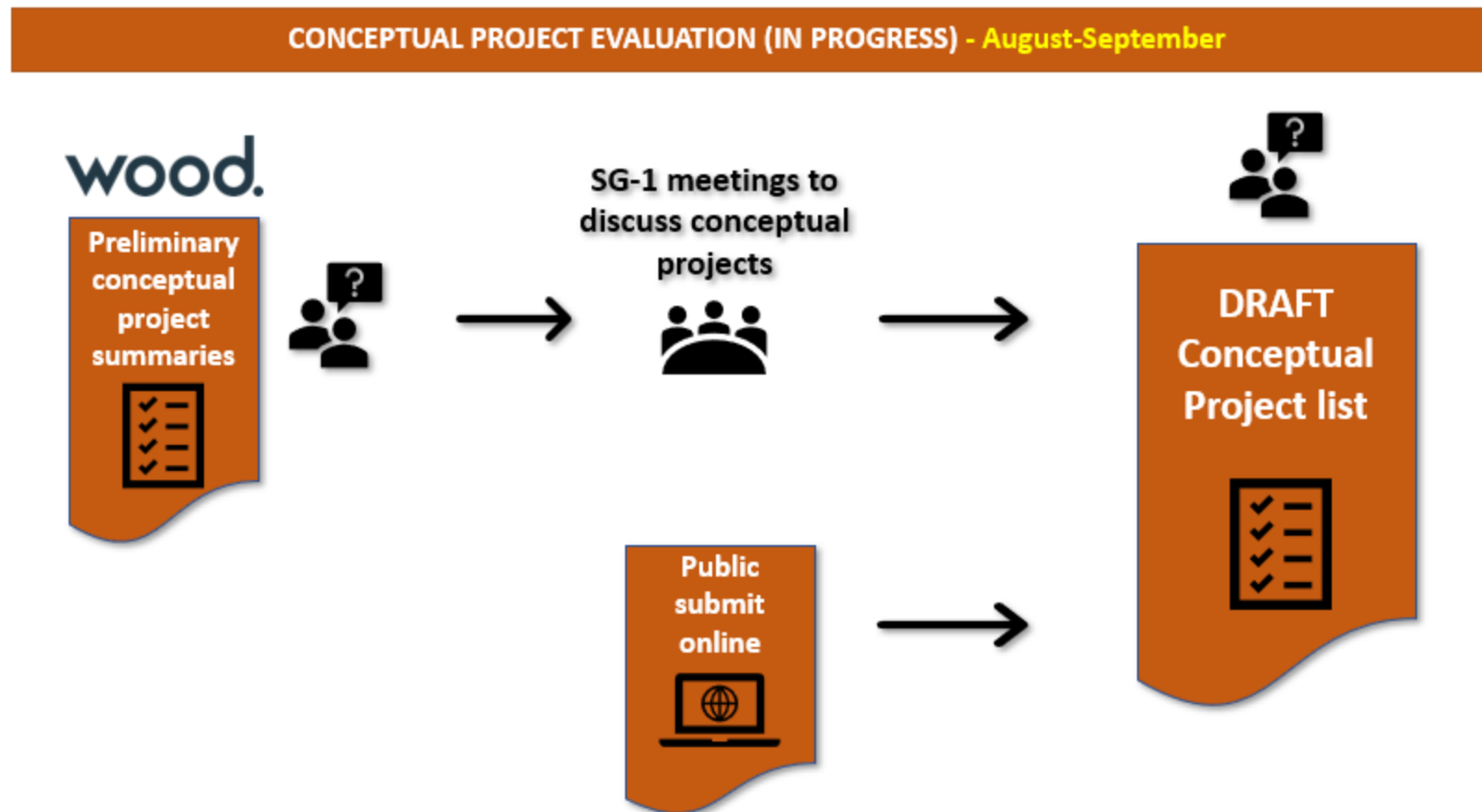


Draft Conceptual Project List

Brian Hamrick and Erin Daugherty, Wood
3M PFC Settlement Work Group Meetings
September 17-18, 2019

Where are we now?.....

Identification of **All Potential** Conceptual Projects



Progress to Date: Gathered Potential Conceptual Projects

- Work group members were encouraged to coordinate with their Subgroup 1 member to provide input in the initial list of conceptual projects
- Wood met with each LGU and other members of Subgroup 1 in August to share the preliminary conceptual project summaries and request feedback
- Work group members, Sub-group 1 members, and public were also encouraged to submit project ideas via the public portal for formal documentation.
- There were 24 projects submitted through the online portal.

Progress to Date: Developed Preliminary List of Conceptual Projects

- Developed preliminary Conceptual Project Memorandums (summaries) for the identified communities in the East Metro area
 - Consistent with the list of water supply improvement options (WSIO)
 - Comprehensive list of POTENTIAL projects
 - Includes projects submitted online by public, LGUs, etc.
 - Memos are working documents and will be refined through the process
 - Projects will be the basis of those included for evaluation as scenarios and will be refined through iterative evaluations.
- Comments received so far from SG-1 were compiled and distributed
- **Draft Conceptual Projects List** was distributed

Preliminary
conceptual
project
summaries



Progress to Date: Developed Preliminary List of Conceptual Projects (Cont'd)

- **List and Conceptual Project Summaries are posted on the Wood SharePoint**

- SharePoint website:
http://amext.amec.com/sites/p_18190022/Work%20Group%20Share
- CP Summaries provide background information and figures to accompany the Wood-compile projects
- Point of Contact is Carson Smith (Wood) carson.smith@woodplc.com

- **Draft Conceptual Projects List**

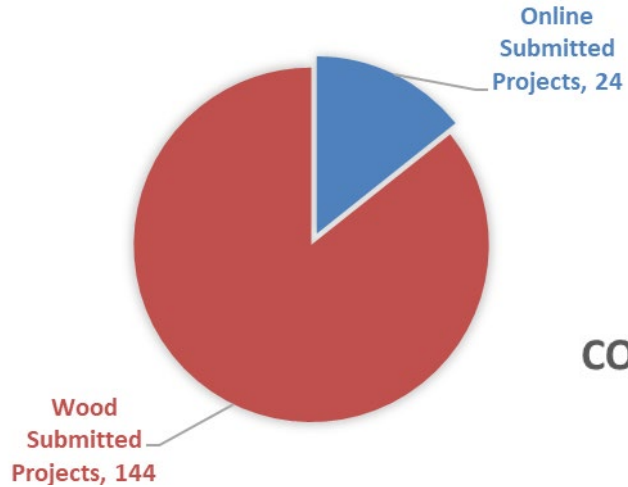
= Online submittals + Wood compiled projects

Preliminary
conceptual
project
summaries

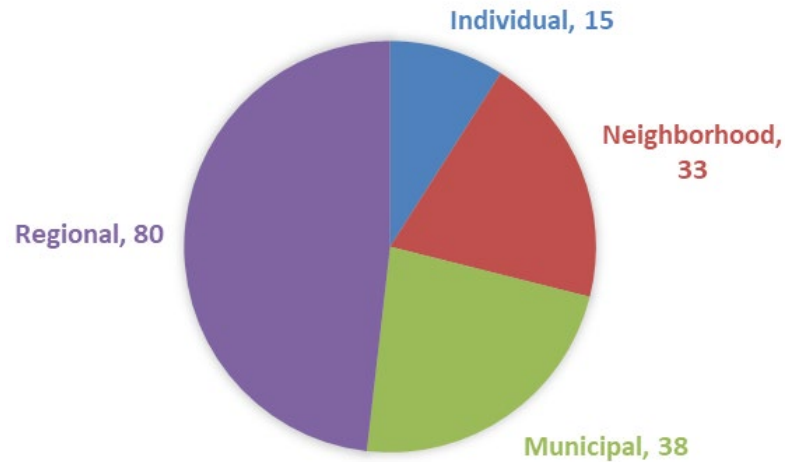


DRAFT Conceptual Project List Breakdown

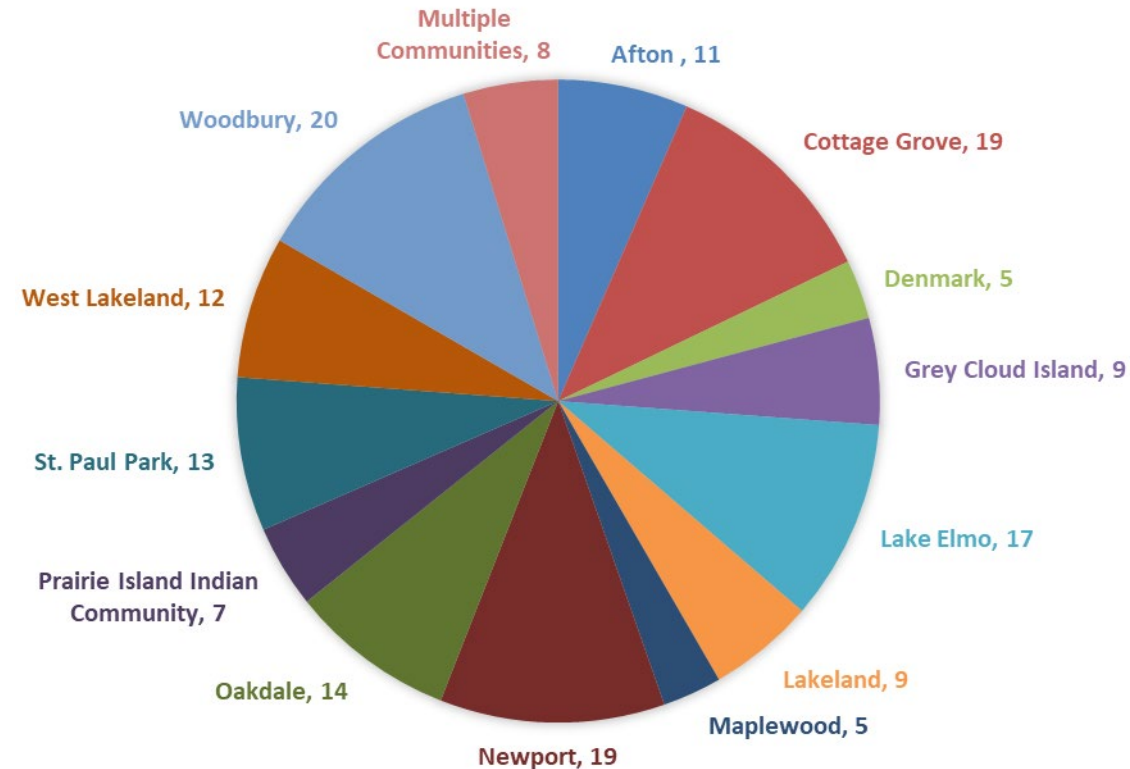
CONCEPTUAL PROJECT SOURCES



CONCEPTUAL PROJECT SCALE

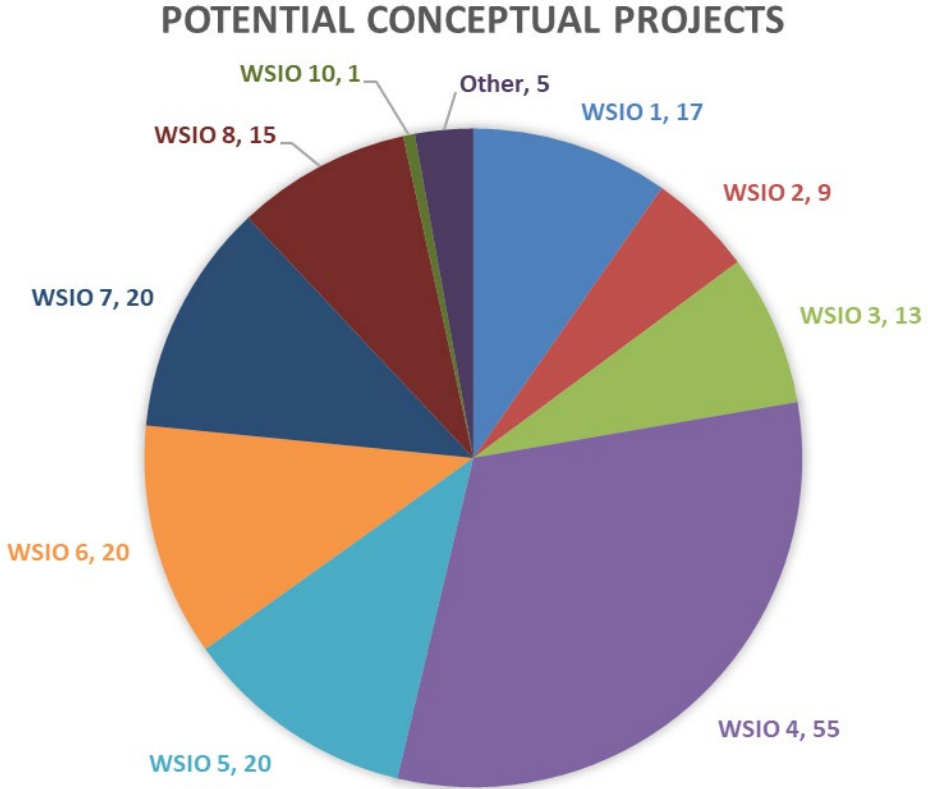


CONCEPTUAL PROJECTS BY COMMUNITY



Note: Projects are not exclusive, there is overlap between projects and communities. A submitted project can pertain to one or more communities or relate to one or more WISOs.

DRAFT Conceptual Project List (Cont'd)



WSIO 1	Drill new wells in optimized locations.
WSIO 2	Connect subsets of communities to St. Paul Regional Water Services.
WSIO 3	Create new surface water treatment plant for use of Mississippi or St. Croix River waters.
WSIO 4	Create new regional water supply system(s) (with treatment).
WSIO 5	Create new rural drinking water supply system(s) (with treatment).
WSIO 6	Move private well hookups to existing drinking water supply system(s) (where available).
WSIO 7	Provide drinking water treatment of existing water supply system(s).
WSIO 8	Provide point of entry treatment of drinking water.
WSIO 9	Non-potable and potable reuse of treated 3M containment water.
WSIO 10	Minimize water well usage by reducing current potable demand, through beneficial reuse and/or conservation
OTHER	Projects outside the scope of the CDWSP or not covered by the WISOs that will be screened and addressed according to set criteria and technical feasibility.

CATEGORIES OF POTENTIAL CONCEPTUAL PROJECTS

Individuals on Private wells & Neighborhoods

- Provide Point of entry treatment systems (WSIO 8)
- Connect to small rural supply system (WSIO 5)
- Connect to a PWS system (WSIO 6)

Local Municipal Options

- Drill new municipal supply wells (WSIO 1)
- Provide treatment at existing well sites (WSIO 7)
- Provide centralized treatment facilities for one community (WSIO 7)

Small Scale Regional

- Establish small regional systems through interconnects (WSIO 4)
- Centralized treatment or groundwater supply for 2-3 communities (WSIO 4)

Large Scale Regional

- Groundwater regional supply system (WSIO 4)
- Surface water regional supply system (WSIO 4)
 - SPRWS (WSIO 2)
 - New surface water plants from rivers (WSIO 3)
- Water conservation efforts (WSIO 10)
- Treated 3M Containment Water (WSIO 9)

Other Projects Submitted as Conceptual Projects

- Resiliency Considerations

- 100028 – Water testing and treatment endowment
- 100024 – Newport looping

- Priority 2 Projects

- 100036 – Manage Aquifer Recharge
- 100043 – Washington County Aquifer Augmentation District (WCAAD)

- RO Treatment

- 100032 – Reverse Osmosis Filtration

Goals for Today

- Discuss initial feedback/input from:
 - The Government and 3M Working Group, Citizen-Business Group, and Subgroup 1.
- Small group discussion on Draft Conceptual Project List
 - Groups will be prompted with a series of questions to answer.
 - Individuals will return to seats for Q&A session.



- Questions for break-out work groups:
 - Do the conceptual projects meet your expectations?
 - Given this list, are there any project that you feel are missing and should be considered?
 - Are there any projects that you are reconsidering?

Feedback Submissions

- Submit feedback before **September 25th** via email to:
 - pfcinfo.pca@state.mn.us
- Conceptual Projects received that fall under Priority 1 will be incorporated into the final list
- Natural resource focused projects will be addressed under Priority 2

The Process Flow Map Continues....



Process Flow Map Legend



= points where feedback is requested from the work groups and SG-1



= a screening process is taking place (e.g., priority 1 criteria is applied)



= a document or list is produced

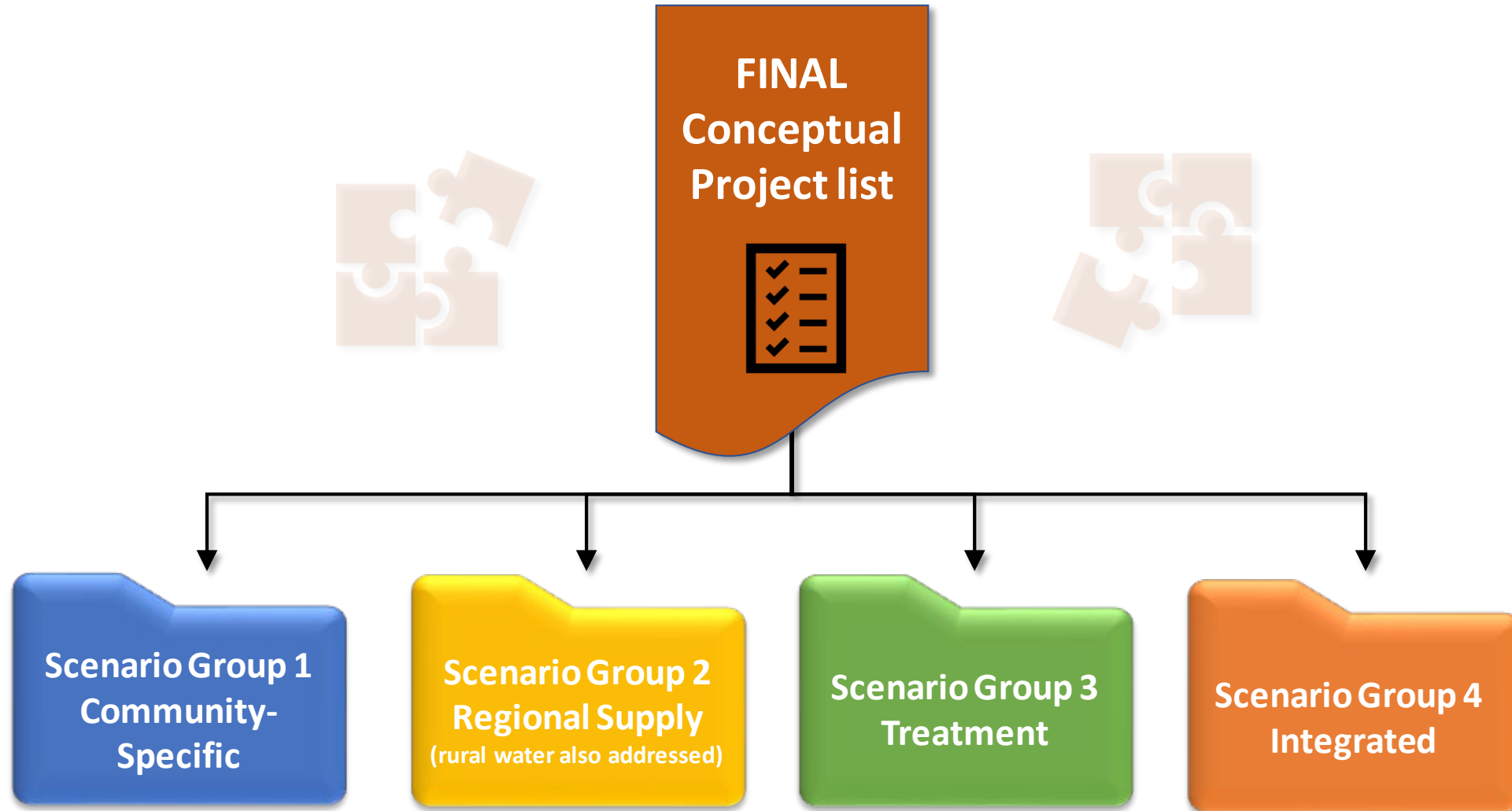


= one-on-one meetings with LGUs (includes WG and SG-1 members)



= request for public input

SCENARIO DEVELOPMENT - September



SCENARIO DEVELOPMENT (explanation)

Scenario Group 1 Community- Specific

Community-centric solutions that maintain the existing structure and operations of the existing water supply systems and/or private wells. Interconnections and regional water solutions are not considered unless presented by LGUs. Wood will bundle the community submitted projects into scenarios – likely more than one scenario, since some LGU submitted projects will conflict with other LGU submitted projects. In those cases, other projects may be used to supplement, and Wood will fill in the gaps.

Scenario Group 2 Regional Supply (rural water also addressed)

Regional Supply Scenario Group EXAMPLES:

1. One surface (or groundwater water) plant that feeds all 14 communities...what is cost? If cost prohibitive or water quality problems...break it down into smaller plants
2. One large surface water plant + several smaller surface water plants to feed all 14 communities
3. One large surface water plant + several smaller surface water plants + groundwater well field
4. One large surface water plant + several smaller surface water plants + groundwater well field + small rural community systems or private well treatment where appropriate.
- 5-10. Further refining above into best solution.

SCENARIO DEVELOPMENT (explanation, cont'd)

Scenario Group 3 Treatment

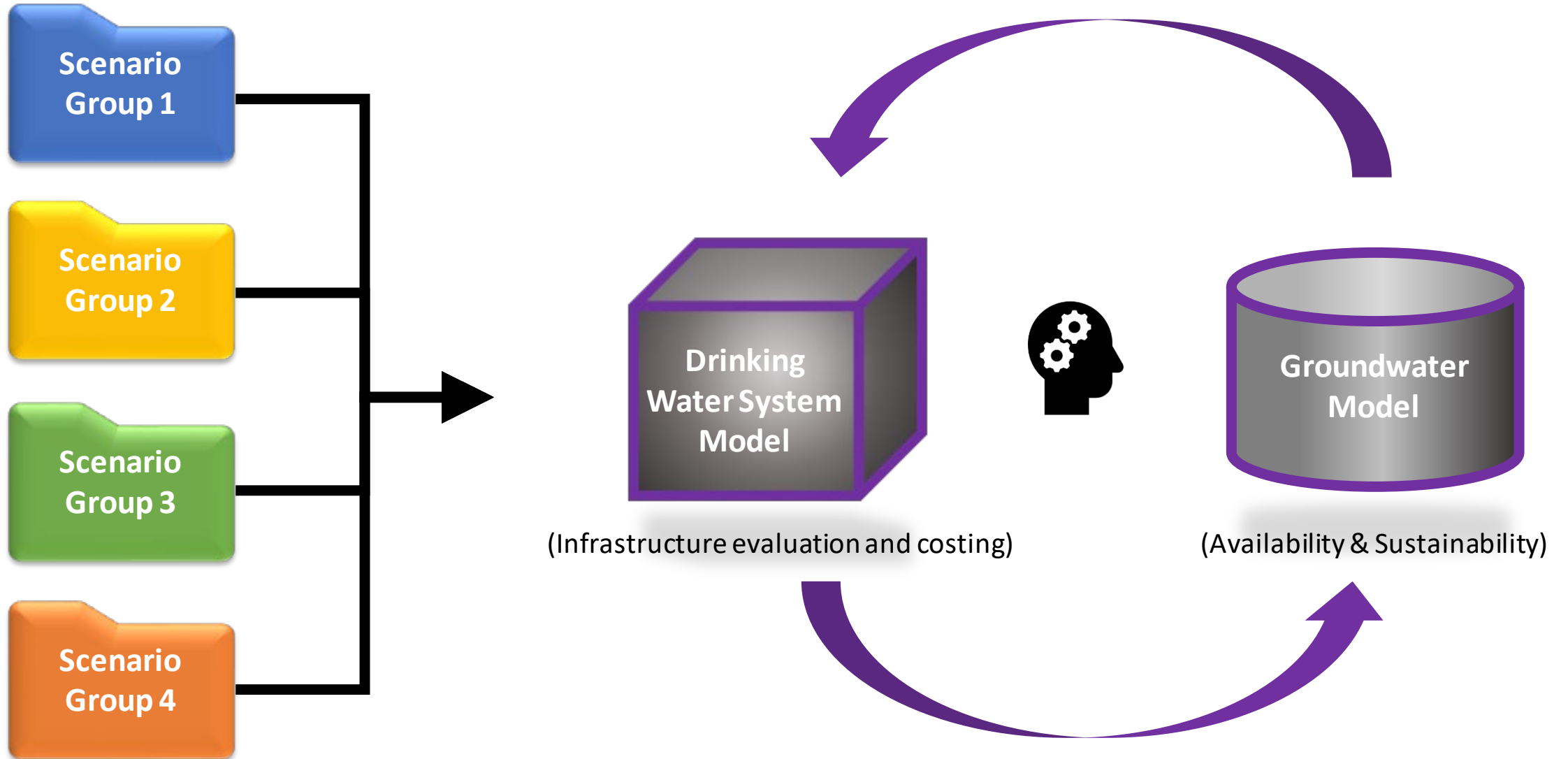
SCENARIO ALTERNATIVES

Wood will prepare high level cost estimates for treatment of existing drinking water wells, both public and private. This will range from treatment of only those drinking water wells which currently exceed health indices to treatment of all drinking water wells in the East Metro project area.

Scenario Group 4 Integrated

Wood will create scenarios to maximize the projects when bundled and incorporate shared/regional systems wherever possible (above and beyond LGU priorities) for a final integrated scenario grouping.

SCENARIO MODELING - October-November

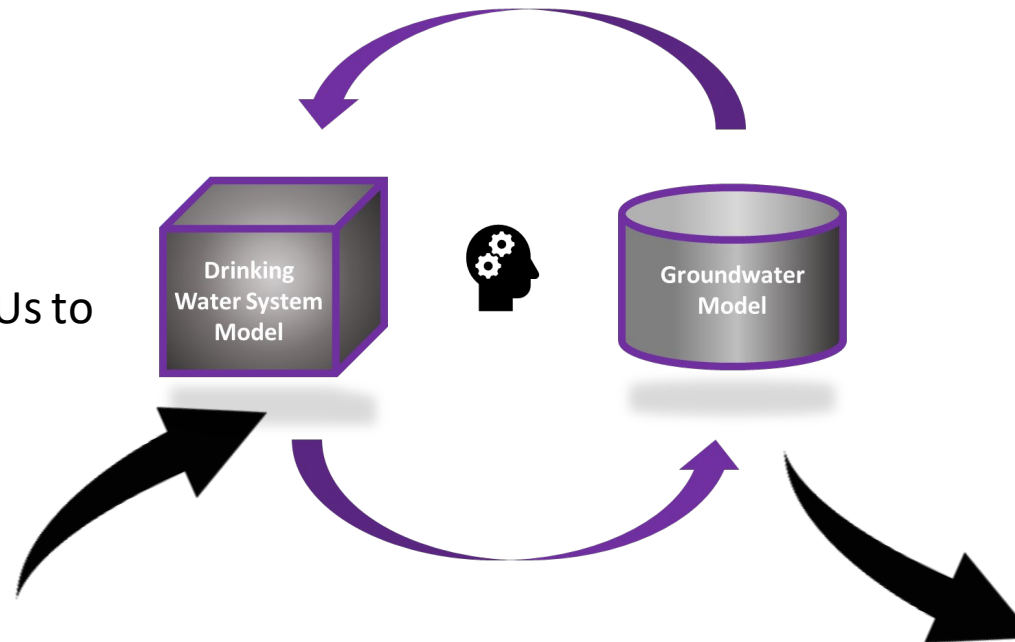


LGU Q&A:

- Wood to reach out as necessary during refinement of scenarios

LGU Meetings:

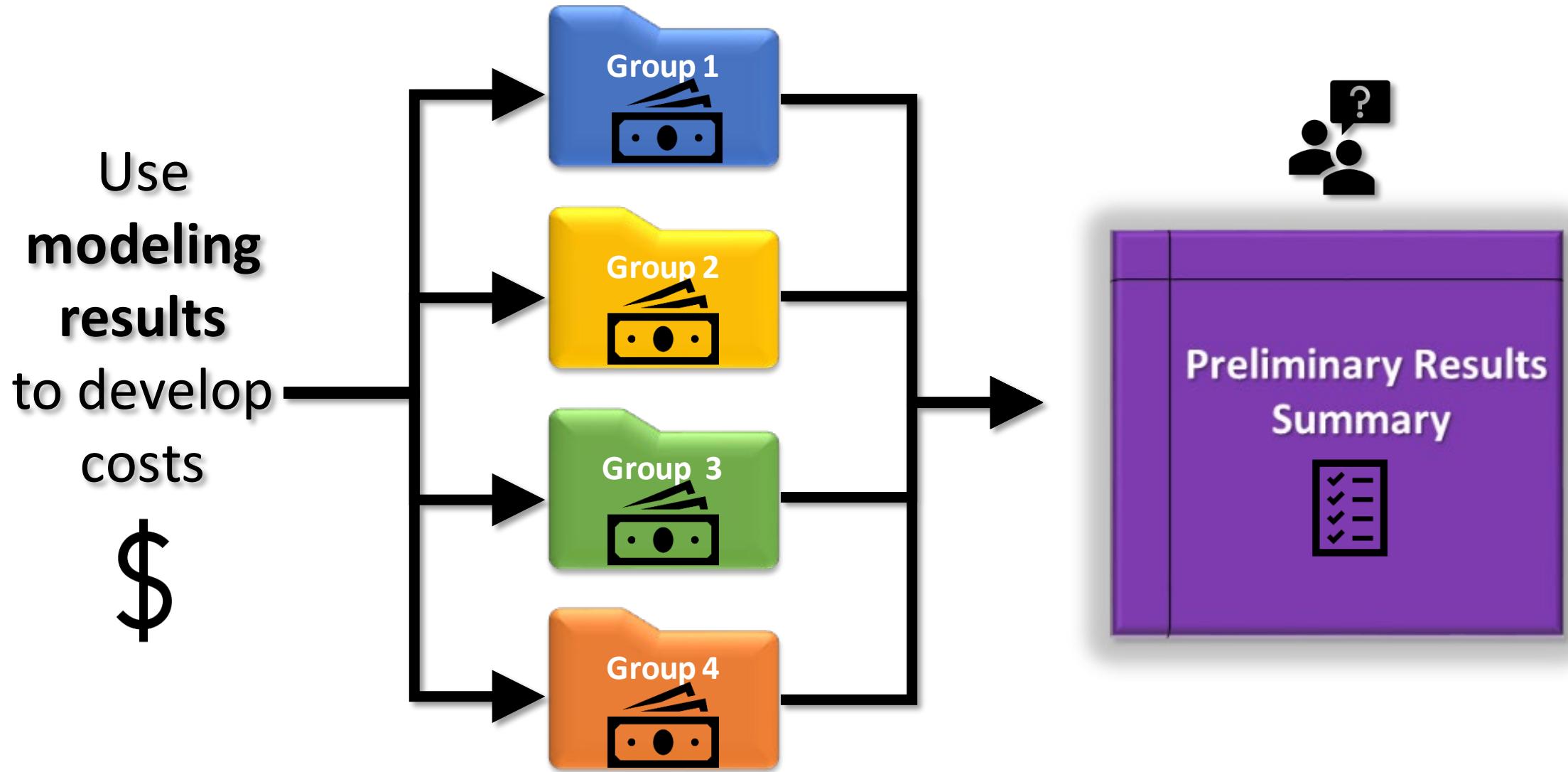
- Wood will meet with LGUs to ensure appropriate infrastructure
- Concurrent with other scenario modeling



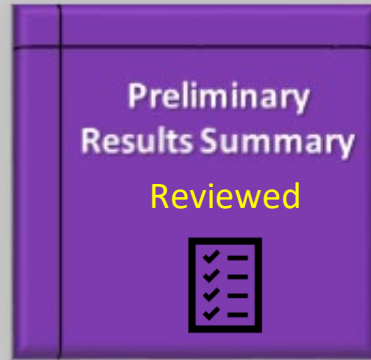
Wood Progress Update – November meetings:

- Opportunity for discussion

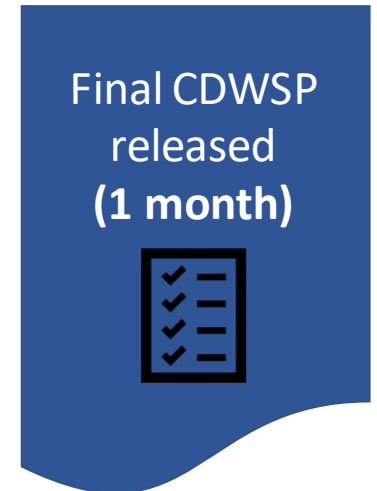
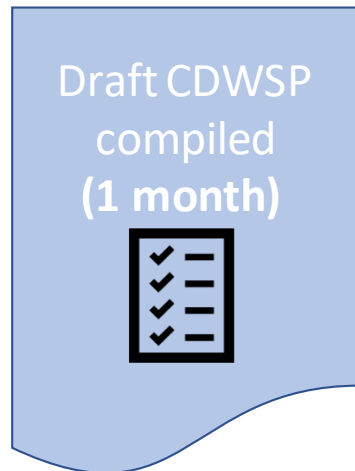
SCENARIO EVALUATION - October-December



CDWSP FINALIZED – December-March



Co-trustees apply
Priority 1 Criteria for
Good/Better/Best
Scenarios



Questions or Comments?

Thank you!

Erin Daugherty, PE

Wood Environmental & Infrastructure Solutions

Erin.daugherty@woodplc.com

602.733.6077

Brian Hamrick, PE

Wood Environmental & Infrastructure Solutions

Brian.hamrick@woodplc.com

602.733.6053