



**CQM Standard 180 User Guide Customer Communications Working Group
Thursday August 29, 2017 Meeting Notes**

Call to Order

The meeting was called to order at 10:06 am PDT by Jan Peterson, XCSpec and Chair.

Roll Call

For this working group, 4 of 7 voting members in attendance would constitute a quorum. 4 voting members, 1 non-voting members, 0 guests and 1 staff were present for a total of 6 attendees.

P = Present at meeting A = Absent from meeting; if proxy has been assigned it will be noted below. Although Voting Members have been designated by the Chair, this group acts primarily by consensus.				
CQM User Guide CC Working Group Voting Members				
Aire Rite AC & Refrigeration	Don	Langston	Contractor (Nonresidential)	P
AMS (American Mechanical Services)	Marc	Pickett	Contractor (Nonresidential)	P
Charles Segerstrom, Energy Efficiency Consulting	Charles	Segerstrom	Energy Efficiency Program Consultant	
Tre' Laine Associates	Pepper	Hunziker	Energy Efficiency Program Consultant	P
XCSpec (Chair)	Janet	Peterson	Controls (Manufacturer or Distributor)	P
CQM User Guide CC Working Group Non-Voting Members				
ASHRAE	Richard	Danks	Engineering Society	P
Western Allied Corporation	Mike	Gallagher	Contractor (Nonresidential)	
CQM User Guide CC Working Group Non-Voting Guests				
Aire Rite AC & Refrigeration	Bruce	Coleman	Contractor (Nonresidential)	
Aire Rite AC & Refrigeration	Lydia	Doll	Contractor (Nonresidential)	
Aire Rite AC & Refrigeration	Darren	Whetstone	Contractor (Nonresidential)	
B2B Sales Excellence**	James	Graening+		
SDG&E (San Diego Gas & Electric)	Paul	Thomas	California IOU	
WHPA Staff (Non-Voting)				
BBI (Better Buildings Inc.)	Mark	Lowry	WHPA Executive Advisor/BBI COO	
BNB Consulting/WHPA Staff	Bob	Sundberg	Energy Efficiency Program Consultant	P (scribe)

** Organization is Not a Member of the WHPA; + Individual is NOT Registered with the WHPA; ^(P) after last name = Member/Registrant is Pending Approval from the WHPA Executive Committee
To avoid repetition, the name of the member organization will not be repeated in the body of the minutes past the first identification with the name of the representative participant.

Welcoming and Member Introductions

Lydia Doll, Aire Rite AC and Refrigeration joined the group at the request of Don Langston.

Approve Previous Meeting Draft Notes

July 18 meeting draft notes were distributed July 22 and reviewed by attendees. No revisions or corrections were submitted. The draft meeting notes would be finalized and posted to the WHPA website.



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ACTION Items

July 18 Meeting DECISION: the WG decided that the maintenance development process needed to include exploration of concerns and possible goals, such as equipment reliability, which were outside of the current standard but mentioned in the FORWARD to Standard 180.

July 18 Meeting ACTION: Distribute the April 26 presentation on metrics provided by Rick Danks for the August 2017 meeting. Completed.

July 18 Meeting ACTION: Don Langston asked Bob Sundberg to locate and distribute a research study on end user perspectives and priorities conducted by EMI for SCE around 2010. Completed.

New Business – Jan Peterson

None.

AGENDA

Topic	Discussion Leader	Desired Outcome
Welcome, Roll Call, Member Introduction, Approve Past Meeting Notes, Review Action Items, New Business, Meeting Agenda	Chair, WHPA Staff	Record attendees, welcome any new members, approve previous meeting minutes, review status of any open Action items, planned agenda and bring up any new business items for the WG to consider addressing.
Grid descriptions for market segments/facility types and decision-makers	Jan Peterson	Discuss and decide on how market segments/facility types and decision-makers will be described
User Guide to address facility staff as well as contracted services	Jan Peterson	Decide on revisions to user guide drafts to reflect addressing facilities with their own maintenance staff situations as well as those where maintenance is primarily a contracted service
Program development draft narratives	Jan Peterson & Bob Sundberg	1. Review Bob's draft narrative example
EMI Reports – Maintenance Focus Groups	Jan Peterson	Review findings from these two studies of end user and contractor focus groups as time permitted
Maintenance program performance objectives (outcome) metrics (KPIs)	Jan Peterson and Rick Danks	Discuss and decide on several important and some uncommon metrics for tracking goal progress as time permitted
Confirm next meeting date/time, assign actions and proposed agenda and adjourn.	Jan Peterson, WHPA Staff	Clear understanding of member responsibilities for the next meeting. Next meeting date/time established.

Grid Descriptions for Market Segment/Facility Types and Decision-Makers – Jan Peterson

Jan Peterson, Chair – the purpose of the table/grids was to provide a variety of combinations between different facility types and decision-makers for the development of initial maintenance program development meetings and discussions.

The current draft report included descriptions of market segments/facility types, customer/responsible party “collaboration factor” and decision-makers who contribute to maintenance program decisions. The decision-maker perspectives were intended to range from those who were skeptical and reluctant to developing better programs to those who were highly motivated to establishing goals and metrics to track progress and evaluate how well a program was doing.



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Understand the Customers Market Segment – current WG report

Understanding the Market Segment and building user profile will aid (get some info from User Guide document already prepared). In the following interview examples, we will reference the market set following the designations identified below.

- MS-A : Office, Professional – Owner Occupied / Non –Owner Occupied
- MS- B: Manufacturing – Industrial, distribution, warehousing, research
- MS-C: Healthcare facilities/hospitals, housing, medical, clinics, nursing homes
- MS-D: Schools, Universities, Campuses
- MS-D: Houses of Worship, not for profit.
- MS-E Government, institution
- MS-F: Retail, Malls
- MS-G: Restaurants and Fast Food

Understand the Customers “Collaboration” Factor -

The owners’ willingness to seek out and provide useful information is a gauge of level of collaboration. In the following interview examples, we will reference the collaboration factor following the designations identified below.

- CF- 1: Minimal Collaboration – likely seeking response to RFP. Not providing useful information.
- CF-2: Neutral – Offers limited information. Reluctant to spend too much time discussing collaboration.
- CF-3: Fairly Collaborative – With further education and case studies is a strong potential to collaborate. Shares information when specifically asked.
- CF-4: Very Collaborative – Open to preventative maintenance ideas. Shares information freely.

Understand the “who” to meet with for approval of maintenance budget.

Understanding the customers financial budgets related to HVAC will aid in scoping the number of surveys and recommendation. Also, this will give you a stronger idea of “who” is in the responsibility chain for approval. In the following interview examples, we will reference the potential budget set following the designations identified below.

- FB-I: Asset Manager – Owner or corporate office. Will perform a cost analysis on the contract.
- FB-II: Productivity driven. Executive Management. Most like to be interested in a productivity analysis of the maintenance contract.
- FB-III: Task Driven. Lower Management or Property manager. Task driven analysis of HVAC maintenance contract.

Table/Grid from Bob Sundberg's Narrative Example:

On the following grid/table, where would a current client place themselves and their organization?

		Market Segment – Facility Type			
		A	B	C	D
Responsible Party – Facility Management		Owner Occupied Small	Owner Occupied Large	National Account, Multi-Location Chain	MUSH (municipals, universities, schools, hospitals, public facilities)
1.	Skeptical, minimal maintenance, low HVAC expertise, low cost, contract price approach				
2.	Open, consider setting maintenance program goals/metrics, interested in HVAC system operation				
3.	Motivated, interested to developing a more comprehensive maintenance program, continuous improvement, interested in advanced technologies				
4.	Sophisticated facility management – monitoring, building automation/control, – seeks advanced technologies for preventive/predictive maintenance				

The attendees reviewed the two approaches to descriptions of who might be involved in early discussions about developing a maintenance program and their facility types/market segments. Jan Peterson suggested they stick to focusing on the limited number of market segments/facility types (4) outlined in the CQM User Guide WG 2016 final work product illustrated in Bob Sundberg's table above. Those included: owner occupied small; owner occupied large; multi-location/national account/chains; MUSH (municipal, universities, schools, hospitals).

User Guide Addressing Facilities with Maintenance Staff in addition to Customer/Contractor Fixed Price Contracted Services – Jan Peterson

Bob Sundberg, WHPA staff – since Rick Danks was attending and had been involved with facility management with in-house staff so extensively.

Rick Danks, ASHRAE – he observed that in the first three responsible party descriptions, the service provider/contractor was likely to be far more knowledgeable about HVAC systems and operations than their potential client. In those cases, he thought a subtle nuance was that the primary contractor effort, rather than being focused on performing the work, this provided an opportunity for their firm to market their capability as a consultant, to offer expertise the owner might not have. This could include expertise on maintenance management systems, assistance in developing a Standard 180 compliant program. He thought it was unlikely that customers 1 through 3 could accomplish this without hiring firms with expertise.

Bob asked him how this table/grid might be revised to represent both major and typical ways in which facility maintenance was implemented.



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Rick Danks, ASHRAE – he suggested a revision to the skeptical facility manager description which included “low cost, contract price approach.” That part of the description was confusing. Suggested “economic advantages” rather than “contract price.” He thought that contractors affiliated with the WHPA and the IOU QM programs were in the sweet spot to offer energy efficiency related services. Rick thought that for many contractors it might be as simple as providing an assessment of the incumbent maintenance program. Comparing the current approach to Standard 180 requirements. He thought that could be provided relatively inexpensively.

Jan Peterson, Chair – she agreed there would be advantages for contractors providing an alignment comparison with Standard 180. She thought this might be a very valuable first step in establishing a collaborative customer relationship.

Bob Sundberg, WHPA staff – he asked Rick Danks whether adding an additional pair of columns which would represent key but different maintenance delivery situations would eliminate the confusion in the current matrix. Rick Danks believed it would clarify who and what was being. One column would represent facilities which were managed and maintained by staff and the second would represent where an owner or their representative primarily obtained maintenance services from contractors through fixed-price agreements. Rick thought that would be a valuable revision over the single column approach which could easily become too verbose. Columns for condition 1 and condition 2 would be an improvement. This revision would address one of the issues he’d hoped the WG would address where most of their effort and work products had implied that Standard 180 implementation was primarily between an owner and a contractor firm. This would help address the more generic nature of Standard 180 which was intended to cover the waterfront of maintenance circumstances.

The group requested Bob revise the table to add these two columns. Bob Sundberg asked Rick to help provide the facility management descriptions. If maintenance management was not a core capability for those decision-makers, it would make sense for them to bring in/hire that expertise, at least on a temporary basis. Prior to entering into any maintenance agreement, there were consultant type opportunities for potential service providers.

ACTION: Bob Sundberg would revise the decision-maker/responsible party & market segment/facility type matrix/grid to provide two initial columns. They would represent 1) facilities with in-house maintenance staff and 2) facilities which contracted maintenance services. Bob requested Rick Danks provide a draft for the column descriptors where in-house staff provided maintenance services.

ACTION: Jan Peterson and Bob Sundberg would work together to fold in the excellent table/matrix revisions suggestions.

Jan Peterson, Chair – Jan pointed out that the ultimate objective for the grid was that a narrative would be developed by the WG for each intersecting square in the table. Each market segment/facility type would have several narratives developed for a variety of responsible party/decision-maker perspectives.

Initial Meeting Narrative Example – Bob Sundberg/staff

Jan Peterson, Chair – Bob had developed a sample start for a client/market segment/facility type narrative. The purpose was to give members an idea of how a dialogue might evolve for one combination from the matrix. Her intent was that members would elect to develop other narratives which aligned with their experience and subject matter expertise.

Bob Sundberg, WHPA staff – he briefly presented his draft narrative document which outlined the start of a dialogue between a client representing the owner occupied/larger business, a privately owned multi-location hardware store chain, who initially was reluctant/skeptical of investing time in discussions about more comprehensive maintenance. He was more interested in the lowest initial contract cost and getting bids and hadn’t previously developed a plan or goals for a maintenance program. This “responsible party” (RP) only had responsible for getting bids for work like HVAC maintenance services and didn’t have responsibility for energy costs, equipment repairs or equipment capital replacement budgets and resources.

Bob had also drawn up a table with some initial descriptors using the market segment/facility types explored in the 2016 User Guide WG report and tentative descriptions for four stages or steps in responsible party orientation/perspective.

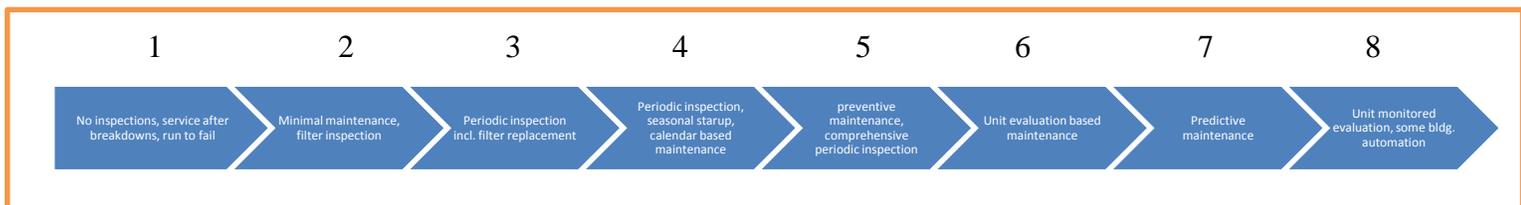
The overview suggested providing a brief explanation of Standard 180, especially Section 4 as well as considering combinations of three key variables to frame up any narrative.

- Building type/market segment (there are certainly others but we'll address these four large segments for starters)
 - a. owner occupied/smaller businesses with limited locations,
 - b. owner occupied/larger businesses and facilities
 - c. national accounts,
 - d. MUSH (municipals, universities, schools, hospital/health facilities – mostly public and/or non-profit organizations)
- Client/customer perspective on maintenance and level of HVAC expertise
 - a. reluctant/skeptical/minimal maintenance and primarily price driven
 - b. open to explore maintenance program goals/metrics/tracking
 - c. motivated to establish better, more comprehensive program
 - d. sophisticated (currently using or interested in preventive/predictive maintenance, expanding building automation to address HVAC system maintenance/performance, program goals/metrics based management, looking for tracking and advanced technologies and program refinement/improvement)
- Budgets/financial responsibilities and planning for
 - a. Maintenance contracts and agreements
 - b. Major repairs/service
 - c. Capital expenditures (HVAC equipment replacement/installations)

C = Client/responsible party

SP = Service provider, contractor in this case

Bob Sundberg suggested that the owner/responsible party be asked what they considered their current perspective and approach to maintenance was early in the initial discussions. To place their current approach on a continuum like the following which ran from a “run to fail” and service only after breakdown approach to facilities already using some advanced technologies and some form of monitoring or building automation control.



Bob also mentioned that he developed the question & answer approach from the three flow charts of topics to be covered which were the core of the CQM Committee’s “Interview Process” 2016 work product. In this instance, the contractor was asking questions about the topics they thought needed to be addressed as well as trying to determine if they were talking with the right person within the organization or whether others needed to be included.



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Don Langston and several others mentioned that they'd not had the chance to read through the sample narrative prior to the Aug. 9 meeting.

Rick Danks, ASHRAE – he asked whether the assumption for this narrative was that this discussion was the result of a cold call or in response to a request for bid that had been issued or some other context.

The group discussed this question and agreed that all narratives should provide those assumptions which led up to the discussion taking place. What drove the meeting to take place?

Jan Peterson, Chair – she suggested that each narrative provide those context assumptions and identify where this specific dialogue fit within the series of initial customer meetings. What advance information the service provider/contractor might have already collected if not a cold call.

Bob Sundberg agreed and was willing to revise his draft narrative to include why this owner was willing to meet with the contractor – they'd not met someone who utilized a structured approach to identifying goals and outlining a maintenance program before.

ACTION: Bob Sundberg agreed to revise his draft narrative to include why this owner was willing to meet with the contractor – they'd not met someone who utilized a structured approach to identifying goals and outlining a maintenance program before.

Bob Sundberg walked the group through his draft narrative.

Pepper Hunziker, Tre' Laine Associates – she wondered who would be the best to draft all of the possible narratives. Someone with direct customer experience or maybe people outside of their small working group? How to solicit interest in helping draft realistic narratives of those early customer/service provider maintenance program development discussions.

Bob Sundberg, WHPA staff – he reminded the group that their 2017 goals only included the effort to draft 2 or 3 narratives from all those possible combinations. All additional efforts to develop more narratives would need to be continued during 2018 or later. Within the WG, he thought that Marc and Don might be willing to tackle one narrative each from their experience, possibly Rick Danks would contribute one from a facility management with maintenance staff perspective. The rest would depend on whatever other members were willing to tackle.

Jan Peterson, Chair – she agreed that populating the rest of the matrix/table would be future work for the WG during the next year. She indicated that Bob could send out the draft narrative he'd started as an example and asked that members let her know if they'd be willing to try drafting one from their experience. She suggested that with the remaining time, the WG review the goals which had been drafted with Ellen Steiner, WHPA staff, the previous week.

CQM UG CC WG 2017 Goals and Implementation Plan – Jan Peterson

Jan Peterson, Chair – qualifying the customer (if services were contracted) and developing a relationship toward collaboratively developing a maintenance program was a big part of what this WG had discussed taking on within the development of a user guide for Standard 180. That's where the narratives fit in, to pull information from the customer about their authority and financial roles, maintenance related issues, pain points, goals and current practices, maintenance approach and past results.

Pepper Hunziker had asked several times how these narratives and the work of this WG fit in with the overall user guide development plan. This WG was committed to developing step 2 in the overall development of a user guide as outlined by the CQM User Guide WG in their 2016 final report.



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Bob Sundberg, WHPA staff - a previous version of the implementation plan was shared online at the meeting. What follows is the most recent draft for the WG 2017 implementation plan.

Jan Peterson, Chair – the draft implementation plan indicated how this CC WG would tackle the Chapter 2 portions of the proposed user guide. The parallel User Guide (T) WG would take on the balance of developing more technical aspects of the guide such as making and implementing a maintenance plan as directed by Standard 180.

FROM 2017 CQM USER GUIDE CC WG IMPLEMENTATION PLAN:

Committee Description/Mission: The ANSI/ASHRAE/ACCA Standard 180 is abstract and not easy to absorb quickly. There is a recognized need to develop a user guide to support the industry in implementing the standard as intended. The framework for the User Guide is conceptualized to include:

1. Introduction to and Overview of Standard 180
2. Communicating and Developing a Standard 180-based Maintenance Program
 - a. Introduction to chapter relevant to communicating and developing a Standard 180-based Maintenance Program and preparation for the structured meeting
 - b. Clarifying financial roles and responsibilities (maintenance agreement, energy and utilities, service/major repairs, and capital expenses)
 - c. Identifying current maintenance approach, pain points, and goals
 - d. Identifying performance metrics
 - e. Develop potential value propositions
 - f. Example narratives
3. Making a Maintenance Plan
4. Implementing a Maintenance Program
5. Validating Standard 180-based Maintenance Program
6. Conclusion

Due to the effort involved and the skills needed to product the content, the CC Working Group proposed to tackle the communication, selling and buying aspects of the guide, specifically working on Chapter 2: Communicating and Developing a Standard 180-based Maintenance Program. The complementary technical aspects of the guide will be developed by the CQM Standard 180 User Guide – Technical Working Group in parallel.

Goal #2: Develop Standard 180 User Guide Focusing on the Customer Communications				
Milestone	Owner	Deliverable	Due Date	Dependencies
1. Develop working group-approved Chapter 2 subsection: Introduction and preparation for the structured meeting	Chair, Working Group Members, and WHPA Staff	Draft Subsection	August 31, 2017	• Availability of Chair, Working Group Members, and WHPA Staff
2. Develop working group-approved Chapter 2 subsection: Clarifying financial roles and responsibilities (maintenance agreement, energy and utilities, service/major repairs, and capital expenses) section	Chair, Working Group Members, and WHPA Staff	Draft Subsection	October 31, 2017	• Availability of Chair, Working Group Members, and WHPA Staff

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3. Develop working group-approved Chapter 2 subsection: Identifying current maintenance approach, pain points, and goals section	Chair, Working Group Members, and WHPA Staff	Draft Subsection	October 31, 2017	<ul style="list-style-type: none"> • Availability of Chair, Working Group Members, and WHPA Staff
4. Develop working group-approved Chapter 2 subsection: Develop Two example narratives for specific market segments/building types and customer perspectives section	Chair, Working Group Members, and WHPA Staff	Draft Narratives	December 31, 2017	<ul style="list-style-type: none"> • Availability of Chair, Working Group Members, and WHPA Staff
5. Develop working group-approved Chapter 2 subsection: Identifying performance metrics section	Chair, Working Group Members, and WHPA Staff	Draft Subsection	March 31, 2018	<ul style="list-style-type: none"> • Availability of Chair, Working Group Members, and WHPA Staff
6. Develop working group-approved Chapter 2 subsection: Potential value propositions	Chair, Working Group Members, and WHPA Staff	Draft Subsection	September 30, 2018	<ul style="list-style-type: none"> • Availability of Chair, Working Group Members, and WHPA Staff
7. Develop working group-approved Chapter 2 subsection: Develop Four - Eight example narratives for specific market segments/building types and customer perspectives section	Chair, Working Group Members, and WHPA Staff	Draft Subsection	November 28, 2018	<ul style="list-style-type: none"> • Availability of Chair, Working Group Members, and WHPA Staff
8. Incorporate into full Standard 180 User Guide	Chair, Working Group Members, and WHPA Staff	Full Standard 180 User Guide ready for CQM Committee Review	December 31, 2018	<ul style="list-style-type: none"> • Availability of Chair, Working Group Members, and WHPA Staff

Jan Peterson - The initial discussions with customers were intended to help identify important goals they wanted to implement which would be the basis for their “value proposition,” the justification for implementing a more comprehensive approach to maintenance. Jan proposed that she and the group expand and provide some further explanations for the interview process flow charts which could lead into examples of maintenance plan development discussions, the narratives. She intended to further develop the flow charts to help members draw on the kinds of questions which should be raised in the narratives they would develop.



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Jan Peterson – one big challenge for the group was how to offer suggested metrics in the narratives to track progress once goals were established. Writing narratives was very subjective when compared to some very specific or detailed metrics for tracking goals. She thought that including some examples of metrics within the narratives and an explanation of the role of metrics and goals was valuable. That could be folded into the larger user guide effort with the other WG in the future.

Jan Peterson – she was concerned about whether the WG members had reviewed the current draft document and were prepared to work on narratives outside of WG meetings. She wondered whether combining the two WGs might provide some advantage even before the end of the year.

EMI Reports – Maintenance Forums for End Users and Contractors – Jan Peterson

Not addressed.

Maintenance Program Performance Objective Metrics – Jan Peterson & Rick Danks

Not addressed.

Closing Comments/Adjournment

Jan Peterson Chair – she proposed the group meet next on Tuesday September 26 at 10 am PT. They'd review the revised work product and any new draft narratives members developed.

The meeting was adjourned at 11:08 am PDT.

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Action Items and Key Decisions

Aug. 29 ACTION: Bob Sundberg would revise the decision-maker/responsible party & market segment/facility type matrix/grid to provide two initial columns. They would represent 1) facilities with in-house maintenance staff and 2) facilities which contracted maintenance services. Bob asked Rick Danks to provide a draft for the column where in-house staff provided maintenance services.

Aug. 29 ACTION: Bob Sundberg agreed to revise his draft narrative to include why this owner was willing to meet with the contractor – they'd not met someone who utilized a structured approach to identifying goals and outlining a maintenance program before.

Aug. 29 ACTION: Jan Peterson and Bob Sundberg would work together to fold in the excellent table/matrix revisions suggestions.