



## WHPA Goal 2: CQM Standard 180 User Guide Working Group Thursday June 9, 2015 Meeting Notes

### Call to Order

The first planning meeting was called to order at 10:03 am PDT by Dale Rossi, Chair of this working group and a representative of Field Diagnostic Services Inc. (FDSI).

### Roll Call

The Chair considered one member of each organization to be a voting member for this new working group, He intends to work toward consensus on all decisions. 10 of 18 voting members in attendance would constitute a quorum. 11 voting members attended this meeting. In addition, 0 non-voting members, 1 guests and 1 staff were present for a total of 13 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 Staff, this group acts primarily by consensus.				
<b>CQM Maintenance Task Working Group Voting Members</b>				
ACCA (Air Conditioning Contractors of America)	Donald	Prather	Contractor Association	P
AHRI	Warren	Lupson	HVAC Manufacturer Association	
Aire Rite AC & Refrigeration	Don	Langston	Contractor (Nonresidential)	
BELIMO	Darryl	DeAngelis	Controls (Manufacturer or Distributor)	
BMI (BuildingMetrics, Inc.)	Pete	Jacobs	Energy Efficiency Program Consultant	P
CLEAResult (formerly PECD)	Michael	Blazey	Energy Efficiency Program Consultant	P
FDSI (Field Diagnostic Services Inc.)	Dale	Rossi	Third Party Quality Assurance Providers	P
GWP (Goodheart-Willcox Publisher)	Sandy	Clark	Educator, Trainer	P
Honeywell ECC, Commercial Buildings, Trade	Michael	Lawing	Controls (Manufacturer or Distributor)	P
HSGS (Honeywell Smart Grid Solutions)	Shayne	Holderby	Energy Efficiency Program Consultant	
Marina Mechanical	Denny	Mann	Contractor (Nonresidential)	
National Comfort Institute	Jeff	Sturgeon	Educator, Trainer	P
Richard Danks Consulting - FacilityPro	Richard	Danks	Other Stakeholder	P
SCE (Southern California Edison)	Steve	Clinton	California IOU	
Charles Segerstrom, Energy Efficiency Consulting	Charles	Segerstrom	Energy Efficiency Program Consultant	P
Tre' Laine Associates	Pepper	Hunziker	Energy Efficiency Program Consultant	P
UC Davis EEC (Energy Efficiency Center)	Kristin	Heinemeier	Research Organization	
Western Allied Corporation	Mike	Gallagher	Contractor (Nonresidential)	P
<b>CQM Maintenance Task Working Group Non-Voting Members</b>				
CLEAResult	Mike	Withers	Energy Efficiency Program Consultant	
HSGS (Honeywell Smart Grid Solutions)	Steve	Varnum	Energy Efficiency Program Consultant	
Lupson and Associates	Warren	Lupson	Other Stakeholder	
SCE (Southern California Edison)	Todd	Van Osdol	California IOU	P
SCE (Southern California Edison)	Scott	Higa	California IOU	
<b>CQM Maintenance Task Working Group Guests</b>				
California Public Utilities Commission (CPUC) - Energy Division			California PUC	
Adrienne Thomle, Consulting**	Adrienne	Thomle+		
<b>WHPA Staff (Non-Voting)</b>				
BBI (Better Buildings Inc.)	Mark	Lowry	WHPA Executive Advisor/BBI COO	
BNB Consulting/WHPA Staff	Bob	Sundberg	Energy Efficiency Program Consultant	P (scribe)
Empowered Solutions/WHPA Staff (WHPA Co-Director)	Shea	Dibble	Energy Efficiency Organization	



## WHPA Goal 2: CQM Standard 180 User Guide Working Group Thursday June 9, 2015 Meeting Notes

*\*\* Organization is Not a Member of the WHPA; + Individual is NOT Registered with the WHPA; <sup>(P)</sup> 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

Todd Van Osdol, SCE, attended at Scott Higa's request to provide commercial maintenance program coverage.

### New Business

None.

### Approve Previous Meeting Draft Notes

The June 2 meeting draft notes were distributed June 7. No revisions were received from attendees. The finalized meeting notes would be posted to the WHPA website by Bob Sundberg.

### ACTION Items

April 28 ACTION: Steve Clinton, SCE program training, agreed to seek out working group participants from the program side of their staff. No present. Ongoing.

May 26 ACTION: Todd Van Osdol, SCE, agreed to provide get together with Scott Higa to locate examples of the reporting tools which the program provided customers and examples of reports delivered to customers. To be provided at WG meeting dealing with customer facing reporting, topic #5.

STATUS: Todd had located several customer reports. He still needed Scott Higa's approval in order to share them with this working group. Dale Rossi suggested the SCE program customer reports be shared when the 5<sup>th</sup> topic was being addressed, customer facing reporting. To be provided at WG meeting dealing with customer facing reporting, topic #5.

May 26 ACTION: Todd Van Osdol, SCE, would work with Scott Higa to gather information obtained through EMI conducted customer interviews which revealed reasons why customers would consider continuing HVAC Optimization maintenance practices after IOU program incentives expired.

STATUS: Todd Van Osdol and Scott Higa would deliver those findings at the 4<sup>th</sup> topic meeting, communicating the value proposition.

May 26 ACTION: Pepper Hunziker would try to come up with HVAC system performance objective examples which had measurements and metrics which didn't need to be quantified or expressed with a number. Completed.

### 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.
Review User Guide Outline 6/2 meeting revisions	Dale Rossi	Reach agreement on decisions recorded in User Guide draft. Resolve any suggested further revisions.
Maintenance Program (HVAC equipment inventory and maintenance plan)		Outline what the WG intends to accomplish when they focus on this portion of Section 4.

**WHPA Goal 2: CQM Standard 180 User Guide Working Group  
Thursday June 9, 2015 Meeting Notes**

Set next meeting date/time, assign actions and proposed agenda and adjourn.	Chair, WHPA Staff	Clear understanding of member responsibilities for the next meeting. Next meeting date/time established.
---	-------------------	--

**User Guide Objectives, Scope and Target Audience – Dale Rossi**

The following list provided topics that the working group intend to explore in the current effort

1. Understanding performance objectives and condition indicators
2. Making a maintenance plan
3. Investigating unacceptable conditions and performance
4. Communicating the value proposition
5. Customer facing reporting

Dale Rossi, Field Diagnostic Services Inc. (FDSI), began the meeting with a review of the discussion at the two previous meetings which he'd divided into propositions to help facilitate what would be included in the user guide.

**Review June 2 meeting user guide outline revisions**

**Proposition 1**

The only acceptable performance objectives allowed by the standard are enumerated in the purpose statement. They are:

1. Acceptable thermal comfort
2. Acceptable energy efficiency
3. Acceptable indoor air quality

Discussion:

Dale Rossi framed the question into two parts. Should the overall goals from the standard purpose statement be required to all have performance objectives? Did any additional performance objectives need to fit under one of these three? Could additional performance objectives which didn't fit under these three be included in a Standard 180 based maintenance plan? The discussion at the June 2 meeting seemed to be a consensus of "no," performance objectives should not be restricted to these three goals or goal statements. These three were required, but one could add to them.

Dale asked whether you still needed to have a performance objective if a building or portion of a building was unoccupied?

Mike Gallagher, Western Allied, and Pete Jacobs, BMI, stated that they thought there would be no need, what was the point.

**Proposition 2**

Previously, the group had agreed that a performance objective needed to be expressed as a number, not just a subjective statement. Observations or measurements could then be monitored, recorded and trended.

**Proposition 3**

Previously, the group had agreed that when defining a performance objective, the source of the data needed to produce the metric must be defined. You needed to know where the number was coming from.

**Proposition 4**

The performance objective is an objective for the performance of the building. A similar concept applied to a unit is a condition indicator.

Previous discussion had produced agreement that no, there might be different performance objectives for different zones in a building (based upon usage).

## WHPA Goal 2: CQM Standard 180 User Guide Working Group Thursday June 9, 2015 Meeting Notes

Dale Rossi had an external conversation (outside the WG meetings) where the other party suggested that although there could be performance objectives for different zones within a building, there still needed to be an overall performance objective for the entire facility. The concern was that you might have a performance objective for just one zone and then a party might consider that they met the intent of Standard 180.

Pete Jacobs, BMI, responded that he thought you could have a building wide performance objective and then list exceptions for zones to which it didn't apply.

Bob Sundberg, WHPA staff, wondered whether some zones that were serviced by HVAC equipment excluded from the maintenance plan and service agreement could also be excluded from any condition requiring the statement of performance objectives?

Dale Rossi asked Richard Danks whether you could have a valid Standard 180 based maintenance plan which didn't include all of the HVAC equipment?

Mike Gallagher responded that it was fairly common to exclude HVAC equipment from a maintenance agreement and plan for various reasons. They might be planning to replace the unit in a few months and had decided to not spend any more money servicing it. He thought that it was perfectly valid to exclude a unit from a maintenance plan so long as it was noted that way as an exception.

Richard Danks, Richard Danks Consulting, agreed. What equipment was included in the maintenance plan was up to the stakeholders of the agreement. They could choose to exclude equipment within the boundaries of the building and that was perfectly valid.

### **Proposition 5**

The definition of performance objective definition in section 3 was flawed because it mixed condition indicator terms and issues with performance objective statements.

#### Working group's consensus:

The WG had decided that they would make a suggestion to the Standard 180 Committee that a new definition was needed for the term "performance objective" in Section 3.

### **Proposition 6**

Section 3 had no definition for condition or condition indicator.

#### Working group's consensus:

Definitions for condition or condition indicator need to be developed by the Standard 180 committee for Section 3 and suggested definitions should be presented to the Standard 180 Committee by this WG that would be consistent with Section 4.2.2.b Condition Indicators.

### **Proposition 7**

The condition indicators were the standards by which for any given task was defined, the acceptability or unacceptability of the condition needed to be determined. (Example: The condition of a belt or filter or if the coils are clean or not).

#### Working group's consensus June 2

Yes. The equipment to be maintained needed to be inventoried as a part of the maintenance program. A task list needed to be defined for each equipment type. For each task, at least one condition indicator must be provided that the service provider will use to judge the acceptability or unacceptability of the condition of the system, sub-system or part that is the subject of the task.

## WHPA Goal 2: CQM Standard 180 User Guide Working Group Thursday June 9, 2015 Meeting Notes

Dale Rossi had an external discussion regarding this proposal which had brought up two concepts. He asked attendees what they thought of the two aspects that needed to be considered for each condition indicator.

- 1) How to access the condition, whether visually or with some form of measurement.
- 2) Criteria needed to be established against which the condition would be judged acceptable or unacceptable.

Dale offered the example that for a particulate filter you'd have to first consider how to assess it. Was it a pressure drop across the filter or a visual assessment? Next, you'd have to have established what was the acceptable and unacceptable condition. What was the maximum acceptable pressure drop? For visual, was it 50%? 70%? More than the three month limit?

Richard Danks agreed. Whether the method of assessment was visual or a measure, the main point was that there was a discussion and agreement between the implementing party and the owning party about a condition to be tracked and the point at which an unacceptable condition was to be judged.

### **Proposition 8**

One desired outcome of this working group's effort is to make a template or other step-by-step process for establishing performance objectives and condition indicators

### Working group's consensus June 2

Agreed.

### **Maintenance Plan**

Dale Rossi proposed that from his understanding, the maintenance plan seemed to him to be the central concept of the standard. How should a user guide treat this? Was it possible that the whole job of the user guide revolved around how to make a maintenance plan? Was it fair to say that any other topics they might discuss were subtopics under making and executing a maintenance plan?

### Definitions for maintenance program, maintenance plan and inventory

Donald Prather agreed and said the from the beginning he'd thought that Section 4 was the guts and the rest was detail on what you needed to do.

Mike Gallagher thought that the maintenance plan in Section 4 was 80 to 90 % of the standard. It provided guidance more about process than a specific task. The rest was guidance about what you might do for a specific piece of equipment. In his mind the user guide should be about the maintenance plan with everything else being a subset.

Richard Danks suggested that in Section 4.2 of the standard, the maintenance plan was a subset of the overall maintenance program which would also include an inventory of the equipment to be maintained. He read 4.2 for attendees.

Dale Rossi agreed that there was such a description in Section 4 but that there was no such definition of a maintenance program directly stated in Section 3 Definitions.

Donald Prather, ACCA, corrected Dale that there was a definition for maintenance program but not one for maintenance plan. And, that the definition for maintenance program did not include the two elements which Richard had just quoted from Section 4.2.

Bob Sundberg, WHPA staff, suggested that the clear definition of the two elements of a maintenance program, the equipment inventory and maintenance plan, stated in 4.2 was missing in the maintenance program definition in Section 3. Maybe the maintenance program definition should be revised to state the two elements and the rest of the maintenance plan description in maintenance program definition should be moved to a definition for a maintenance plan and another definition be developed for equipment inventory for Section 3. A clear description of an inventory

## WHPA Goal 2: CQM Standard 180 User Guide Working Group Thursday June 9, 2015 Meeting Notes

was provided in Section 4.2.1 but there was no inventory definition provided in Section 3. That would link key definitions in Section 3 to the more detailed descriptions provided in Section 4 Implementation.

### Conclusion:

The group discussed this further and came to a common understanding that the overall document needed was for a maintenance program. Further, that that program was made up of 1) an inventory of equipment to be maintained and 2) a maintenance plan to guide implementation.

### Was a maintenance plan a building level or unit level document?

Dale Rossi then posed the question whether each individual unit required a separate documented maintenance plan.

Richard Danks suggested that all the equipment of a similar type which required that same maintenance tasks and implementation plan could be grouped. But, the maintenance plan was a unit level document even though a group might be scheduled to receive the same maintenance services.

### Difference between a responsible party and an authorizing party?

**4.1 Responsible Party.** The building owner shall be responsible for meeting the requirements of this standard. The owner may designate other parties that shall be authorized and contractually obligated to fulfill the owner's responsibility.

Donald Prather described the scenario being discussed about a corporate office owning property and contracting with another firm for facility management. The owner/corporate office would be the owner referred to in 4.1 and responsible for establishing and meeting the requirements of the standard. The facility manager or their firm would be the authorized party established to carry out the owner's maintenance program.

Dale Rossi then asked which of those two you would negotiate a maintenance agreement with?

Richard Danks agreed with Donald. He added that if the service provider was negotiating a maintenance agreement they might be working with a corporate or regional procurement department. The responsible party was responsible for putting a plan together on how they wanted their HVAC system maintained. There had to be a designated responsible party/person identified to start the program. It could be a facility management person, a procurement guy or other designated party depending upon circumstances.

### Inventory

Mike Gallagher said it was simply the list of equipment to be maintained under the maintenance plan. He thought that the degree of equipment detail, like a serial number, was left to the parties for discussion and a decision. At a minimum it had to list how many of each type of equipment were to be maintained.

Dale Rossi recalled their earlier agreement that a maintenance plan was a unit level document. Each piece of equipment had to have its own maintenance plan. It seemed to him that you'd have to provide a unique identifier for each piece of equipment. At a minimum he thought that would need to include make, model and serial number.

Mike Gallagher suggested that similar equipment with the same maintenance tasks could simply be numbered or named. Others with different maintenance requirements, like filter change schedules for units over a loading dock vs. those over office space, could be listed and just note that exception. In his experience the maintenance plan would note the common tasks and then you'd only have to list the exceptions to that. He thought that it would be a deviation from the intent of the standard to require a maintenance plan document for each piece of equipment. It would be sufficient to list the maintenance tasks for a group or class of equipment which all required those common tasks and then note equipment that had differing maintenance task requirements. Otherwise, maintenance plans and documents would be enormous and greatly redundant and impractical to produce or maintain.

## WHPA Goal 2: CQM Standard 180 User Guide Working Group Thursday June 9, 2015 Meeting Notes

Dale Rossi mostly agreed with Mike's explanation but insisted that the equipment inventory would include a list with the individual identifying information. The plan could note that all like units, like units 1 through 44, would all receive the identified maintenance tasks. Plan 1 could be for one group of units, plan 2 for another group of like units and so on. But the inventory list needed to include unique identifiers like make, model and serial number, maybe even unit number if established. Did the group agree? Was it sufficient to just list "six rooftop units" or did you have to list out those six units with make, model and serial numbers for each?

Donald Prather added that in Section 4.2.1 there was an even more detailed requirement than just listing units. "Components" of the HVAC system needed to also be inventoried. He also thought that the inventory needed to a detailed list of what was to be maintained.

### **4.2.1 Inventory of Items to be Inspected and Maintained.**

Components of HVAC systems that impact the building's *performance* shall be inventoried. This detailed list shall be used to establish unacceptable system condition indicators, *inspection frequencies*, and *maintenance tasks*.

Bob Sundberg, WHPA staff, agreed with Donald and thought he'd just identified how units with and without economizer systems, components of rooftop units, would help differentiate a group or class of equipment to be maintained.

Jeff Sturgeon, NCI, thought that there needed to be the additional information required as Dale suggested. Otherwise, there would be no way to tie the exceptions or different maintenance task requirements back to specific units.

Mike Gallagher thought, to answer Dale Rossi question posed earlier, that it was sufficient to list six rooftop units and tie that to a list of common maintenance tasks. Since this was a minimum standard, he didn't see the value for requiring the additional information. You could simply identify units as AC1, AC2 or some other simple system to list equipment with common requirements. Otherwise, if they required far more detail than spelled out in the standard, like capacities or rated efficiencies, they would start to sound like a utility program with all of its massive documentation requirements that really didn't add to the quality of the maintenance being delivered to owners. Like big government.

Richard Danks tended to agree with Mike Gallagher's argument for a minimum standard. You needed enough to differentiate between the assets to be maintained. How that would be designated should be left up to the parties involved and circumstances between owner and contractor or owner and staff. The minimum was to clearly understand this is what I've got and this is what should be done to it.

### Conclusion

No consensus about whether an inventory needed to go to the detail of make, model and serial number.

### Section 4.2.2 Maintenance Plan Development

Dale wanted the group to next address one phrase in this section regarding monitoring the results. If you looked at the documentation requirements of the current standard in Section 4.2.2.e, it was all focused on documenting the requirements of the maintenance tasks being completed. None of that addressed whether the performance objectives were being achieved or not.

The plan shall describe each required task, identify the party responsible for performing the task, specify the authorizing party, document its completion, and subsequently monitor the results.

Once the performance objectives were established, there didn't seem to be any guidance for how they would or should be monitored, followed-up or reported on. No instructions or suggestions to periodically revisit them with the

## WHPA Goal 2: CQM Standard 180 User Guide Working Group Thursday June 9, 2015 Meeting Notes

responsible party about status or about whether any were even being achieved. He thought the standard lost all of its effectiveness with that reporting, review and feedback loop being established. But, how could you have this spelled out in the user guide if it wasn't stated in the standard?

Mike Gallagher thought that if you had a good discussion up front with the owner, that should include a review process and schedule for whether the performance objectives were being met. He liked Dale's phrases about a period review. Something of that sort needed to take place to close that loop. He'd understood that this was something which should be taking place with the owner. But, he'd inferred it from his readings of the standard and hadn't realized that it wasn't specifically called out. That sort of guidance should absolutely be in the user guide.

Richard Danks reminded the group that in Section 4.4 it stated "the maintenance program shall be reviewed and revision shall be considered under any of the following situations:" That statement didn't give timeframes or detail out the nature of the review but the concept was addressed in that section, in his opinion.

Mike Gallagher agreed and said he'd always inferred the requirement for performance objective reviews to meet the standard. If the maintenance program was required to be reviewed, he believed that included the performance objectives. On second thought, he didn't think he was inferring anything.

Dale Rossi reminded the group that there were no performance objectives reviews required by any of the California IOU programs and after having studied the standard further, he understood how that could be considered perfectly reasonable. A standard written in code language didn't allow for such an inference. Dale based this on a re-read of Section 4.3 which only talked about inspection and maintenance tasks, not maintenance plan performance objectives.

Mike Gallagher referred to Section 4.2.2.e Documentation part c.

c. sufficient record detail and *verification* (written or electronic)  
to demonstrate implementation of the maintenance  
plan.

He felt this reference to "verification" was sufficient to require some sort of periodic review of status against the performance objectives goals. A user guide which pointed out methods would be very valuable.

Richard Danks offered that an AHU that was documented to meet its intended purpose fulfilled the intention of 4.2.2.e documentation. Dale Rossi disagreed and didn't believe that would address performance objectives established to support the primary goals of energy efficiency, IAQ and occupant comfort.

Dale suggested that if a rooftop unit was undersized for the space the maintenance inspection would report that the unit was working fine. But, if a performance objective had been established around occupant comfort and a metric around a reduced number of complaints per year, the performance objective would not be met because there would be chronic complaints. The technician who was doing the maintenance and judged the unit performing satisfactorily might not have even had access to the documents regarding the overall performance objectives and likely wouldn't be involved with records of the trend of increased occupant complaints or of a review of that trend with the owner. He probably wouldn't be reviewing utility billing or the trending of space temperature over time that would be the record of space temperatures where it was unacceptably uncomfortable for periods of times but maybe not occurring when he was onsite.

Donald Prather mentioned that Dale's example was exactly what Don Langston had been getting to about customer reporting regarding performance objectives. If there was no regular or scheduled review of the performance objectives, this was exactly what Don had indicated was a missing element in current IOU programs. If you wanted CQM practices to continue after the program incentives expired, you needed to have a process in place for showing owners the value of this approach, demonstrating how it was meeting and/or exceeding the goals set in the performance objectives.



## WHPA Goal 2: CQM Standard 180 User Guide Working Group Thursday June 9, 2015 Meeting Notes

Dale Rossi added, he thought that was Don Langston’s whole point in establishing this working group.

Richard Danks suggested that it was the owner who was in the better position to access their own utility bills and document progress of their energy efficiency related goals and any energy savings. He wasn’t convinced that most contractors were in the best position to collect and analyze that sort of information.

Bob Sundberg, WHPA staff, thought Richard had just identified one of the issues that resulted from the vagueness of the current standard that made it difficult to implement. Who was in a better position to access the necessary information and who would conduct metrics analysis of that information to determine how well they were performing compared to their goals. Those decisions needed to be established in the maintenance plan just like the decision about how much detail was needed in the equipment inventory. Maybe the owner provided the contractor’s staff with utility bills and the contractor analyzed it prior to a review meeting with the owner. Maybe the contractor was provided authorization to access that owner’s utility billing. The standard would allow any number of ways to accomplish this depending on who had the time and capability. But, the main point of the standard was that the discussion needed to take place that would set up responsibilities and a process for a review of the maintenance program. This user guide might point out several different ways this information gathering, review and analysis could be accomplished.

Mike Gallagher agreed and stated that in his opinion, that was the whole point of Section 4. The establishment of that kind of a process. The standard mandated that it needed to happen but provided very little guidance on how that might be accomplished. He agreed that that was the purpose behind establishing this user guide working group.

### Closing Comments/Adjournment

Dale commented that he’d listen to the recording and try to prepare to pick up the discussion at the next meeting.

the next week for Thursday June 16 at 10 am PDT. Their agenda would continue on development of the maintenance program in Section 4.

The Chair adjourned the meeting at 11:07 am PDT.

\* \* \* \* \*

ACTION Items listed on following page.

### Action Items and Key Decisions (not referenced above)

April 28 ACTION: Steve Clinton, SCE program training, agreed to seek out working group participants from the program side of their staff. No present. Ongoing.

May 26 ACTION: Todd Van Osdol, SCE, agreed to provide get together with Scott Higa to locate examples of the reporting tools which the program provided customers and examples of reports delivered to customers. To be provided at WG meeting dealing with customer facing reporting, topic #5.

STATUS: Todd had located several customer reports. He still needed Scott Higa’s approval in order to share them with this working group. Dale Rossi suggested the SCE program customer reports be shared when the 5<sup>th</sup> topic was being addressed, customer facing reporting. To be provided at WG meeting dealing with customer facing reporting, topic #5.

May 26 ACTION: Todd Van Osdol, SCE, would work with Scott Higa to gather information obtained through EMI conducted customer interviews which revealed reasons why customers would consider continuing HVAC Optimization maintenance practices after IOU program incentives expired.

STATUS: Todd Van Osdol and Scott Higa would deliver those findings at the 4<sup>th</sup> topic meeting, communicating the value proposition.



## WHPA Goal 2: CQM Standard 180 User Guide Working Group Thursday June 9, 2015 Meeting Notes