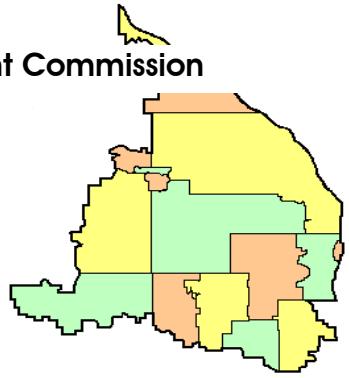
Shingle Creek Watershed Management Commission
West Mississippi Watershed Management Commission

3235 Fernbrook Lane N • Plymouth, MN 55447
Tel: 763.553.1144 • Fax: 763.553.9326
Email: judie@jass.biz • Website: www.shinglecreek.org



MINUTES
Regular Meeting
January 8, 2015

(Action by the SCWMC appears in blue, by the WMWMC in green and shared information in black.
*indicates items included in the meeting packet.)

I. A joint meeting of the Shingle Creek Watershed Management Commission and the West Mississippi Watershed Management Commission was called to order by Tina Carstens, Chair, on Thursday, December 11, 2014, at 12:49 p.m., at the Clubhouse at Edinburgh USA, 8700 Edinbrook Crossing, Brooklyn Park, MN.

Present for Shingle Creek were: David Vlasin, Brooklyn Center; Tina Carstens, Brooklyn Park; Janet Moore, Crystal; Karen Jaeger, Maple Grove; Jeff Johnson, Minneapolis; Bill Wills, New Hope; Daniel Spanier, Osseo; Dawn Swanson, Plymouth; Wayne Sicora, Robbinsdale; Charlie LeFevere, Kennedy & Graven; Ed Matthiesen and Joe Bischoff, Wenck Associates, Inc.; and Judie Anderson, JASS.

Present for West Mississippi were: David Vlasin, Brooklyn Center; Tina Carstens, Brooklyn Park; Gerry Butcher, Champlin; Karen Jaeger, Maple Grove; Daniel Spanier, Osseo; Charlie LeFevere, Kennedy & Graven; Ed Matthiesen and Joe Bischoff, Wenck Associates, Inc.; and Judie Anderson, JASS.

Also present were: Andrew Hogg, Brooklyn Center; John Roach and Jesse Struve, Brooklyn Park; Todd Tuominen, Champlin; Wayne Houle, Crystal; Rick Lestina, Maple Grove; Bob Paschke, New Hope; Ben Scharenbroich, Plymouth; Richard McCoy, Robbinsdale; and Steve Christopher, Board of water and Soil Resources (BWSR).

II. Agendas and Minutes.

Motion by Swanson, second by Johnson to approve the **Shingle Creek agenda.*** *Motion carried unanimously.*

Motion by Butcher, second by Vlasin to approve the **West Mississippi agenda.*** *Motion carried unanimously.*

Motion by Johnson, second by Swanson to approve the **minutes of the December 11, 2014 Shingle Creek regular meeting*** with the following correction:

IV. Open Forum.

~~Moore~~ Jaeger queried the use of potash in the control of zebra mussels.

Motion carried unanimously.

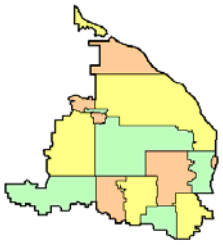
Motion by Butcher, second by Vlasin to approve the **minutes of the December 11, 2014 West Mississippi regular meeting*** with the same correction. *Motion carried unanimously.*

III. Finances.

A. Motion by Wills, second by Moore to approve the **Shingle Creek Treasurer's Report.*** *Motion carried unanimously*.

Motion by Vlasin, second by Johnson to approve the **Shingle Creek January claims.*** Claims totaling $22,066.29 were *approved by roll call vote:* ayes – Vlasin, Carstens, Moore, Johnson, Wills, Spanier, and Swanson; nays – none; absent – Robbinsdale.

[Jaeger arrived 12:52 p.m.]



B. Motion by Butcher, second by Vlasin to approve the **West Mississippi Treasurer's Report.*** *Motion carried unanimously.*

Motion by Butcher, second by Vlasin to approve the **West Mississippi January claims.*** Claims totaling $7,591.98 were *approved by roll call vote:* ayes – Vlasin, Carstens, Butcher, Jaeger and Spanier; nays – none

IV. Open Forum.

Moore questioned the feasibility of requiring ordinances for nondischarge from roofs. Staff responded that it is expensive to add cisterns and the design would have to factor in water quality benefits. Cisterns are sometimes used by water-conscious individuals, but due to their small scale they have minimal water quality benefits.

V. Project Reviews.

A. SC2014-16 I-494 Lane Widening, Maple Grove and Plymouth.* Construction of northbound and southbound I-494 temporary and final general purpose lanes between I-394 and I-94. Shingle Creek watershed boundaries begin 300 feet north of CSAH 9 and extend to I-94. Following development, the site will have an increase of 10.82 acres of impervious surfaces. A complete Project Review was received December 16, 2014.

To comply with the Commission's water quality treatment requirement, the site must provide ponding designed to NURP standards with dead storage volume equal to or greater than the volume of runoff from a 2.5" storm event, or BMPs providing a similar level of treatment - 80-85% TSS removal and 50-60% TP removal. Runoff from the site is proposed to be routed to numerous wet ponds and filtration basins before entering either Bass Lake, Pike Lake or Cedar Island Lake, The applicant meets Commission water quality treatment requirements.

Commission rules require the site to infiltrate 1.0" of runoff from new impervious area within 48 hours. The new impervious area on this site is 10.82 acres, requiring that 0.90 acre-feet be infiltrated within 48 hours. The applicant proposes to filtrate and infiltrate throughout the project boundaries where feasible. The proposed drainage plan meets Commission requirements.

The NWI does identify wetlands in the project area but no construction is proposed. There are no Public Waters on this site and no regulatory floodplain in the project area.

An erosion control plan was submitted with the project review, and includes rock construction entrance(s), perimeter silt fence, slope checks, and native seed specified on the pond slopes. The erosion control plan meets Commission requirements.

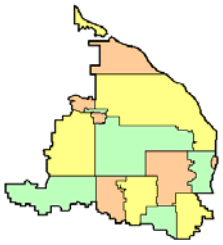
Public information meetings on the project have been held in November 2013, January 2014 and special meetings for Cedar Island Lake residents during the summer of 2014.

Motion by Moore, second by Swanson to advise the cities of Maple Grove and Plymouth that approval of SC2014-16 is granted, contingent that the detailed calculations used to determine phosphorus loadings be provided. *Motion carried unanimously.*

B. SC2014-17 Menards, Brooklyn Park.* Demolition of an existing store, warehouse/pallet racking, parking lot and utilities. Construction of a new Menards store with the same elements at the northeast corner of Brooklyn Boulevard and County Road 8. Following development, the site will be 92% impervious, an increase of 0.9 acres. The Commission reviewed the existing structure and site in 1986. A complete Project Review sans the review fee was received on December 22, 2014.

To comply with the Commission's water quality treatment requirement, the site must provide ponding designed to NURP standards with dead storage volume equal to or greater than the volume of runoff from a 2.5" storm event, or BMPs providing a similar level of treatment - 80-85% TSS removal and 50-60% TP removal. Runoff from the site is proposed to be routed to the Stormtech chambers under the north side of the parking lot. The site has an existing pond but the pond area will be used as additional parking with treatment obtained through the Stormtech units. The project meets the Commission rules for water quality treatment.

*items are included in meeting packet



Commission rules require that site runoff be limited to predevelopment rates for the 2-, 10-, and 100-year storm events. The applicant did not use the updated Atlas 14 runoff values for the site. The 2-, 10- and 100-year runoff values should be 2.87", 4.28" and 7.34", respectively. The rate control was sized using the TP-40 precipitation volumes. Therefore, the site does not meet the Commission rate control rule. However, there appears to be adequate space to enlarge the Stormtech chambers to meet the Commission rule to account for the increase in precipitation volume.

Commission rules require the site to infiltrate (or filtrate if site constraints exist) 1.0" of runoff from new impervious area within 48 hours. The impervious area on this site is 11.6 acres, requiring that 0.96 acre-feet be infiltrated within 48 hours. The applicant proposes to filter the stormwater using Stormtech underground chambers. By observation, based on the existing pond being dry the majority of time, the Stormtech chambers will filtrate in the required time. Current design meets Commission requirements.

The NWI does not identify any wetlands on site. There are no Public Waters or floodplain on this site. There is a gas station on the northwest corner of the property but this project will not extend into that area.

An erosion control plan was submitted with the project review, and includes rock construction entrances, perimeter silt fence, slope checks, and native seed specified on the pond slopes. The erosion control plan meets Commission requirements.

A public hearing on the project is being scheduled as part of Planning Commission and City Council review of this project, meeting Commission public notice requirements.

Motion by Sicora, second by Swanson to advise the City of Brooklyn Park that approval of SC2014-17 is granted with the following stipulations:

1. A project review fee of $2,200 must be submitted.

2. The HydroCAD model must be updated using Atlas 14 precipitation values for 2, 10 and 100-year storm events and the Stormtech chambers adjusted accordingly.

3. A geotechnical report must be provided that verifies separation of infiltration from drain tile and groundwater. [Following the meeting it was verified that the proposed project work area does not extend into the gas station area, nor are there any known soil contamination issues.]

4. Applicant must execute a recordable maintenance agreement with the City ensuring the Stormtech system is maintained.

5. The underground filtration system must be tested post-construction to ensure proper operation and drawdown time (within 48hours).

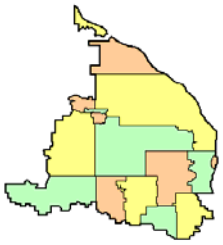
6. Verification must be received showing that the applicant has dedicated a utility maintenance easement over the infiltration basin and appurtenances.

Motion carried unanimously.

C. WM2014-13: Oaks of Oxbow, Brooklyn Park.* Construction of a 37 lot single-family residential development on 17.16 acres located in the southwest corner of Douglas Drive and 103rd Avenue North. The site currently does not have impervious surface. Following redevelopment, the site will be 30% impervious, an increase of 5.82 acres. A complete project review was received December 5, 2015.

The site must comply with the Commission's water quality treatment requirement by providing ponding designed to NURP standards with dead storage volume equal to or greater than the volume of runoff from a 2.5" storm event, or BMPs providing a similar level of treatment - 80-85% TSS removal and 50-60% TP removal. The site uses two regional stormwater ponds to provide water quality. The east portion of the site (12.56 acres) drains to pond P5 while the western portion of the site (6.84 acres) drains to pond P4. These two stormwater ponds will be constructed to provide water quality for this site. The current plan meets the Commission's requirements for water quality.

*items are included in meeting packet



Commission rules require that site runoff be limited to predevelopment rates for the 2-, 10-, and 100-year storm events. The amount of proposed impervious surface at the site is 5.82 acres. The proposed plan meets the Commission rule for rate control.

Commission rules require the site to infiltrate 1.0" of runoff from new impervious area within 48 hours. The amount of proposed impervious surface at the site is 5.82 acres requiring 0.48 ac-ft to be infiltrated. The current plan meets the Commission's requirements for infiltration.

The NWI does show wetlands; but an on-site investigation showed that there a no wetlands. There are no Public Waters or regulatory floodplain on this site. The lowest floor elevations of the buildings are required to be at least two feet higher than the high water elevation of the detention ponds and infiltration basins according to Atlas 14 precipitation. The proposed structures meet Commission requirements.

The Erosion Control Plan includes perimeter silt fence, rock construction entrance, and inlet protection. The proposed project meets Commission requirements.

A public hearing has not yet been conducted.

Motion by Jaeger, second by Vlasin to advise the City of Brooklyn Park that project WM2014-13 is approved with the following conditions:

1. Receipt of a maintenance agreement acceptable to the City of Brooklyn Park that includes the pond and drain tile.

2. Provide consistency for the following: HydroCAD model pipes for P4 are inconsistent with pipe information on plan set. Line #1 in HydroCAD model as In-Invert of 864.0' (864.5' on plan set), Line #2 has In/Out-Inverts of 864.0' (864.5' on plan set) and Lines #3 & 4 have diameters of 18.0" (24" on plan set).

Motion carried unanimously.

VI. Work Plans.

A. Shingle Creek.

Wenck's December 30, 2014 memo included a status report on the **2014 Work Plan.*** Focus was on tasks in three areas – implementation of TMDLs, partnering with other organizations to increase reach and cost effectiveness, and ongoing administration and programming.

Staff's second December 30 memo provided suggestions for the **2015 Work Plan:*** The same three focus areas were identified.

1. Continue to implement TMDLs.

a. Undertake a 5-year performance review for the Bass, Pomerleau, and Schmidt Lake Nutrient TMDL.

b. Partner with one or more member cities to complete a subwatershed BMP assessment in the Twin Lake drainage area, possibly in the Crystal Shopping Center area.

c. Continue to pursue grant funding for projects and programs, including chloride TMDL research projects and implementation projects in the Twin and Ryan Lakes drainage area.

d. Keep abreast of Upper Mississippi River bacterial TMDL implementation planning.

e. Stay abreast of other regional and state TMDLs.

2. Partner with other organizations to increase reach and cost effectiveness.

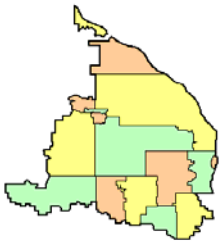
a. Participate in the West Metro Water Alliance joint education and outreach group.

b. Continue to partner with USGS to operate the Queen Avenue monitoring site.

c. Partner with the Minneapolis Park Board to consider options for Shingle Creek in Webber Park.

d. Partner with the USGS, DNR, and other interested parties to stay abreast of groundwater issues.

*items are included in meeting packet



3. Continue ongoing administration and programming.

a. Conduct Commission stream monitoring on Shingle Creek and Bass Creek and lake water quality monitoring and aquatic vegetation surveys on Cedar Island, Pike, and Eagle Lakes.

b. Sponsor Volunteer stream monitoring through RiverWatch and wetland monitoring through WHEP (Hennepin County).

c. Sponsor volunteer lake monitoring through CAMP (Met Council) on Bass, Schmidt, and Magda Lakes.

d. Review development and redevelopment projects as necessary.

e. Prepare an annual water quality report.

f. Solicit cost-share projects from member cities funded from the Cost Share Fund and the annual $50,000 levy.

g. Review feasibility studies for 2015 proposed capital projects, hold public hearings, order projects and certify levies.

h. Prepare a 2016 annual budget.

i. Solicit interest proposals for technical, administrative, and legal services.

j. Invite three guest speakers to make lunchtime water resources presentations. *A WMWA educator and a speaker on AIS were suggested.*

k. Tour project sites in the watershed.

Motion by Jaeger, second by Sicora to accept the 2015 Work Plan. *Motion carried unanimously.*

B. West Mississippi.

Wenck's December 30, 2014 memo included a status report on the **2014 Work Plan.*** Focus was on tasks in three areas – staying abreast of regional TMDLs, partnering with other organizations to increase reach and cost effectiveness, and ongoing administration and programming.

Staff's second December 30 memo provided suggestions for the **2015 Work Plan:*** The same three focus areas were identified.

1. Continue to implement TMDLs.

a. Continue to pursue grant funding for projects and programs addressing the bacterial impairment in the Mississippi River.

b. Keep abreast of Upper Mississippi River bacterial TMDL implementation planning.

c. Stay abreast of other regional and state TMDLs.

2. Partner with other organizations to increase reach and cost effectiveness.

a. Participate in the West Metro Water Alliance joint education and outreach group.

b. Partner with the USGS, DNR, and other interested parties to stay abreast of groundwater issues.

c. Partner with a member city to complete a subwatershed BMP analysis.

3. Continue ongoing administration and programming.

a. Undertake routine flow and water quality monitoring at two outfalls into the Mississippi River.

b. Sponsor volunteer stream monitoring through RiverWatch and wetland monitoring through WHEP (Hennepin County).

c. Review development and redevelopment projects as necessary.

d. Prepare an annual water quality report.

e. Solicit cost-share projects from member cities funded from the Cost Share Fund and the annual $50,000 levy.

f. Review feasibility studies for 2015 proposed capital projects, hold public hearings, order projects and certify levies.

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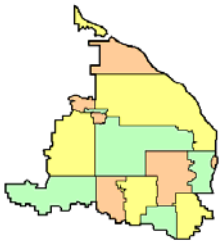


g. Prepare a 2016 annual budget.

h. Solicit interest proposals for technical, administrative, and legal services.

i. Invite three guest speakers to make lunchtime water resources presentations. *A WMWA educator and a speaker on AIS were suggested.*

j. Tour project sites in the watershed.

Motion by Butcher, second by Jaeger to accept the 2015 Work Plan. *Motion carried unanimously.*

[Spanier departed 1:45 p.m.]

VII. Water Quality.

A. Shingle Creek. Staff's December 30, 2014 memo outlines the proposed **2015 water monitoring program.***

1. The routine **stream monitoring** program includes flow and water quality at two sites and cost sharing with the USGS of continuous flow and water quality monitoring at the USGS site on Queen Avenue in Minneapolis. The stream monitoring budget for 2015 was increased to accommodate adding automated water quality sampling and continuous conductivity on Bass Creek. The Bass Creek monitoring is proposed to gain better information about water quality in Bass Creek and to obtain baseline conductivity data in advance of the Bass Creek chloride TMDL, which is being completed as part of the Metro Chloride TMDL. Included in the monitoring budget is a line item ($2,000) to purchase a **conductivity meter** similar to the one being used to record conductivity in Shingle Creek.

Stream monitoring also includes two longitudinal dissolved oxygen (DO) surveys during high and low flows on Bass and Shingle Creeks; and Wetland 639W outlet flow and water quality sampling. If 2015 is an average water year and Staff get good data, monitoring of 639W will be discontinued or go to an every two or three year schedule. (Budget: $38,500)

The volunteer stream monitoring program RiverWatch is offered through Hennepin County Environmental Services, which solicits and trains high school science teachers and their students to conduct macroinvertebrate monitoring. The students collect and classify macroinvertebrates at three locations on Shingle Creek. The Park Center High School site has been monitored every year since 1996. A site in Webber Park has been monitored most years since 2001 by students from Patrick Henry High School. The third site has been located at various locations by various schools over the years of the program. (Budget: $3,000)

2. Staff **lake monitoring** in 2015 is intended to gather information for the Eagle, Pike, and Cedar Island Lakes TMDL Five Year Review to be completed in 2016, and includes water quality monitoring and aquatic vegetation surveys on Eagle and Pike Lakes, and possibly Cedar Island Lake if the budget will allow. (Budget: $21,200). Lestina requested that Staff coordinate the monitoring of Pike Lake with the City of Maple Grove.

It was also recommended that WMWA develop a program to educate residents about water quality and what a "good" lake looks like.

Volunteer lake monitoring will be conducted on Bass, Schmidt, and Magda Lakes through the Citizen Assisted Monitoring Program (CAMP), offered through the Metropolitan Council. (Budget: $3,600)

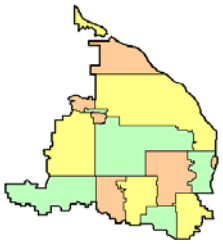
3. The volunteer **wetland monitoring** program WHEP is offered through Hennepin County Environmental Services, which solicits and trains team leaders and adult volunteers to conduct macroinvertebrate monitoring and identify wetland vegetation. Two to three sites are monitored per year on a rotating basis, depending on team leader availability. (Budget: $2,000)

4. Preparation of the **Annual Monitoring Report** is budgeted at $12,000.

The final 2015 monitoring program will be approved at the February 12, 2015 meeting.

B. West Mississippi. Staff's December 30, 2014 memo outlines the proposed **2015 water monitoring program.***

*items are included in meeting packet



1. The **outfall and stream monitoring** program provides routine flow and water quality monitoring at two locations, which are rotated among the Mississippi River outfalls and Mattson Brook. In 2013 those sites were the 65th Avenue outfall in Brooklyn Center and the outfall just north of Oxbow Creek in Champlin. (Budget: $15,000)

As in Shingle Creek, volunteer stream monitoring occurs through RiverWatch. In West Mississippi the students collect and classify macroinvertebrates in Mattson Brook. That site has been monitored almost every year since 1998 by students from various schools. (Budget: $1,000)

2. Volunteers perform **wetland monitoring** through WHEP at two to three sites in the West Mississippi watershed per year on a rotating basis, depending on team leader availability. (Budget: $2,000)

3. Preparation of the **Annual Monitoring Report** is budgeted at $5,000.

The final 2015 monitoring program will be approved at the February 12, 2015 meeting.

C. General Lake Water Quality Issues.* A PowerPoint presentation by Bischoff provided an overview of the 2015 programs described above and also discussed topics of recent interest – Zebra Mussel control and the use of alum in-lake restoration. In the past the focus of the Commissions has been on watershed management. As they move forward the focus will necessarily turn to in-lake management. Management techniques will include invasive species control, alum treatment for internal load control, carp control and management, and submerged aquatic vegetation management.

Bischoff discussed phosphorus inactivation using alum treatment. He noted alum treatments can be effective even when watershed loads are moderately high. It can be safely reapplied and remain cost-effective.

He also discussed options for controlling zebra mussel infestations. The presentation showed the Zequanox treatment done by the Minnehaha Watershed District on Christmas Lake last September. It was followed by a copper treatment in November. All known zebra mussels in the lake were removed. (see IX.C., below) A third option is the use of potash. 100% eradication was seen in two instances cited in the presentation.

The Judas technique was used to locate and remove wintertime aggregations of invasive carp in Lake Wingra, WI. As a result, a significant increase in clarity occurred, necessitating submerged aquatic vegetation management that may be in the form of harvesting and herbicide applications.

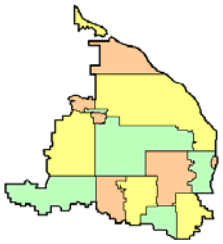
D. Brooklyn Center BMP Assessment.* The Commission's 2014 operating budget includes $20,000 to continue a program of systematically assessing subwatersheds across the watershed to determine options for installing Best Management Practices (BMPs) to reduce sediment, nutrient, and bacteria loading to the Mississippi River. In 2013, the Commission completed an assessment in Champlin that included a redevelopment area and a large residential neighborhood. In 2014, the assessed subwatershed included about 680 acres in northeastern Brooklyn Center where neighborhood street reconstruction projects are expected over the next few years.

Staff has completed a draft assessment, which is currently being reviewed by the City of Brooklyn Center. Following completion of any requested revisions, the draft assessment report will be presented to the Technical Advisory Committee (TAC) at its January 22, 2015 meeting. The final report will be presented to the Commission at the February or March 2015 meeting, depending on any further review the city would like with its staff and elected officials.

Included in the meeting packet are pages extracted from the draft report showing the study area, the city's upcoming street projects, and an assessment of existing estimated TP and TSS loading. Two figures show the potential overall TSS and TP loading reductions that could be achieved if all of the potential BMPs outlined in the report were completed.

Not shown are bacteria load reductions. Many of the BMPs that reduce TP and TSS load also reduce bacteria loading, and some of the recommended BMPs are of high priority mainly because of the bacteria load reduction benefit rather than the TP or TSS benefit. While West Mississippi does not have specific bacteria load reductions in the Upper Mississippi bacteria TMDL, it is beneficial to achieve reductions wherever possible.

*items are included in meeting packet



VIII. Education and Public Outreach.

The **next WMWA meeting** is scheduled for 8:30 a.m., Tuesday, February 10, 2015, Plymouth City Hall.

IX. Grant Opportunities and Updates.

X. Communications.

A. December Communications Log.* Information only.

B. Road salt use gets weighed against saving money, environment,* *StarTribune*, December 19, 2014.

C. New treatment aims to eradicate Christmas Lake zebra mussels,* DNR News Release, December 19, 2014.

D. Sediment, science and stakeholders, Dr. Peter Wilcock, Moos Family Speaker Series, January 20, 2015.

E. Aquatic Invaders Summit, January 20-21, 2015.

F. Representatives from Brooklyn Center and Brooklyn Park were reminded that their cities must make **appointments** for the term February 2015- January 2018.

XI. Other Business.

Election of officers will occur at the February meeting. Moore will chair the Nominating Committee for Shingle Creek. A committee of the whole serves as West Mississippi's Nominating Committee.

XII. Adjournment.

There being no further business before the Shingle Creek Commission, motion by Jaeger, second by Moore to adjourn. *Motion carried unanimously.* The meeting was adjourned at 3:08 p.m.

There being no further business before the West Mississippi Commission, motion by Vlasin, second by Butcher to adjourn. *Motion carried unanimously.* The meeting was adjourned at 3:08 p.m.

Respectfully submitted,

Judie A. Anderson
Recording Secretary
JAA:tim

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*items are included in meeting packet