Big Cypress Modeling and BST Project

Stakeholder Meeting
Mt. Pleasant Civic Center, Mt. Pleasant, TX
February 28, 2010

6:15 - **Opening Remarks – Lee Thomas, NETMWD**

6:19 - **Proposed SELECT Modeling inputs – Kyna Mckee, AgriLife Research**
Brief refresher of SELECT Model
- Sources of input information (land use and characteristics, population densities, soil types, etc)
    - Agency resources
    - Stakeholder input
- Helps identify areas where management would be best applied to reduce bacteria loading to creek

Updated land use information from stakeholder recommendations
- Coastal Bermuda patches previously classified as cropland were all moved to "managed pasture"
- Previous pie chart was for entire watershed, this is for only the impaired portion

Proposed cattle estimates
- Method I: Stakeholder input average: 13775
- Method II: Data from NASS agriculture census, 2007: 13203
- Method III: Stocking rates from NRCS (2 ac/animal for pasture, 5 ac/animal for rangeland: 17083

Discussion:
Using stocking rates will likely yield the most accurate answer, but with recent changes to drought/insurance program requirements, stocking rates have dropped to 3 ac/animal for pasture, so it would be most beneficial to use the 3rd method, but use the updated stocking rate.

Q: But in order to get Ag Exemption for tax status, don't you need at least one cow/calf per 4 acres?
A: Yes, and the 3 ac/animal falls within those bounds, so it's not an issue.

APPROVED: Method III, but with stocking rates of 3 ac/animal for pasture.

Proposed horse estimates
- Method I: Stakeholder input average: 1004
- Method II: Data from NASS agriculture census, 2007: 575

Discussion:
Q: where is this ag census data from?

A: It's from USDA – producers receive mailed ag census, and if they don't respond, USDA calls them weekly until they respond.

APPROVED: Method II, apply to rangeland

Proposed deer estimates

- **Method I**: Stakeholder input average: 2847
- **Method II**: County Distribution data from TPWD: 1142
- **Method III**: Animal density data from TPWD (2008 RMU, 82 ac/animal): 450

Discussion:

That density seems kind of low. There seem to be a lot more deer in the watershed. Possibly closer to 20 ac/animal, or even lower. General consensus on land use categories used.

APPROVED: Method III, keep using same land use categories, but increase to 15 ac/animal.

Feral hog estimates

- **Method I**: Stakeholder input average: 5253
- **Method II**: Stocking rate: 20 ac/animal: 1846

Discussion:

If we want to stick with an animal density basis, the 20 ac/animal isn't low enough. General consensus that there are more hogs than deer in watershed, so it should be higher than 15 ac/animal.

Q: Should we try for maybe 7.5 ac/animal?

A: That may actually be unrealistic for whole watershed if we apply them to all land uses aside from urban as suggested.

Q: How about we use 7.5 in the mixed/riparian forested areas where the do the majority of fecal deposition, and 20 ac/animal on all other land uses aside from urban?

A: That is possible within the model, we can do that and apply it to the 100 m buffer for the riparian zones.

Q: is a 100 m buffer what's normally done?

A: Yes, it's the standard we use for most of the other projects we do this model for, but can be changed, if needed.

APPROVED: Method II, but use 7.5 ac/animal for mixed/riparian forest, use 20 ac/animal in all other land uses except urban, maintain the 100 m buffer around the riparian tracts for analysis.

Proposed dog estimate

- Data from American Veterinary Medical Association, 2002: 7644
- 2000 Census Data, 9555 households, 0.8 Dogs/household

Discussion:
Q: 2000 data seems irrelevant now – where's the 2010 data?
A: Not entirely available yet, but we should have that data by the end of the project and can hold off on this particular input until the very end. We will also confirm these numbers with local veterinarians.

APPROVED: Use the same density (0.8 per household) but use 2010 data and try to check numbers w/ info from local veterinarians if possible.

On-site Sewage Facility estimates
- Data from 2000 Census using Census Blocks and CCN boundaries: 5618
- Apply different failure rates based on underlying soils

Discussion:
It's a fair statement to say that all septic systems here in the watershed will fail at some point; it's just a matter of when. It might be best to apply the 15% failure rate for clay soils across the board and use that estimate.

APPROVED: Will use (Census Blocks – CCNs) = (# of OSSFs) method, but will apply 15% failure rate across all soil categories. Will also try to incorporate 2010 census data if it becomes available in time.

TPDES discharges
- City of Mt. Pleasant WWTF
- American Electric Power (Welsh Plant)
- Pilgrim's Pride – Mt. Pleasant Complex
- Pilgrim's Pride – Walker Creek Distribution Center

Discussion:
Q: Walker Creek Center and the Welsh Plant discharges should not have fecal content in their water. It's just process water, so why are they included?
A: We assumed as much, but wanted to include them here just in case.

APPROVED: Use only City of Mt. Pleasant WWTF and Pilgrim's Pride-Mt. Pleasant Complex in analysis.

7:11 - **Water Monitoring Update – Linard Arocha, Water Monitoring Solutions**
Sampling update
- Routine *E. coli:* 487* of 642 samples (155 remaining)
- WWTP *E. coli:* 70* of 94 (24 remaining)
- Storm *E. coli* (all 16 sites): 80 of 128 (48 remaining)
- Bacteroidales and BST sampling were complete in August 2010.

Preliminary data analysis

- Statistically significant relationship between *E. coli* and discharge at Tankersley Site
- Statistically significant relationship between *E. coli* and temperature at Big Cypress Creek Site

7:27 – **Recreational Use Attainability Analysis – Randy Rushin, Water Monitoring Solutions**
Proposed RUAA site identification
- Presented preliminary site selection for all three segments

Discussion:
Q: Study was done for recreational use back in 04-05 and it was determined that there was virtually no rec use on Tankersley. Why do it again?
A: TCEQ just recently finished the updated guidelines for doing an RUAA, so there are some new rules to follow for that type of study. The recreational use data from that time period were just visual observations that were noted while the samplers were out in the watershed collecting data, so it wasn't exactly a measureable parameter they were looking at or anything like that.
Q: So is that data gone and useless?
A: No, the observations from that study will surely be used in the historical data report for the upcoming analysis – there will just be no formal report that past study and it will be incorporated into the new one

7:40 – **General Discussion**
Q: Still uneasy about "worst case scenario" and how this information may be misused by other entities to inaccurately represent landowners. Can we not run the model to look at "moderate" or "better" scenarios?
A: Doing that would be very difficult to achieve and would double or triple our workload, and we do not have the time to accommodate the extra burden.
Further commentary: The intended result of this project is to remove these creeks from the 303 (d) list. There are two ways to do this, 1) to raise the standards, or 2) lower the inputs by implementing BMPs. The presentations you heard tonight represent both sides of that. The RUAA seeks to lift the contact recreation designation that all 3 segments have so that a non-contact standard can be applied. On the other side, the SELECT model and E. coli *sampling work together to find where certain BMPs need to be implemented in order to do the most benefit for the least amount of investment. The loads presented by the SELECT model are only meant to be used as a spatial representation of which areas will be most sensitive to increased* E. coli *loads based on land use and soil type. They are not meant to be used for archived records – that's why we do the grab samples from the creeks by hand. That is the data that will be used to plan for the future. However your concern is legitimate, and care will be taken to note this in the final report by outlining the intended use of the model and its application so that the information it provides is not misused in future generations of the project.*

7:53 – **Adjourn**
Next Meeting – Tentatively set for May 9th @ 6:00)

additional meeting materials can be found online at http://bcc.tamu.edu