Oregon Department of Environmental Quality

# Meeting Summary

## Temperature Total Maximum Daily Load Replacement: Willamette Subbasins

### Rule advisory committee meeting #2
### Apr.6, 2023, virtual meeting (Zoom)

The video recording of this meeting is available from DEQ upon request. Email Willamette.TemperatureTMDL@DEQ.oregon.gov with your request for the video.

## List of attendees

**Rule advisory committee members:**

| | |
|---|---|
| April Snell (absent) | Oregon Water Resources Congress |
| Becky Anthony | Oregon Department of Fish and Wildlife |
| Carrie Sanneman | Multnomah County Drainage District |
| Dave Gilbey | City of Corvallis |
| Jackie White | Northwest Pulp and Paper Association |
| Al Johnson | U.S. Forest Service |
| Julia Bond | City of Portland Bureau of Environmental Services |
| Kathryn Tackley (absent) | U.S. Army Corps of Engineers |
| Lauren Poor | Oregon Farm Bureau |
| Mike Brown (absent) | Bureau of Land Management |
| Rich Wildman | Geosyntec Consultants for Oregon Forest & Industries Council and Oregon Farm Bureau |
| Olivia Jasper | Oregon Department of Agriculture |
| Rebecca McCoun | Oregon Department of Forestry |
| Sharla Moffett (absent) | Oregon Business and Industry |
| Susie Smith | Oregon Association of Clean Water Agencies |

**DEQ staff**
Ryan Michie, Andrea Matzke, Priscila Woolverton, Grace Goldrich-Middaugh, Evan Haas, Gene Foster, Michele Martin, Trina Brown, Rob Burkhart

**EPA staff**
Rebecca Veiga Nascimento

**Agenda**

| Time | Topic |
|---|---|
| 1 p.m. | Welcome, introductions, meeting agenda |
| 1:10 p.m. | Draft Total Maximum Daily Load rule, changes from meeting #1 |
| 2 p.m. | Draft Water Quality Management Plan, changes from meeting #1 |
| 2:50 p.m. | Break (5 min.) |
| 2:55 p.m. | Draft Fiscal and Economic Impact Statement |

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|---|---|
| 3:25 p.m. | Wrap up, next steps (including EPA comment) |
| 3:30 p.m. | Adjourn meeting |

## Meeting summary

Michele Martin started the meeting introductions and roll call of rule advisory committee members, reviewed logistics and ground rules for the meeting and discussed meeting materials that were posted on Mar. 27, 2023, in advance of the meeting. Michele continued with the project history and schedule. The meeting was opened for questions and there were no questions.

**Ryan Michie:** Overview of the TMDL changes from rule advisory committee meeting #1 (see presentation slide 11).

1. Cool water species narrative was left out from the first draft and added to the second.
2. Provided additional information in section 6 about water quality data evaluation and modeling.
3. Previously had Human Use Allowance (HUA) of .05 for buildings and transportation corridors. Clarified that HUA is for existing structures and buildings.
4. Included more specificity about NPDES point sources.
5. Clarification about HUA and load allocations implemented in terms of surrogate measures.
6. Addition of information about site specific effective shade targets including addition of an equation
7. Removed a table that was added from the Lower Columbia-Sandy Subbasin
8. Clarification about the margin of safety narrative
9. For readability, moved tables from effective shade to appendix

Ryan continued with presentation slide 12 changes to the human use allowance and waste load allocations.

**Susie Smith:** Correction – from the HUA for some points sources from 0.1, not 0.01 to 0.075 deg-C.

**Michele Martin:** We will make the change on the slide to .1 prior to posting the slides online after this presentation.

**Ryan Michie:** Yes, it's going down to a proposed 0.075 deg-C. For a couple of rivers with multiple discharges, the draft TMDL presented at RAC 1, DEQ used a similar approach to the 2006 TMDL and divided the human use allowance between the dischargers to the same waterbody. For RAC 2 Instead, of dividing the human use allowance, it was increased so every point source on these streams has equal HUA discharge of 0.075 deg-C. This was done to consider the potential cumulative warming.

Another change is to International Paper in Springfield. DEQ added an allocation for outfall 003. Outfall 003goes to a canal that flows to a park and others that go to the McKenzie River. The McKenzie River outfalls will be addressed in the Willamette mainstem TMDL.

Removed a few NPDES point sources that no longer hold a permit.

Ryan described how the effective shade curves apply to the basin and waterbodies that don't have site specific effective shade curves. Site specific shade curves are those where DEQ has calculated it directly with the model and presented that information for each DMA and applies to specific areas. There is a map that shows this. Ryan continued with more information about the basis for this analysis. DEQ didn't change anything from 2006 TMDL but pulled into the current proposed TMDL. Ryan showed table 12.1 from the TMDL which is how to look up the target shade value is for any given location. Ryan then showed the web map for effective shade and described how the map works. He illustrated on the map how to differentiate between the shade curves vs. site specific targets. DEQ has a map of the model results with site specific models that can be provided if requested as an Excel spreadsheet or a GIS file.

RAC member commented that a web map would be beneficial with this information.

**Ryan Michie:** continued with presentation slide 15 regarding the recommendation from DEQ to have a 120-foot buffer rational. DEQ did a literature review to answer the question *What buffer width treatment minimizes stream temperature increases?* Acknowledged that a lot of the work was built upon Oregon Dept. of Forestry who completed a lot of the work about this topic and DEQ is building on that work. Also, some of the information DEQ is using was compiled by Peter Leinenback, EPA from 2013. The conclusion was based on no increase in temperature or reduction in shade; no change in temperature when the buffer is there. The drivers for the 120-foot buffer width treatment were made in consideration of the information and any other consideration would need to have a demonstration or measurement to be considered. Presentation slide 17 shows the effective shade response from buffer width treatments.

**Rich Wildman:** When showing the map and the large green areas, there are mainstem tributaries; how are they handled? In the site-specific models, assuming Heat Source, what about the really small tributaries that are not modeled? Like the south fork of the Santiam? How are the shade targets for really tiny areas modeled for shade specific areas?

**Ryan Michie:** Tributaries and streams mapped are included in the model. That includes larger and smaller rivers. The shade on those rivers source information is LiDAR data, which is a high-resolution elevation and canopy height data. The model uses that to develop the amount of solar radiation flux that is hitting the surface. That process is the same for larger or smaller rivers. The smaller rivers may have more shade without as much canopy coverage. Remember on the map the jagged edges are there because that is where the LiDAR captures the information.

**Susie Smith:** A few questions – how you dealt with shade differs from the 2006 where a 0.05 allocation was given to the nonpoint sources, which provides for consideration of constraints to achieving full shade and the dynamic nature of riparian corridors and also provides for allowance of water quality trading for point sources. In the meantime, there are a bunch of larger jurisdictions that collected a bunch of data on constraints to achieve full shade and provided those reports to DEQ. I don't recall what the average percent of shade achievement was provided, but it wasn't 100 percent shade and there are all kinds of documented constraints that prevent them from achieving 100 percent shade. What changed between 2006 and now that lead you to change .05 to a 0 allocation, and understanding that achieving 100 percent shade isn't physically possible and what are the implications of that and what does that mean for water quality trading? How did DEQ process that? Evolution of thinking? Did you look at the constraint information as part of the implementation plan requirements? Concerns about unintended consequences and unachievable targets?

**Ryan Michie:** One of the differences from the Willamette Basin 2006 TMDL specifically, most of the tributaries were provided a nonpoint source load allocation equivalent to 0.05 deg-C increase. That is what we call a sector allocation to all nonpoint sources. The TMDL did not provide a lot of clarity about which nonpoint sources that allocation would be specifically attributed to. There are a lot of different types of nonpoint sources and there were questions about which nonpoint sources were given that allocation. For this TMDL, some nonpoint sources were given zero and some were provided an allocation. In the HUA tables in section 9.1, we tried to be more specific about which types of nonpoint sources could access that HUA. Generally, we provided 0.05 deg-C to water management activities and water withdrawals. We also provided 0.02 for the loading from transportation corridors as well as existing buildings and utility infrastructure. Those types of nonpoint source sectors were given an explicit allocation in this TMDL. Other sources not connected to transportation, a building, or a utility structure is where the allocation given was zero, which means there shouldn't be solar loading from anthropogenic removal of that vegetation. We know that roads are difficult to move or deal with. Considering these complications is part of the rationale for why we provided those specific sectors HUA allocations.

**Susie Smith:** Curious if the folks involved in developing these allocations if they reviewed the constraint reports; guessing it's not limited to roads and there are limitations about providing shade where they are not feasibility practical and possible.

**Ryan Michie:** I don't recall seeing those reports, but I will if they are accessible. Do you mean 100 percent effective shade?

**Susie Smith:** Yes.

**Ryan Michie:** I don't think there is a lot of places where the effective shade target is 100 percent effective shade. In most cases for larger rivers it's not 100 percent. One of the things we did in this TMDL is provide an equation that may help address imperfect information about the shade targets e.g., if there are errors in the mapping, we tried to accommodate that in the rule to accommodate changes to the targets based on new information. We are trying to improve upon that in this TMDL.

**Susie Smith:** How does this work with the water quality trading for point sources?

**Ryan Michie:** I'll let the basin coordinators respond to water quality trading.

**Michele Martin:** Asked committee members for a "thumbs up" to agree (or not) about moving on from water quality trading for the moment to get to the Water Quality Management Plan changes from the previous meeting. Seeing many in agreement with moving on the WQMP, Michele introduced Priscilla Woolverton, DEQ basin coordinator.

**Priscilla Woolverton:** There are 135 entities in Appendix A of the WQMP that are Responsible Persons or Designated Management Agencies. Presentation slide 23 shows the agencies removed from Appendix A following RAC 1 for reasons on the slide e.g., unintentional named RPs and DMAs such as sovereign tribal nations, unincorporated cities, etc. Some were removed after looking at the DMA mapping results. Some didn't have ownership or jurisdiction on streamside areas within 150 feet of a stream and removed those entities in the WQMP. Removed a few entities through the mapping exercise who "generally" owned or managed streamside areas but were unable to attribute which entity was specifically the owner. Cities were removed because they were unincorporated and were not intended to be included in the first place, or they were cities that upon further inspection didn't have ownership within 150 feet of the stream withing the scope of the TMDL. The water conveyance entities removed didn't have discharge to waters of the state.

Priscilla mentioned there was no feedback from the RAC 1 meeting regarding entities listed in Appendix A in the first draft of the WQMP.

**Carrie Sanneman:** Only MCDD is listed and is functionally appropriate, because they do manage other drainage district and she wanted to connect with DEQ if and how they should be acknowledged.

**Priscilla Woolverton:** Continued with presentation slide 25 for Responsible Persons or DMAs that are listed in the first draft of the WQMP and remain but are not required to submit an implementation plan at this time. The reasons to not require an implementation plan are on the slide and include needing more clarity about what types of measures or actions would be required based on considerations about structural integrity, how easements work, and safety concerns or DMAs that implement shade measures through another TMDL (were not required at this time to provide an implementation plan). Priscilla emphasized that entities named in the WQMP and are not required to provide an implementation plan at this time be required to provide an implementation plan if additional information is available and it seems responsible and relevant to submit an implementation plan, then DEQ may revisit and require implementation plans in the future.

DEQ did not get feedback from the previous RAC meeting about management strategies.

**Rebecca McCoun:** Reviewed the model map that Ryan showed. Is the expectation that each one of those are validated? I am trying to understand what is being asked of us with regards to the modeled areas.

**Priscilla Woolverton:** Noted that this question will be answered briefly on the next slide. Table 2 had changes from the first WQMP draft meeting based on RAC input (presentation slide 27). Updated Table 2 regarding protection of cold-water refuges and noted that permits may be needed for channel modification work. Added that DMAs need to conduct site-specific evaluations of streams rather than relying only on DEQ guidance in the WQMP. There were good examples of site-specific examples given by RAC members that supported prioritization and specific site actions for riparian sites.

DEQ did not get feedback from the first committee meeting and therefore, did not make changes to prioritization areas for restoration projects. The goal is for DMAs to determine where priority riparian restoration can take place. This speaks to Susie Smith's comment about conditions that may prevent certain restoration activities and DEQ acknowledges that and are aware of that and while DEQ's modeled shade gaps and look up tables are a good place to start, it requires DMAs to get out on the ground and assess for themselves where riparian restoration can take place and where it can be successful. There may be areas that DEQ would like to see shade go in where it may not be feasible for any number of reasons.

DEQ is looking to DMAs to perform an assessment of shade on the ground in site-specific areas and DEQ is requiring that DMAs select from any methods (presentation slide 29) to use assessment methods for response brough up in this call and noted from the previous meeting. For DMAs that do not or can't perform a site-specific method, they can use the 120-foot width buffer zone from the stream bank that DEQ is using from literature reviews.

**Rich Wildman:** Tables in the WQMP plan section 9, shade gaps for different DMAs for the entire area. Can you explain about site specific locations; are DMAs meant to resolve specific shade at specific locations, or the average shade gap in the tables? (Redline track changes version, page 43 of the document).

**Priscilla Woolverton:** Provided for conversation as an example of the City of Fairview; the shade gap of 33 percent is a mean taken over their entire jurisdiction where they have an ability to influence or regulate activities in the riparian areas. It doesn't represent where on the ground they can plant trees for shade. They need to get out on the ground and determine where they can prioritize riparian efforts and where they can plant trees to create shade on the stream.

**Rich Wildman:** If they do it a lot in some areas and not in others, and they get the shade gap down to zero, is that okay, or is that not adequate because DEQ is looking at the specific locations or nodes where it was developed?

**Priscilla Woolverton:** There is a relationship between the TMDL and the WQMP to achieve load allocations. DEQ acknowledges that in real life on the ground, DEQ cannot achieve the specific shade target at every place on the streams because of certain conditions or constraints. DMAs who are implementing their plans, are required to do performance monitoring. Looking for prioritized areas for planting trees and are actively making progress to achieve the work identified in the implementation plan. Over time, DEQ will decide if that is achieving shade targes and load allocations. That comes with analyses over time.

**Rich Wildman:** Thank you for that.

**Ryan Michie:** If the question is how DEQ evaluates the attainment of the shade allocation target, the answer is in the past, DEQ used the mean in the context of the overall TMDL. Sometimes there is site-specific information and evaluation. For evaluating the targets overall, DEQ looks at the mean.

**Rebecca McCoun:** Looking at presentation slide 29, ODF does not have a rule or authority to go on private landowners' property to do a Solar Pathfinder or (an ODF) rule that says you need to plant a 120-foot buffer. When it comes to implementation, if it's outside of the Oregon Forest Practices Act rules, and there is no forest operation occurring, we will need to rely on partners to encourage private landowners to plant, because we don't have the authority. When you say we must get tress on the ground it makes me nervous, because we don't have the authority to make someone who doesn't have trees to plant trees. It's the way you are phrasing it, sets us up to fail, especially given the Willamette and the three-year implementation process.

**Priscilla Woolverton:** We hear that. We are presenting that streams that are too warm and trees will make them cooler and riparian restoration has to happen and it has to happen on private property. ODF and ODA, and other entities help to regulate; we are telling DMAs what has to be done to meet the TMDL, but we are not telling you exactly how to do that. If it's through a regulatory or voluntary mechanism, that works. Trees have to get on the ground, and it includes private landownership to reach our goals.

**Rebecca McCoun:** Wouldn't DEQ petition the Board of Forestry to chnage the rules? I feel like it's going that way. Instead of us going through this effort, why doesn't DEQ petition the board that 110-foot buffer effort isn't enough.

**Gene Foster:** This is an option under our (DEQ) rules to have ODF to develop a TMDL implementation plan that can rely on a combination of regulatory and voluntary practices for making practices toward TMDL shade allocations. We can certainly rely on voluntary measures as long as there is progress toward achieving the allocations and that requires monitoring to do that. Certainly, it's within our administrative rules and statutes if DEQ doesn't see progress we can petition the Board of Forestry and that can happen in the future, but for now this is the approach we are taking.

**Olivia Jasper:** In response to Rebecca's questions from the perspective of another DMA, ODA is the DMA on a bunch of these. Mercury is easier because we have regulatory rules. Temperature is a lot trickier because we don't have regulatory rules such as requiring 120-foot buffer. After talking with DEQ to help make sense of this between our two entities, the best place of common understanding that we came to is that [DEQ] can't require people to do this, but that we pay attention to and advocate for voluntary measures and there is a lot of stuff built into the WQMP that allows us to assess the amount of success we have been able to achieve and change our targets based on that. So, if you can only do a certain percent in certain time period, then you can say "this what we can do in this amount of time" for adaptive management and lean on that to do our best.

**Michele Martin:** Read Susie Smith's chat - Municipal DMAs also do not have the authority to require tree planting, unless a landowner is applying for some permit that triggers development code ordinances, and landowners don't have to participate in voluntary restoration projects. This is one of the constraints the municipalities would share.

**Priscilla Woolverton:** We are aware of that constraint. Since the 2006 TMDL, most municipalities prioritized riparian restoration efforts on publicly owned lands and used voluntary measures to engage and sometimes incentivize riparian plantings on private properties. We expect that some of those same tools will be used in the adoption of this TMDL. I think what we are highlighting that there isn't a lot of regulation in the riparian areas in the private lands in the basin and this presents a lot of challenges in getting trees planted in those areas. We need to be thinking and talking about that. The final note on the slide is about the assessment completion dates.

**Rich Wildman:** Regarding the 120-foot buffer required if there was not site-specific measurement or modeling. Does that 120-foot buffer apply for all streams? Would DEQ consider having some adjustment in the buffer size for smaller waterways, or would that need to be proven on the ground via the first or third options [on the slide]?

**Priscilla Woolverton:** The 120-foot buffer is a general number taken from a literature review and is there to use if folks don't want to use site-specific assessments. If there is a smaller buffer width that DMAs want to recommend, the assumption is that they did the assessment and determined the buffer width is too big.

**Rich Wildman:** Sounds like it's an incentive to the shade assessments if one believes the 120-foot buffer width is too wide for a tiny creek.

**Julia Bond:** Clarifying question about the assessments; 120-foot buffer is based off of the literature that at that point it would be sufficient not just for shade, but also local changes to the dynamics of air temperature and movement that would keep a stream from warming. Clarifying assessment is not about assessing that whatever the riparian buffer width would be sufficient to prevent warming? Or sufficient to achieve the system potential shade based on that specific location?

**Priscilla Woolverton:** The shade assessments are to determine the current condition and the restored condition.

**Julia Bond:** The value in the literature review was that with a 120-foot buffer a stream would not be warming, but that when getting the right amount of shade, that a smaller buffer width may potentially be able to provide

100 percent of the effective shade at that is possible specific location. It's not the same as the guaranteeing that that shade is sufficient to prevent the stream from warming. My clarification is that when talking about the assessments we are focusing on for this particular site is that if we plant all the trees possible, that it provides the amount of shade possible and not to prevent the total warming.

**Priscilla Woolverton:** The goal with the assessment is to determine the amount of shade that can be provided on that stream.

**Ryan Michie:** In the TMDL, the goal and the objective is the temperature and to minimize the temperature increases. It's often difficult to figure out. That is why we have surrogate measures. To have a measure that is easier to measure and implement than a loading. The purpose is to meet the shade targets and to assess how close you are to meeting the shade targets, for nonpoint source.

**Julia Bond:** I wanted to confirm that this is shade possible, not some temperature modeling that it's the right amount of shade.

**Gene Foster:** Doing a shade analysis is one thing, and also including the temperature with the additional cost and work.

**Julia Bond:** And potentially beyond what you are asking DMAs to do.

**Priscilla Woolverton:** Continued on presentation slide 30 about DMA required performance monitoring and water quality monitoring.

**Rich Wildman:** Do you foresee that this expanded temperature monitoring could provide data that would allow presently 303(d) listed streams to be delisted? If the streams are on the 303(d) listed, and not subjected to a TMDL.

**Priscila Woolverton:** The Integrated Report does have a methodology for delisting streams. These monitoring data would be included in the Integrated Report process and these data like other monitoring data would be used for evaluating if water bodies could be delisted.

**Rich Wildman:** We talked about delisting something that is in Category 5 that doesn't have a TMDL, and once it does and it goes to Category 4, can it move back to Category 2?

**Gene Foster:** According to the assessment methodology, if the stream is achieving standards it moves to Category 2. The TMDL does stay in place even if the stream moves into Category 2, because those are the actions needed to bring the water body into compliance.

**Rich Wildman:** I encourage DEQ to make sure the monitoring plans are consistent with what the Integrated Report methodology expects. It would be a disappointing lack of agreement between the TMDL program and Integrated Report program if the measurements were different. If those could be cross walked that would benefit everyone.

**Priscilla Woolverton:** Continued with presentation slide 31 about proposing DMAs enter temperature related restoration activities into OWRI or other DEQ-approved publishing assessable databases. Presentation slide 32 was about the schedule for implementation plan submittal. The plans are proposed to be due 18 months after EQC adoption of the Willamette Mainstem Temperature TMDL in Feb. 2025. Presentation slide 33 included the identification of a timeline for attaining water quality standards. DEQ is asking RAC members about recommendations about what a reasonable timeline for achieving water quality standards based on the surrogate shade measures that DMAs are required to implement.

**Michele Martin** asked for any comments. There were none. A five-minute break followed. After the break, the committee was asked about the fiscal impact statement. Presentation slide 36 provided background on the fiscal impact statement sections. Presentation slide 37 noted the changes from rule advisory committee

meeting #1 to meeting #2 rule advisory committee meeting. Michele asked the committee the following questions on presentation slide 38:

1. Will the draft rule have a significant adverse impact on small businesses?
2. If a significant impact is identified, how could DEQ reduce the fiscal impact on small business (ORS 183.333 and 183.450)
3. Will the proposed rule impact racial equity?
4. What are additional considerations for environmental justice for this draft rule?
5. What types of entities will be impacted by the proposed rule?
6. How and to what extent will the proposed rule have a positive, negative, or no impact on these entities?

**Olivia Jasper:** The amount of land in the TMDL area used for agriculture, and the amount of land that was in the riparian buffer area – that in and of itself is impacting small businesses, and small businesses that are agriculture disproportionally because of course, the land along the river would historically be agricultural land and I spoke to the SWCD and the SWCD board and they didn't assess that the agriculture land owners affected by the TMDL area were disproportionally affected were people of color or underserved communities and to me that was most important that it wasn't disproportionally affecting people who have been historically oppressed or would incur additional financial burden as an underserved community. I think it should be noted that the very nature of looking at privately owned land riparian area is going to affect small businesses, a very specific wedge within small businesses, affecting farmers, because it's on the river and historically going to be agriculture.

**Michele Martin:** Any other comments? None. If there are comments, committee members have until Apr. 14 at which time DEQ will begin preparing documents for public notice.

**Rebecca Veiga Nascimento, EPA:** EPA Region 10 coordinator. Goal with all TMDL projects is to work directly and early and often with state partners. That is the case with these TMDLs. DEQ and EPA are working closely together for a number of years including the QAPP and we have been working together regularly including the modeling that provides the scientific foundation for this TMDL, and EPA and DEQ have been overseeing that work together. This process with coordination and cooperation allows us to highlight any issues with the TMDL along the way and sets EPA up to have a smooth review of the TMDL. When EPA is reviewing the TMDL, EPA is ensuring all of the required components are accounted for, including if the TMDL is using the correct water quality standards, are the allocations assigned in the TMDL going to meet the water quality standards, is there an allocation for every impairment and is reasonable assurance included. Also looking at TMDL implementation; looking if the TMDL allocations clearly communicated and transparent for all DMAs to know what they need to do for implementation and does the WQMP lay out steps that will lead to successful TMDL allocations to be achieved. Reasonable assurance is part of EPA's review and approval process. Reasonable assurance is when a TMDL is being developed with point and nonpoint sources, the WLA are based on the assumption that nonpoint source allocations will occur in the TMDL and so the TMDL should provide reasonable assurances that control measures for nonpoint sources will be achieved. This TMDL revision is being done in response to a lawsuit and the timeline we are working under is court ordered. As a result, the development and adoption of the TMDL is under a quick pace and DEQ and EPA are working together to meet the court ordered schedule. EPA values its relationship with DEQ and look forward to continued cooperation.

**Rich Wildman:** Thank you for the background. I know it's not in your control if you get sued after this TMDL occurs, but have you done analysis to know if this TMDL would be defensible under another lawsuit?

**Rebecca Veiga Nascimento:** Everything we are doing is making sure we have a defensible TMDL. It's important to DEQ and EPA because we are partners in this. Going back to the QAPP that is guiding the modeling effort and the modeling to arriving at the point where we are at now, I think we are on our way. Once it's approved by the EQC and then EPA, we may be on solid ground, but someone can sue us no matter what.

**Michele Martin** provided next steps on presentation slide 39.

Meeting adjourned at 3:24 p.m.

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**Translation or other formats**

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