CSA/ICC B805 Joint Technical Committee on Rainwater Collection
System Design and Installation
Tuesday and Wednesday, June 17-18, 2014
 CSA Standards, 5060 Spectrum Way, Mississauga, ON, Canada
Contents

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- M.1.1 Quorum
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- M.2 Task Force Report, Discussion and Committee Feedback
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- M.2.2 Source Water Task Force
- M.2.3 Storage Task Force
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- M.5 Task Force Recommendations on Rainwater, Stormwater Definitions
- M.6 Task Force Assignments
- M.7 Review of Project Schedule
- M.8 Date & Location of Next Meeting
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- Appendix C Agenda for the Meeting

Action Items		
No.	Action, Person Responsible	Status, Due Date
AI.2.1	Seek permission to provide NFPA 13, 13R, 13D, 14, 20, 22 and 1142 standards to the committee for review and reference. (Shawn Martin)	NEW, ASAP
AI.2.2	Provide 2015 IFC, IPC, IMC and 2012 IgCC codes to the committee for review and reference. (Shawn Martin)	NEW, ASAP
AI.2.3	Provide the Canadian Recreational Water Guidelines to the Water Quality TF (Judy MacDonald)	NEW, ASAP



AI.2.4	Provide the Canadian Well Water Standard to the committee for review and reference. (Shawn Martin)	NEW, ASAP
AI.2.5	Provide the current public draft of ASHRAE 188 to the committee for review and reference (Judy MacDonald)	NEW, ASAP
AI.2.6	Insert Working Draft #5 from the Tank Sizing Task Group into the working draft of the standard (Shawn Martin).	NEW, ASAP
AI.2.7	Contact ARCSA to discuss the potential for holding Meeting #4 during or adjacent to the ARCSA Annual Conference in Phoenix. (Shawn Martin)	NEW, ASAP



CSA
Group



Name	Affiliation	Day 1		Day 2	
		Pres	Abs	Pres	Abs
Voting members					
Dave Cantrell	Public Health-Seattle & King County, Seattle, WA	✓T		✓T	
Justin DeWitt	Illinois Department of Public Health, Springfield, IL	✓		✓	
Russell Jackson	RainHarvest Systems, Cumming, GA	✓		✓	
Robert M. O'Donnell	Aquanomix, LLC, Davidson, NC	✓		✓	
Philip F. Parisi	Jaros Baum & Bolles Consulting Engineers, New York, NY	✓		✓	
Doug Pushard	HarvestH2o.com, Santa Fe, NM	✓T		✓T	
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	✓		✓	
Alf Durnie	Alberta Municipal Affairs, Edmonton, AB	✓		✓	
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	Green Turtle Technologies, Ltd, Mississauga, ON	✓		✓	
	Total Voting Members:		15		15
Alternates					
None					
Associates					
Reuben Butterfield	RHo Solutions, Victoria, BC		✓		✓
Wayne Galliher	City of Guelph, Guelph, ON		✓		✓
Glenn MacMillan	Toronto and Region Conservation Authority, Woodbridge, ON	✓			✓
Linda Maley	Atlantis Water Management, Vancouver, BC	✓T			✓T
Zachary May	Ministry of Natural Gas Development & Responsible for Housing, Victoria, BC		✓		✓
Anthony Oosterveld	VIQUA - a Trojan Technologies Company, Guelph, ON		✓		✓
Troy Vassos	Golder Associates Ltd, Burnaby, BC		✓		✓
Robert Rubin	Pittsboro, NC		✓		✓



CSA
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Guests					
Jeffrey M. Hugo	National Fire Sprinkler Association, Essexville, MI	✓			✓
Devin Cumming	University of Guelph, Guelph, ON	✓			✓
Shawn Strausbaugh	Arlington County, VA	✓T			✓
CSA/ICC Staff					
Shawn Martin	ICC, Pittsburgh, PA	✓		✓	
Paul Gulletson	CSA Group, Mississauga, ON	✓		✓	
Ed Wirtschoreck	ICC, Country Club Hills, IL	✓T		✓T	

Notes:

(1) Individuals with ✓T participated via teleconference and web conference.

M.1 Call to Order

Co-chairs Alf Durnie and Phil Parisi welcomed the committee members and associates and called the meeting to order at 8:05 AM EDT on June 17, 2014. Members introduced themselves and housekeeping comments were made.

M.1.1 Quorum

At the time of this meeting, the Joint Technical Committee (JTC) had 17 voting members.

On day 1, 15 were present at the meeting and therefore minimum quorum requirements (at least 50% of the voting members) were met. A maximum of 15 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: $1/2 \times 17 = 8.5 \rightarrow 9$, or
 2/3 of the votes cast: $2/3 \times 15 = 10$, if all votes were cast

On day 2, 15 were present at the meeting and therefore minimum quorum requirements (at least 50% of the voting members) were met. A maximum of 15 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: $1/2 \times 17 = 8.5 \rightarrow 9$, or
 2/3 of the votes cast: $2/3 \times 15 = 10$, if all votes were cast

M.1.2. Approval of the agenda for the meeting

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

M.1.3 Approval of the minutes of last meeting

Judy MacDonald moved to adopt the minutes of Meeting No. 1 held on April 8-9, 2014 in Chicago; Nancy Springer seconded the motion and it was carried unanimously.



M.1.4 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) Vacant

The committee was updated on efforts to fill the open User Interest seat. Shawn Martin reported that ICC's Codes and Standards Committee would be meeting on July 23 and would be making the recommendation on the appointment to ICC's Board of Directors.

M.1.5 Report on outstanding action items

Outstanding Action Items		
No.	Action, Person Responsible, Report	Status, Due Date
AI.1.1	Develop seed document framework. (Shawn Martin, Paul Gulletson with oversight from Alf Durnie and Phil Parisi) Report: A draft outline for the standard was developed showing the proposed high-level clause structure. The document is to become the working draft standard as the task forces begin to write requirements. The draft was sent to members prior to the meeting.	Complete, 7/6/2014
AI.1.2	Post Health Canada document Canadian Guidelines for Domestic Reclaimed Water for Use in Toilet and Urinal Flushing on the CSA portal (Shawn Martin) Report: The document was provided and uploaded to the Members Only Area. https://community.csagroup.org/docs/DOC-13332	Complete, 5/1/2014



AI.1.3	<p>Seek permission from the ARCSA Board of Directors to use material from the ARCSA Rainwater (Doug Pushard)</p> <p>Report: Doug Pushard and Russ Jackson made a request at ARCSA to reference the ASPE/ARCSA 63 standard. Also, Phil Parisi secured a copy of ASPE/ARCSA 63 from Jim Kendzel at ASPE for use on our committee. The standard was uploaded to the private members only area. It is important to note that if the committee wishes to copy information directly then a more formal agreement may need to be set up with ARCSA/ASPE.</p>	Complete, 7/6/2014
AI.1.4	<p>Post full committee roster with full contact information on CSA Portal (Shawn Martin)</p> <p>Report: The roster was uploaded to the MOA under the folder "Membership".</p>	Complete, 5/1/2014
AI.1.5	<p>Setup Task Forces with necessary resources (scheduling assistance, conference lines, webinar) to begin holding meetings (Shawn Martin, Paul Gulletson)</p> <p>Report: The existing task forces were set up and met by teleconference/webcast to advance their tasks. Any new task forces will be provided with the same support.</p>	Ongoing, 4/14/2014
AI.1.6	<p>Fill vacant User Category committee seat. (Shawn Martin, Paul Gulletson)</p> <p>Report: Shawn Martin and Paul Gulletson are working within the ICC and CSA processes to fill the remaining seat. Input sought from the committee on candidates.</p>	Ongoing, ASAP
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>	Ongoing, ASAP

M.2 Task Force Report, Discussion and Committee Feedback

Chairman Alf Durnie kicked off discussions on Task Force activities since the last meeting, inviting each group to report on activities, challenges, and next steps.

M.2.1 Controls Task Force

Task Force chair Doug Pushard provided a summary of work conducted to date. He initiated a discussion regarding the appropriate definition and scope of the term "controls". He made the case that it should include not only the hardware, but also the software and any control algorithms governing the control system. The general consensus of those in attendance



appeared to support that approach. Jeff Hugo recommended the inclusion of specialty uses such as automatic fire sprinkler systems. He recommended referencing existing standards for this purpose including NFPA 13, 13R, 13D, 14, 20, 22 and 1142 and the International Fire Code. Shawn Martin was asked to try to obtain the documents for committee review.

Doug also reviewed a proposed schema of categorization of controls for single family residential, multi-family residential, and commercial applications. He indicated that the next steps of the task force would be to expand and further populate these categories.

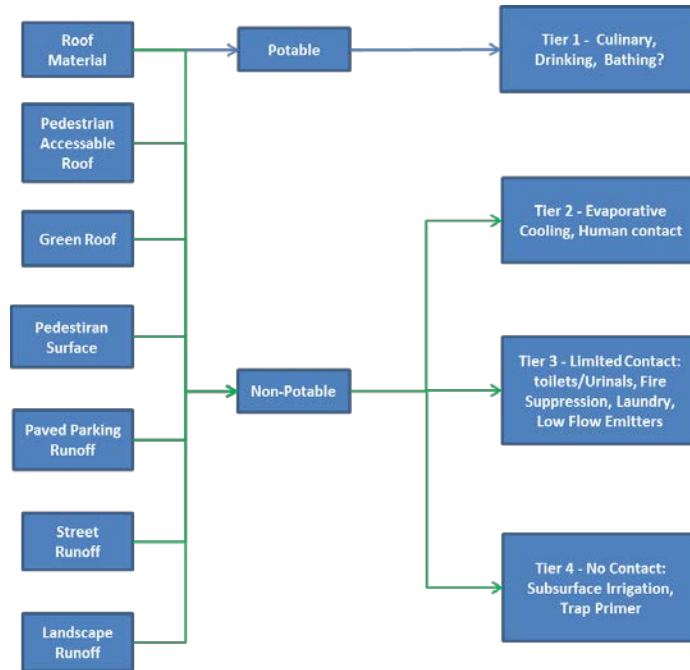
M.2.2 Source Water Task Force

Task Force chair Penh Tov next summarized the work conducted by the Source Water Task Force to date. She provided the committee with a detailed summary comparing the quality of input water derived from various surfaces based on several studies, most notably by WERF. She placed this into a table allowing comparison with the output water quality requirements of various documents, including CSA B128.3, Health Canada and NSF 350.

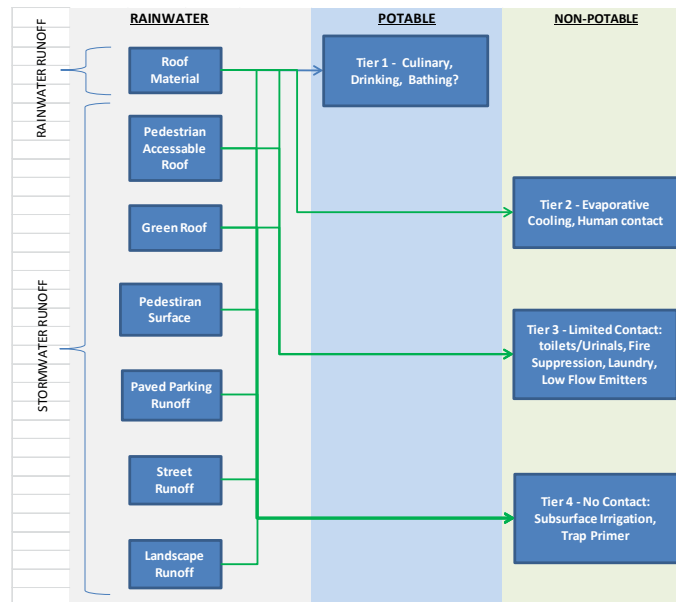
Duncan Ellison questioned the need for input water specifications within the normative portion of the standard given the committee's approach to focus on output water quality criteria. He noted that with that approach, knowledge of the input condition is not necessarily needed. Instead he advocated for the addition of the source quality material to an informative appendix for reference purposes. Doug Pushard noted that knowledge of the contaminants of concern was needed to ensure that water derived from various sources is tested for the right contaminants. This would be important to ensure that expensive or time-consuming tests are not mandated for contaminants not likely to appear within a given source. Judy MacDonald also noted that knowledge of source contaminants of concern was important since a single test would not be definitive. Various tests may be necessary at differing times of the year and at different locations within the system.

Penh also introduced flowcharts indicating possible categorization of source waters by source water and intended use. These two drafts are provided below.

The key question posed was: "Do we provide exceptions for certain sources or certain end uses, or do we design all for a worst-case scenario?" Penh indicated that the source group has and will continue to work closely with the Treated Water Quality Task Force as the activities of the two are closely linked.



Flow Chart A – Source Water Task Force



Flow Chart B – Source Water Task Force

M.2.3 Storage Water Task Force



Task force chair Chris Despins provided a summary of the sizing methodology advocated by the group. He indicated that after reviewing the current sizing approaches, numerous methods can be used depending on site constraints, budget, objective, priorities, and many other variables. Inclusion of stormwater management as a performance objective further amplifies the complexity bringing additional variables such as erosion control and soil infiltration rates. He recommended a general requirement that the tank be sized to meet demand and other system objectives, and then sizing guidance and variables within a non-normative table. This approach was endorsed by the committee.

Jeff Hugo emphasized the need to incorporate the specific requirements within the NFPA standards and International Fire Code regarding sizing if the tank is to be used as a firefighting reserve or for automatic fire sprinkler systems. He offered to assist efforts to address firefighting applications in sizing of tanks.

M.2.4 Treated Water Quality Task Force

Task force chair, Russ Jackson provided an update on the work of the Treated Water Quality Task Force. The group has discussed a performance-based approach that would establish categories for various end uses and point of use water quality criteria based on the risk of human contact. The categories proposed were:

- Potable
- Non-Potable with Human Contact
- Non-Potable with Limited Human Contact
- Non-Potable Non-Contact
- Evaporative Cooling

Specific end uses and water quality parameters of concern were then proposed for each. This was done in part, coordinating with the Source Water Task Force, but they indicated that more work was needed to mesh the work of the two groups. The group indicated that various questions remained on the proper classification of pool and spa fill water, above ground and landscape irrigation.

For swimming pools Russ mentioned that the EPA Recreational Water Guidelines, despite widespread use in the U.S., focused almost exclusively on e.Coli as an indicator organism. Judy MacDonald offered to provide the Canadian Recreational Water Guidelines for comparison. Justin DeWitt indicated that the state of Illinois requires the use of potable water exclusively for the refill of pools and spas.

Other issues were suggested for consideration by the committee:

- Should water quality requirements be introduced for the purpose of protecting the system (i.e. toilet fill valves or sprinklers) or only for the purposes of protecting health and safety?
- Can NSF 350 and CSA B128.3 limits be used appropriately for rainwater?
- Can other clear-water sources be co-mingled, such as AC condensate, steam condensate or foundation drain water?
- Should the maintenance of a chlorine residual at the point of use be required?



- Should a stored water quality also be established to prevent the water stored in the tank from becoming unsanitary?

Russ indicated that the group would continue to work to resolve the remaining questions and draft standard provisions based on the thresholds.

M.3 Introduction and Discussion of the Proposed Format of the Standard

Alf Durnie introduced the proposed standard template and general outline. This document was developed in response to Action Item A1.1.1 from the previous meeting by the staff secretariats and co-chairs. Alf instructed the Task Forces to transition to the creation and submission of standard language for inclusion in the template to create what would become the working draft for future revision and development.

M.4 Task Force Breakout Sessions

Task forces then separated to continue work on remaining issues and begin drafting language for the working draft. The Source Water and Treated Water Quality Task Forces elected to work together to coordinate their activities and information. Task forces worked individually for the balance of Day 1.

M.5 Task Force Recommendations on Rainwater, Stormwater Definitions

Day 2 of the meeting began at 8:35 AM on June 18 with a discussion lead by chairman Alf Durnie on the differentiation between the terms “rainwater” and “stormwater”. He noted the importance of the distinction given the application of stormwater regulations to “stormwater” and not “rainwater” and the fact that the contaminants of concern for water flowing over the ground or paved surfaces were clearly different than those of water collected from elevated rooftops.

The discussion that followed noted the need to further generalize the discussion to address “precipitation” since it includes rain, snow, sleet, hail and other forms of water. It was agreed though, that the term “rainwater harvesting” was sufficiently accepted that moving the title to the more technical correct “precipitation harvesting” term was not advisable.

Several issues were discussed without resolution:

- Is stored water in a tank to be referred to as rainwater? Potential names discussed were ‘source water’, ‘harvested water’, and ‘input water’.
- Does water stop being rainwater when it comes into contact with a roof surface or the ground?

A discussion of requirements for well water or groundwater followed. It was noted by the group that testing requirements for well water used for potable purposes were minimal and varied widely. Often testing was only required at the outset of well use. Shawn Martin summarized well requirements in the IPC, which were minimal and introduced the standard *ANSI/NGWA-01-2007 Water Well Construction Standard* (which is not referenced in the IPC).

It was noted that legionella was also a contaminant of concern for these systems and that a forthcoming standard, ASHRAE 188, would impose new requirements regarding Legionella.



Duncan Ellison stated that health officials are stating that Legionella is the single greatest microbial risk in water systems and that regrowth is the greatest around 20 C. Doug Pushard questioned the need to reference ASHRAE 188 in this standard if it will eventually be found in plumbing codes which will be required. Others noted that references to ASHRAE 188 in plumbing codes, while likely, were going to take time to come into force at the local level. All agreed that the draft of ASHRAE 188 should be reviewed and considered for reference. It was also agreed that the group should seek additional water quality expertise in the new committee appointee for the open seat to assist with this issue and others like it.

M.6 Task Force Assignments

Co-chairmen Alf Durnie and Phil Parisi then lead the group in a review of the Task Forces and their assignments. It was agreed that all existing groups should continue their work to transition their findings and documents to draft language for the standard. The Source Water and Treated Water Quality Groups proposed that the two be merged given the link between the two. After some discussion, this was approved by the committee, with the new group to be called the Water Quality Task Force, co-chaired by Penh Tov and Russ Jackson. The committee also moved to establish and kick off the System Components Design and Materials Task Force, headed by Dave Cantrell. This group was outlined but not initiated during Meeting #1 pending additional work on scope and approach. Lastly, the Working Draft Outline Task Force concluded its work and was therefore disbanded.

M.7 Schedule

The co-chairs then lead a discussion of the overall project schedule and next meetings. After some discussion the following rough, revised schedule was agreed upon.

- **Meeting #3, approximately mid-August, 2014**
- **October or November TBD, 2014: Meeting #4 (possibly in conjunction with ARCSA conference in November, 2014, Phoenix, AZ)**
- November 27, 2014: Release draft for Public Review and Comment – round 1 (60 days)
- Feb 2015: **Meeting #5** to address Public Review comments
- Mar 2015: Release draft for Public Review and Comment – round 2* (45 days)
- Apr 2015: Comprehensive edit formatting of the draft by CSA Editorial Services
- Jun 2015: 30-day ballot to approve the standard
- Jul 2015: **Meeting #5** to resolve ballot
- Aug 2015: Draft submitted to CSA Editorial Services for final production
- Sep 2015: 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.8 Date and Location of Next Meeting

Co-chair Phil Parisi offered to host the next meeting of the committee at the offices of Jaros, Baum and Bolles in New York City in August. The committee discussed and accepted the offer,



selecting the dates of August 13 and 14. The staff secretariats expressed their sincere thanks to Phil and JBB for the offer. Phil Parisi offered to help setup local accommodations within walking distance of the office.

Shawn Martin recommended consideration of co-location of the fourth meeting of the committee at the ARCSEA Annual Conference set for the week of November 17, 2014 in Phoenix, AZ. Shawn was asked to contact the ARCSEA leadership to discuss the feasibility of conducting a committee meeting adjacent to or during the conference.

M.9 Adjourn

The meeting was adjourned at 5:30 PM EDT on Day 1 and resumed at 8:35 AM EDT on Day 2. Upon completion of scheduling, the chairs invited a motion to adjourn on Day 2. The meeting adjourned at 1:31 PM EDT.

CSA/ICC B805 Joint Technical Committee on Rainwater Collection System
Design and Installation (IS-RCSDI)
Minutes of Meeting No. 1; held on April 9-10, 2014
Issued: May 27, 2014
CSA File: B227-23
ICC File:



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)
<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 Linda Maley	<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.
<u>RWH-14-03</u> Source water quality (input)	Penh Tov (Chair) Rob O'Donnell Dave Cantrell Nancy Springer Chris Despins Wayne Galliher Khosrow Farahbakhsh Robert Rubin Linda Maley	<ul style="list-style-type: none"> • Apr 2014: New project to investigate source water quality (input). Characterize stormwater/rainwater differentiation. Solidify definitions. Integrate stormwater control, rainwater reuse. • June 2014: Merge with Treated Water Quality. Closed.



Open Task Force (TF) Projects — CSA/ICC B805 JTC		
Project No. & Title	Task Force (TF) Members	Mandate, Actions, Status
<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.
<u>RWH-14-05</u> Working draft outline	Shawn Martin Paul Gulletson Phil Parisi Alf Durnie	<ul style="list-style-type: none"> • Apr 2014: New project to develop a framework for the initial working draft standard. • June 2014: A draft outline for the standard was developed showing the proposed high-level clause structure. The document is to become the working draft standard as the task forces begin to write requirements. The draft was sent to members prior to the meeting. The project is complete, and the task force was disbanded.
<u>RWH-14-06</u> System components design and materials	Dave Cantrell Alf Durnie Judy McDonald 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

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Appendix B

Committee Member Coordinates

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2014-7-31 3:57:58 PM

**MEDS Full Committee**

File No.: B227

Class: 9426

Committee Name: Rainwater Collection Systems (B805)

1	Name: Mr. R. (Reuben) Butterfield Title: Owner Company: RHo Solutions Address: 1581 Hillside Ave, Suite 396 Victoria, BC V8T 2C1 Canada Business : 250 857-4746 E-Mail: reuben@rhosolutions.ca Position: M Status: A	Membership ID: 31460 Language: English Mail Stop: E-Mail 2: Matrix: ZZ
2	Name: Mr. D. (Dave) Cantrell Title: Chief Plumbing Inspector Company: Public Health-Seattle & King County Address: 401 Fifth Ave, Suite 1100 Seattle, WA 98104-1818 USA Business : 206 263-8493 Cell Phone : 206 510-4378 E-Mail: dave.cantrell@kingcounty.gov Position: M Status: V	Membership ID: 31861 Language: English Mail Stop: E-Mail 2: Matrix: RG
3	Name: Mr. C. (Chris) Despins Title: Water Resources Specialist Company: Credit Valley Conservation Authority Address: 1255 Old Derry Rd Mississauga, ON L5N 6R4 Canada Business : 905 670-1615 x288 E-Mail: cdespins@connectthedrops.ca Position: M Status: V	Membership ID: 31258 Language: English Mail Stop: E-Mail 2: cdespins@gmail.com Matrix: UI
4	Name: Mr. P. (Pieter) deVries Title: President Company: UVDynamics Inc. Address: 315 Neptune Cres London, ON N6M 1A9 Canada Business : 1 800 667-4629 Fax 1 : 519 452-1701 E-Mail: p.devries@uvdynamics.com Position: M Status: V	Membership ID: 28261 Language: English Mail Stop: E-Mail 2: Matrix: PI
5	Name: Mr. J. (Justin) DeWitt Title: Chief of General Engineering Company: Illinois Department of Public Health Address: 525 W Jefferson St Springfield, IL 62761 USA Business : 217 782-5830 Fax 1 : 217 785-5897 E-Mail: justin.dewitt@illinois.gov Position: M Status: V	Membership ID: 31870 Language: English Mail Stop: E-Mail 2: Matrix: RG
6	Name: Mr. F. (Franco) DiFolco Title: Technical Advisor Company: CSA Group Address: 178 Rexdale Blvd Toronto, ON M9W 1R3 Canada	Membership ID: 23975 Language: English Mail Stop:

	Business :	416 747-2526			
	Fax 1 :	416 747-4149			
	E-Mail:	franco.difolco@csagroup.org	E-Mail 2:		
	Position:	X	Status:	E	Matrix: ZZ
7	Name:	Mr. A. (Alf) Durnie	Membership ID:	17739	
	Title:	Chief Inspector / Administrator	Language:	English	
	Company:	Alberta Municipal Affairs	Mail Stop:		
	Address:	Public Safety Division 10155-102 St, Flr 16 Edmonton, AB T5J 4L4 Canada			
	Business :	403 823-1680			
	Cell Phone :	403 820-2681			
	Fax 1 :	403 823-1756			
	Fax 2 :	780 427-8686			
	E-Mail:	alf.durnie@gov.ab.ca	E-Mail 2:		
	Position:	C	Status:	V	Matrix: RG
	Comments:	Co-Chair dtd Apr 30/14 (Toll free: 1-866-421-6929)			
8	Name:	Mr. T. D. (Thomas Duncan) Ellison	Membership ID:	9698	
	Title:		Language:	English	
	Company:	Cheffell Associates	Mail Stop:		
	Address:	136 Edwards St, Unit 202 Rockland, ON K4K 1T5 Canada			
	Business :	613 446-4219			
	Cell Phone :	613 882-4219			
	E-Mail:	duncan.ellison@videotron.ca	E-Mail 2:		
	Position:	M	Status:	V	Matrix: UI
9	Name:	Dr. K. (Khosrow) Farahbakhsh	Membership ID:	28002	
	Title:	Associate Professor	Language:	English	
	Company:	University of Guelph	Mail Stop:		
	Address:	School of Engineering Albert A. Thornbrough Bldg Guelph, ON N1G 2W1 Canada			
	Business :	519 824-4120 x53832			
	Fax 1 :	519 836-0227			
	E-Mail:	khosrowf@gmail.com	E-Mail 2:	khosrowf@uoguelph.ca	
	Position:	M	Status:	V	Matrix: UI
10	Name:	Mr. W. (Wayne) Galliher	Membership ID:	31410	
	Title:	Project Manager Water Conservation	Language:	English	
	Company:	City of Guelph	Mail Stop:		
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	Fax 1 :	519 822-8837			
	E-Mail:	wayne.galliher@guelph.ca	E-Mail 2:		
	Position:	M	Status:	A	Matrix: ZZ
11	Name:	Mr. P. (Paul) Gulletson	Membership ID:	29304	
	Title:	Project Manager	Language:	English	
	Company:	CSA Group	Mail Stop:		
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	Business :	416 747-4186			
	Fax 1 :	416 747-2473			
	E-Mail:	paul.gulletson@csagroup.org	E-Mail 2:		
	Position:	A	Status:	E	Matrix: ZZ
12	Name:	Mr. J. M. (Jeffrey) Hugo	Membership ID:	32122	
	Title:	Manager of Codes, Engineering	Language:	English	
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	Business :	845 519-5963			
	E-Mail:	hugo@nfsa.org	E-Mail 2:		
	Position:	M	Status:	A	Matrix: ZZ
13	Name:	Mr. R. (Russell) Jackson	Membership ID:	31873	
	Title:	Vice President of Sales	Language:	English	
	Company:	RainHarvest Systems, LLC	Mail Stop:		
	Address:	6075 Parkway North Dr			

	Cumming, GA 30040 USA		
Business :	770 889-2533		
Fax 1 :	770 889-2577		
E-Mail:	russ@rainharvest.com	E-Mail 2:	
Position:	M Status: V	Matrix:	PI
<hr/>			
14 Name:	Ms. J. A. (Judy) MacDonald	Membership ID:	8327
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Fax 1 :	613 952-2574		
E-Mail:	judy.macdonald@hc-sc.gc.ca	E-Mail 2:	
Position:	M Status: V	Matrix:	RG
<hr/>			
15 Name:	Mr. G. (Glenn) MacMillan	Membership ID:	27314
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Cell Phone :	416 520-2704		
Fax 1 :	416 303-8060		
E-Mail:	gmacmillan@trca.on.ca	E-Mail 2:	
Position:	M Status: A	Matrix:	ZZ
<hr/>			
16 Name:	Ms. L. (Linda) Maley	Membership ID:	31570
Title:	Business Development North America	Language:	English
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Business :	604 817-8670		
E-Mail:	linda@atlantis-america.com	E-Mail 2:	
Position:	M Status: A	Matrix:	ZZ
<hr/>			
17 Name:	Mr. S. E. (Shawn) Martin	Membership ID:	25700
Title:	Director, Industry Relations (PMG)	Language:	English
Company:	International Code Council	Mail Stop:	
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Business :	1 888 422-7233 x7736		
Cell Phone :	704 907-0436		
E-Mail:	smartin@iccsafe.org	E-Mail 2:	
Position:	X Status: P	Matrix:	ZZ
Comments:	Tel: 1 888.icc.safe (422.7233), ext. 7736		
<hr/>			
18 Name:	Mr. Z. D. (Zachary) May	Membership ID:	31465
Title:	Codes Administrator	Language:	English
Company:	Ministry of Natural Gas Development & Responsible for Housing	Mail Stop:	
Address:	Bldg & Safety Stds Br in the Office of Housing & Constr. Stds PO Box 9844, Stn Prov Govt Victoria, BC V8W 9T2 Canada		
Business :	778 679-9641		
Cell Phone :	778 679-9641		
E-Mail:	Zachary.May@gov.bc.ca	E-Mail 2:	
Position:	M Status: A	Matrix:	ZZ
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19 Name:	Mr. K. (Ken) Nentwig	Membership ID:	31244
Title:	Governor, BC Jurisdiction	Language:	English
Company:	Canadian Association for Rainwater Management	Mail Stop:	
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Position:	M Status: V	Matrix:	PI
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20	Name: Mr. R. (Robert) O'Donnell Title: Partner Company: Aquanomix, LLC Address: 710 Northeast Dr, Suite 10 Davidson, NC 28036 USA Business : 704 402-4373 E-Mail: rodonnell@aquanomix.com Position: M Status: V	Membership ID: 31864 Language: English Mail Stop: E-Mail 2: Matrix: PI
21	Name: Mr. A. (Anthony) Oosterveld Title: Mgr., Product Support/Customer Service Company: VIQUA - a Trojan Technologies Company Address: 425 Clair Rd W Guelph, ON N1L 1R1 Canada Business : 519 763-1032 x257 Cell Phone : 519 317-0428 Fax 1 : 519 763-5069 E-Mail: aoosterveld@viqua.com Position: M Status: A	Membership ID: 31462 Language: English Mail Stop: E-Mail 2: Matrix: ZZ
22	Name: Mr. P. F. (Philip) Parisi Title: Director, Plumbing and Fire Protection Company: Jaros Baum & Bolles Consulting Engineers Address: 80 Pine St, Flr 12 Manhattan, NY 10005 USA Business : 212 530-9409 Cell Phone : 917 733-9295 Fax 1 : 212 269-5894 E-Mail: parisip@jbb.com Position: C Status: V Comments: Co-Chair dtd Apr 30/14	Membership ID: 31876 Language: English Mail Stop: E-Mail 2: Matrix: UI
23	Name: Mr. D. (Doug) Pushard Title: Founder Company: HarvestH2o.com Address: 537 Garcia St Sante Fe, NM 87505 USA Business : 505 603-5498 E-Mail: doug@harvesth2o.com Position: M Status: V	Membership ID: 31865 Language: English Mail Stop: E-Mail 2: Matrix: UI
24	Name: Mr. J. (Joe) Rogers Title: Building Code Advisor Company: Ontario Ministry of Municipal Affairs and Housing Address: Building & Development Branch 777 Bay St Flr 2 Toronto, ON M5G 2E5 Canada Business : 416 585-6753 Fax 1 : 416 585-7455 E-Mail: joseph.rogers@ontario.ca Position: M Status: V	Membership ID: 22225 Language: English Mail Stop: E-Mail 2: Matrix: RG
25	Name: Prof. R. (Robert) Rubin Title: Professor Emeritus Company: NCSU Address: 192 Fearington Post Pittsboro, NC 27312 USA Business : 919 545-3066 Cell Phone : 919 270-0344 E-Mail: rubin@ncsu.edu Position: M Status: A	Membership ID: 32132 Language: English Mail Stop: E-Mail 2: Matrix: ZZ
26	Name: Ms. N. (Nancy) Springer Title: Building Division Manager Company: Butte County Department of Development Services Address: 7 County Center Dr Oroville, CA 95965 USA Business : 530 538-7159 Cell Phone : 530 693-1559 Fax 1 : 530 538-7785 E-Mail: nspringer@buttecounty.net Position: M Status: V	Membership ID: 31859 Language: English Mail Stop: E-Mail 2: Matrix: RG

27	Name: Ms. P. (Penh) Tov Title: Product Portfolio Manager Company: Green Turtle Technologies Ltd. Address: 2596 Dunwin Dr Mississauga, ON L5L 1J5 Canada Business : 416 966-9400 Cell Phone : 416 319-1799 Fax 1 : 877 966-8411 E-Mail: penh.tov@greenturtletech.com Position: M Status: V Comments: T: (877) 966-9444	Membership ID: 25114 Language: English Mail Stop: E-Mail 2: Matrix: PI
28	Name: Dr. T. D. (Troy) Vassos Title: Sr. Envmtl Engr - O&G Sector WTL Company: Golder Associates Ltd. Address: 4260 Still Creek Dr, Suite 500 Burnaby, BC V5C 6C6 Canada Business : 604 296-4277 Cell Phone : 604 657-6559 Fax 1 : 604 298-5253 E-Mail: tvassos@golder.com Position: M Status: A	Membership ID: 27692 Language: English Mail Stop: E-Mail 2: tvassos@hotmail.com Matrix: ZZ
29	Name: Mr. M. (Mike) Warren Title: Product Manager Company: Watertronics, Inc. Address: 525 East Industrial Dr Hartland, WI 53029 USA Business : 414 640-2496 Cell Phone : 414 640-2496 E-Mail: mike.warren@watertronics.com Position: M Status: V	Membership ID: 31869 Language: English Mail Stop: E-Mail 2: Matrix: PI
30	Name: Mr. E. L. (Ed) Wirtschoreck Title: Manager of Standards Company: International Code Council (ICC) Address: 4051 West Flossmoor Rd Country Club Hills, IL 60478-5798 USA Business : 888 422-7233 4317 E-Mail: ewirtschoreck@iccsafe.org Position: X Status: P	Membership ID: 31930 Language: English Mail Stop: E-Mail 2: Matrix: ZZ

CSA/ICC B805 Joint Technical Committee on Rainwater Collection System
Design and Installation (IS-RCSDI)
Minutes of Meeting No. 1; held on April 9-10, 2014
Issued: May 27, 2014
CSA File: B227-23
ICC File:



Appendix C

Agenda for the Meeting



International Code Council and Canadian Standards Association

JOINT CONSENSUS COMMITTEE ON RAINWATER COLLECTION SYSTEM DESIGN AND INSTALLATION (IS-RCSDI)

*BSR/CSA/ICC 805-201x, Standard for Rainwater
Collection System Design and Installation*

MEETING #2: DETAILS

Date

June 17, 2014 - 8:30 AM to 5:00 PM EDT &
June 18, 2014 – 8:30 AM to 2:00 PM EDT

Teleconference

1-866-946-0852 (toll free) or 1-646-216-4900 PIN: 46412229#

Location

CSA Standards
5060 Spectrum Way
Mississauga, ON L4W 5N6 CANADA

WebMeeting

<http://iccsafe.adobeconnect.com/rcsdi/>

(Click the link & login as Guest)

Secretariats

[Shawn Martin](#), ICC, [Paul Gulletson](#), CSA

Public Project Website

www.iccsafe.org/is-rcsdi

MEETING #2: AGENDA

**Day 1: Full Committee - General Discussion, Task Force
Reports and Task Force Breakouts 8:30 am – 5 pm**

1. (8:30 – 9:30 am) Call to Order
 - a. Opening Remarks
 - b. Quorum
 - c. Approval of Agenda
 - d. Approval of Minutes from Meeting #1
 - e. Membership Review
 - f. Report on Outstanding Action Items
2. (9 am – noon) Task Force's Reports, discussion and committee feedback
 - a. Controls Task Force
 - i. Discussion and Feedback
 - b. Source Water Task Force
 - i. Discussion and Feedback
 - ii. What sources shall be included?

**Day 2: Task Forces – Reports and
Committee Decisions 8:30 am – 2:00 pm**

5. (8:30am – 9:00am)
Recommendations from Source Water Task Force on definition of Rainwater and Storm water and reach consensus on definition of rainwater and storm water.
6. (9:00am – 11:30am) Task force reports and discussion; decisions and direction.
 - a. Source Water Task Force
 - b. Storage Task Force
 - c. Treated Water Quality Task Force
 - d. Controls Task Force
7. (11:30am – noon) Task Force Assignments and identify new task groups needed.

- c. Storage Task Force
 - i. Discussion and Feedback
 - d. Treated Water Quality Task Force
 - i. Discussion and Feedback
 - ii. What end uses and water quality is required?
- 3. (1 – 1:45 pm) Introduction and discussion of the proposed format for the Standard
- 4. (1:45 – 5pm) Task group breakout sessions. Further develop content and recommendations and start to put language in standard.
 - a. Develop specific recommendations to present to the committee as a whole the following morning,
 - b. consider and address feedback from committee as whole provided in item 2, and
 - c. identify areas that may cross over task groups to ensure they are coordinated.
- 8. (1 – 1:30pm) Review of Project Schedule
- 9. (1:30 – 1:45) Date & Location of Next Meeting; bring your calendars.
- 10. (1:45 – 2:00) Closing Remarks and Adjournment