

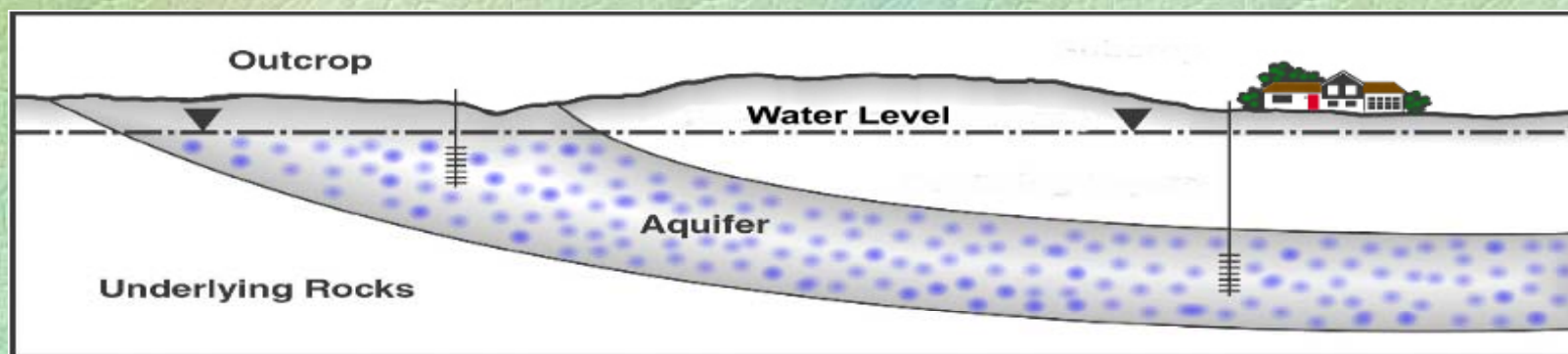
2009 GWPC Annual Forum:

Water Availability and Sustainability Session:

Water Management Planning Efforts:

Enhanced Management for Northwest Kansas


BY: Wayne Bossert, Manager, NWKSGMD 4



Joint Water/Energy Sustainability Symposium & 2009 GWPC Annual Forum

September 13-16, 2009

Salt Lake City, Utah



It all starts with the **Kansas Water Plan** - the official Kansas water planning document.

Included are a number of **objectives** to direct all state and local water management & planning activities.

The objective we are most interested in for this talk is:

Reduce water level decline rates within the Ogallala Aquifer and implement enhanced water management in targeted areas.

Guidance concepts in implementing this objective are:

- First use voluntary, incentive-based approaches rather than regulatory;
- Appropriately involve all the stakeholders;
- Consider regional economic and social impacts; and
- Use existing laws and policies rather than create new ones.



March 9, 2006: GMD 4 set 7 Tasks to set high priority aquifer subunits

Task 1) - Cluster Aquifer Sub-units:

Use existing KGS section-level data sets and other data to determine aquifer sub-units.

Task 2) - Prioritize Aquifer Sub-units:

The board will set appropriate high, medium, and low threshold triggers based on the Task 1 parameter(s) chosen.

Task 3) – Verify data for each high priority aquifer sub-unit:

The board will consider KGS/GMD special study findings and other reports and information to more clearly assess if the existing data adequately supports any or all of the high priority aquifer sub-units rendered by task 1.



Task 1) - Cluster Aquifer Sub-units:

Used KGS Section-Level data identifying all sections:

9% or more decline – 1996-2002; and

275 acrefeet or more, 2-mile reported water use density value – 1996-2002

(Excluding very thin saturated thicknesses and very low reported water use densities)

Split Townships into ¼ Townships and identified all that had 2 or more identified sections

Any area with a stakeholder group asking for more enhanced management

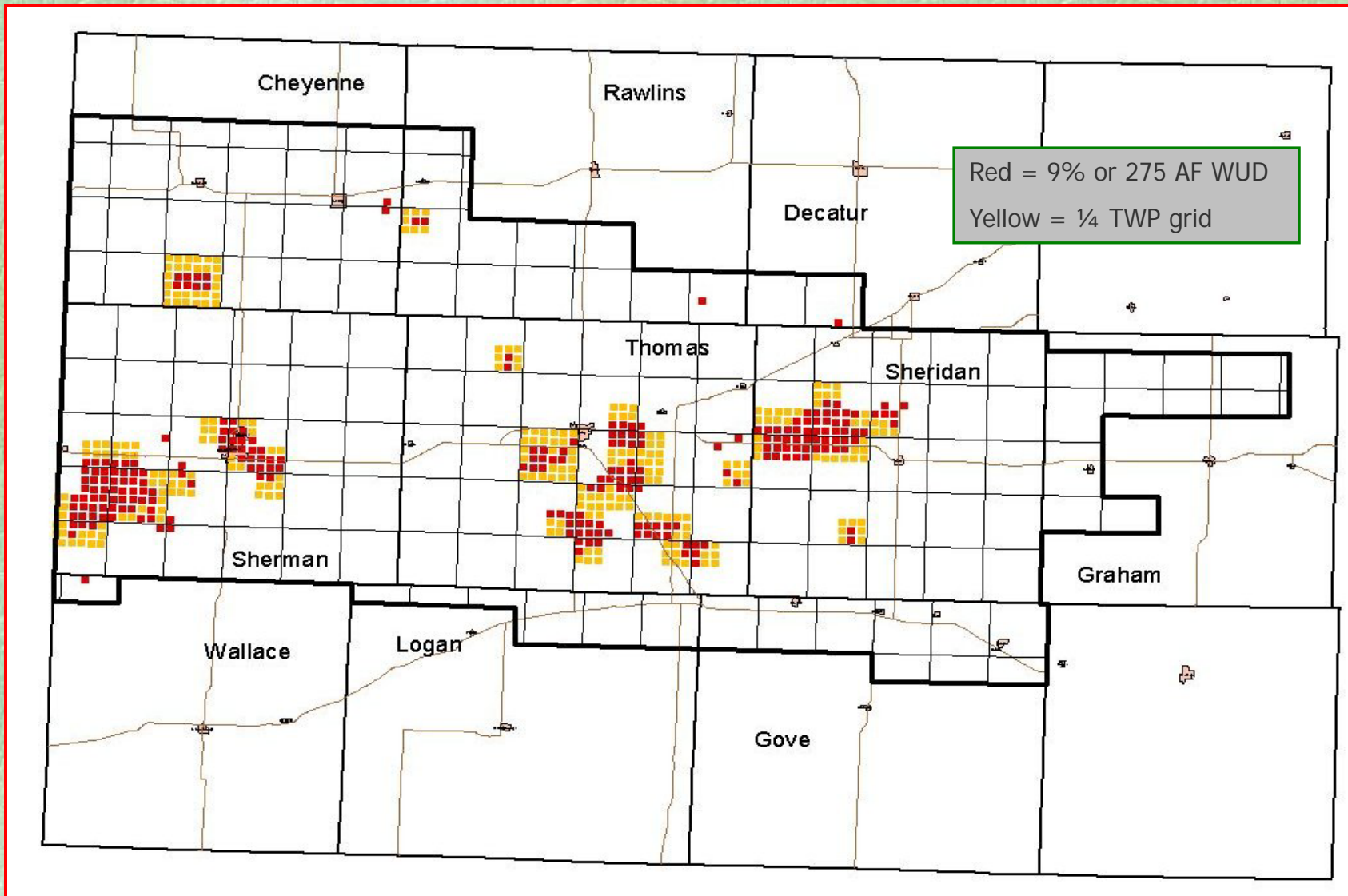
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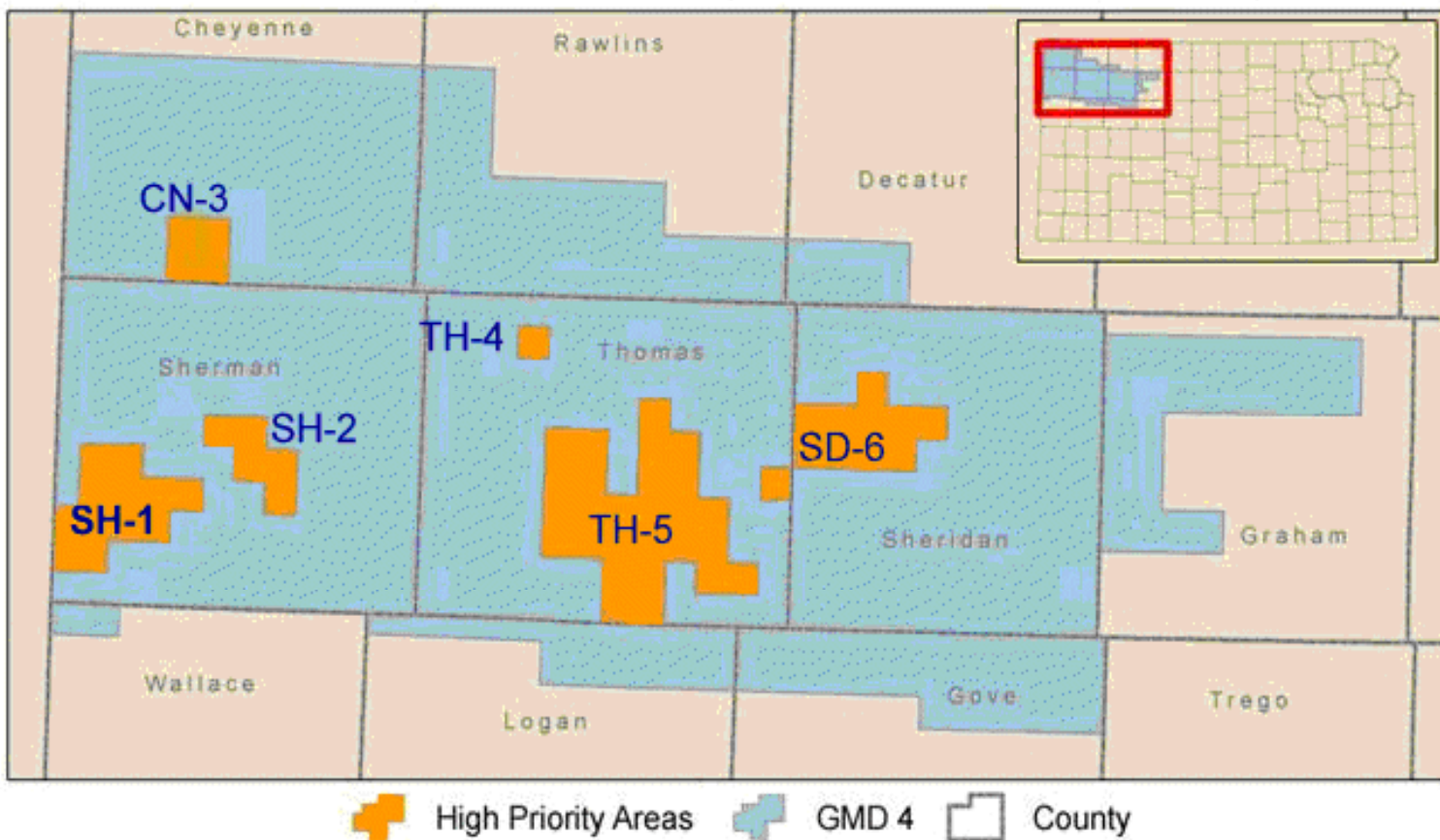
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GMD 4 Identified High Priority Sections



Northwest Kansas Groundwater Management District No. 4 High Priority Areas



Task 4) - Establish preliminary water use goals and enhanced management actions for the high priority aquifer sub-units:

Conduct public meeting(s) within each HPA to:

- a) inform the land owners and water users of the process;
- b) discuss the area's future outlook based on findings;
- c) request input from the attendees about preferred future actions - specifically including preferences for a groundwater budget for the next 20 years; and
- d) seek direction as to what management policies/actions/strategies should be considered by the board to achieve the budget.

Let the games begin!

Personally contacted landowners and water right owners

Scheduled 6 initial meetings w/ presentations on:

- * Overview of the SWP and Aquifer Subunit process; and
- * Hydrology (section-level data – hydrographs – water rights – pumpage)

Began discussions

(Future visions; 20 year water budget; policy recommendations to meet goals)

Sherman HPA SH 1
November 3, 2008 Meeting
Participant Comments (C) | Questions (Q) and District Responses (R)

Q. How many irrigated acres are in GMD 4?
R: Approximately 400,000 – but the actual number is unknown due to water right overlaps and other data accounting conditions.

C. Questioned the use of the % Township process to aggregate HPA sections.
R: Not much can be done about this at this time, but will relay the comment to the board.

C. There should be a philosophy of all within the HPA sharing the solution.
R: This is a stakeholder position which will be provided to the board and which appears to be consistent with the HPA process and current statutes and regulations.

C. Don't like triggers. They result in lines that don't treat neighbors the same.
R: Not much can be done about this at this time, but will relay the comment to the board.

C. How much pumpage needs to be reduced to bring
R: The groundwater aquifer model (due soon) will give us the best answer. Such an approach would require the most recent average HPA decline rate of 1.5 feet/yr. However, the average HPA decline rate changes depending on what specific years (time period) are considered. Another way to look at it is: An average of 22,000 AF pumped annually in this HPA has been resulting in an average 1.5 feet/yr decline rate. 11,000 AF pumped should approach a .75 feet/yr decline rate – all else being equal.

C. The HPA goal should be to reduce the area's average decline rate by 1 foot/yr within 2.5 years by voluntary incentive (WTAP approach) only.
R: This is a stakeholder position which will be provided to the board and which appears to be consistent with the HPA process and current statutes and regulations.

Q. Can GMD4 raise enough money to conduct a WTA
R: Depends on how much time we want to apply such a local program. Certainly not in the 2.5 years suggested above. Moving our water user charge over the entire GMD (assess \$1 per AF rather than the current \$.33) would raise an additional \$540,000.00 per year for WTAP purposes.

Q. Can the GMD increase its water user charge above
R: Not without a statutory change (current rate caps are set by statute).

C. GMD should max the water user charge and do a severe (most decline) HPA.
R: This is a stakeholder position which will be provided to the board and which appears to be consistent with the HPA process and current statutes and regulations.

C. A listing of each HPA's discussion points and options considered should be posted on the website.
R: Will be considered.

C. Another meeting is desired
R: District will work with the board to set another meeting later this winter for this HPA, and sufficiently advertise to get the word out.

(NOTE: The above items were merely captured as comments/questions/discussion points. No final decisions or recommendations were made by the meeting participants regarding any of them.)

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C. How much pumpage needs to be reduced to bring this HPA's decline rate to the GMD average?
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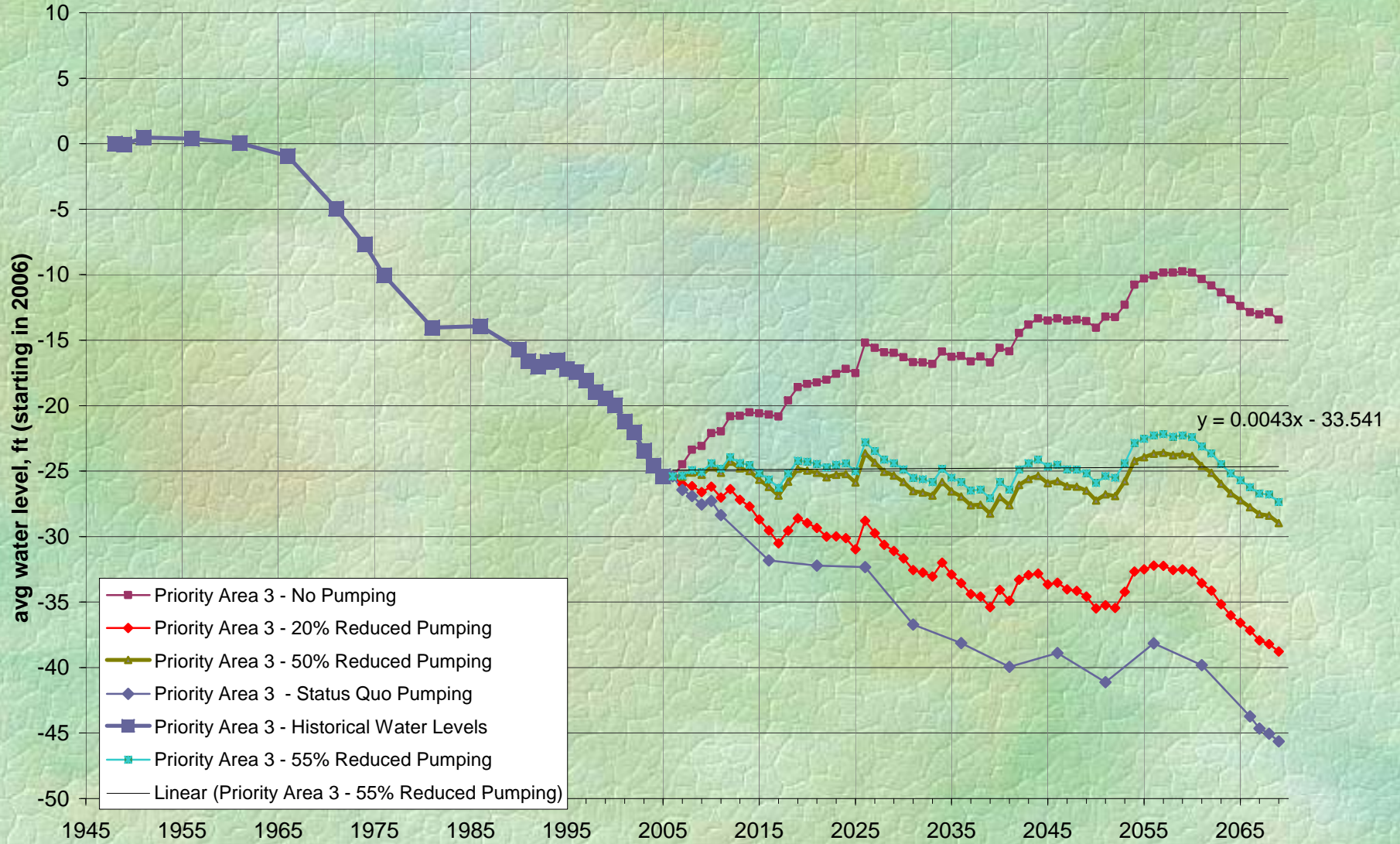
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Selected Discussions:

- 1) HPA SH-1: Use EQIP & AWEPP to retire water rights to achieve a decline rate equal to long term GMD average rate
- 2) HPA SD-6: We must do something & desire any reductions to be achieved by a water rights allocation approach
- 3) HPA CN-3: Model for us what reductions needed to stabilize the water table in the next 5 years – then we'll discuss goals

Historical Water Levels and Future Pumping Scenarios for Spatially Averaged Heads Cheyenne Co. Priority Area 3



Next Step - economic model

Taking the output of the hydrologic model, inputting it to the economic model and predicting economic returns based on producer decisions to reduced water supplies over time

Model linkage is awaiting funding

Early runs (economic model) suggest there will be different economic impacts between varying strategies to reduce water use (CREP; Limited Irrigation; Water right buy-out)

It's not only how much to reduce, but also how to reduce it

Wrapping Up - Key Points

- 1) Sub-unit management w/ intimate stakeholder involvement
- 2) Each sub-unit can have different management plan - resulting from different goals and different approaches
- 3) Keep the discussions going – stakeholders are very involved
- 4) Now have consistent focus areas for **all** conservation efforts - EQIP; AWEP; WTAP;
- 5) More info:
Wayne Bossert, PO Box 905, Colby, KS 67701 (785) 462-3915
wab@gmd4.org <http://www.gmd4.org>

Questions?