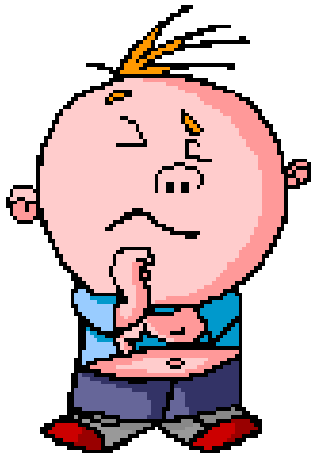
# Lavaca Bay Freshwater Inflow Regime

| Onset Month | Subsistence | Base Low | Base Medium | Base High |
|---|---|---|---|---|
| **Spring Feb-May** | **13,500 for 3 consecutive months** | **55,080 for 3 consecutive months** | **127,980 for three consecutive months** | **223, 560 for three consecutive months** |
| **Fall Aug-Oct** | **9,600 for 3 consecutive months** | **39,168 for 3 consecutive months** | **91,080 for 3 consecutive months** | **158,976 for 3 consecutive months** |
| **Intervening 6 months** | **6,900** | **28,152** | **65,412** | **114,264** |
| **% Frequency of occurrence (1940-2009)[1]** | **97** | **86** | **56** | **37** |
| **450,000 acre-feet in 30 days in any season, once at least every 10 years** | | | | |

# Matagorda Bay Freshwater Inflow Regime

| Onset Month | MBHE 1 | MBHE 2 | MBHE 3 | MBHE 4 |
|---|---|---|---|---|
| **Spring Jan-July** | **114,000 for 3 consecutive months** | **168,700 for 3 consecutive months** | **246,200 for three consecutive months** | **433,200 for three consecutive months** |
| **Fall Aug-Dec** | **81,000 for 3 consecutive months** | **119,900 for 3 consecutive months** | **175,000 for 3 consecutive months** | **307,800 for 3 consecutive months** |
| **Intervening 6 months** | **105,000** | **155,400** | **226,800** | **399,000** |
| **% Achievement Guideline[1]** | **90** | **75** | **60** | **35** |
| **Threshold: minimum of 15,000 acre-feet per month (100% of months)** | | | | |
| **Long-term Volume and Variability: Average at least 1.4 to 1.5 million acre-feet per year as a long-term average (100%)** | | | | |

# Fun with Hydrologic Condition



**“ I wonder, Do you think there is any water available in the Lavaca River near Edna that that is not permitted yet?”**

"Well, I'll run this Water Availability Model and see."

Kirk says,

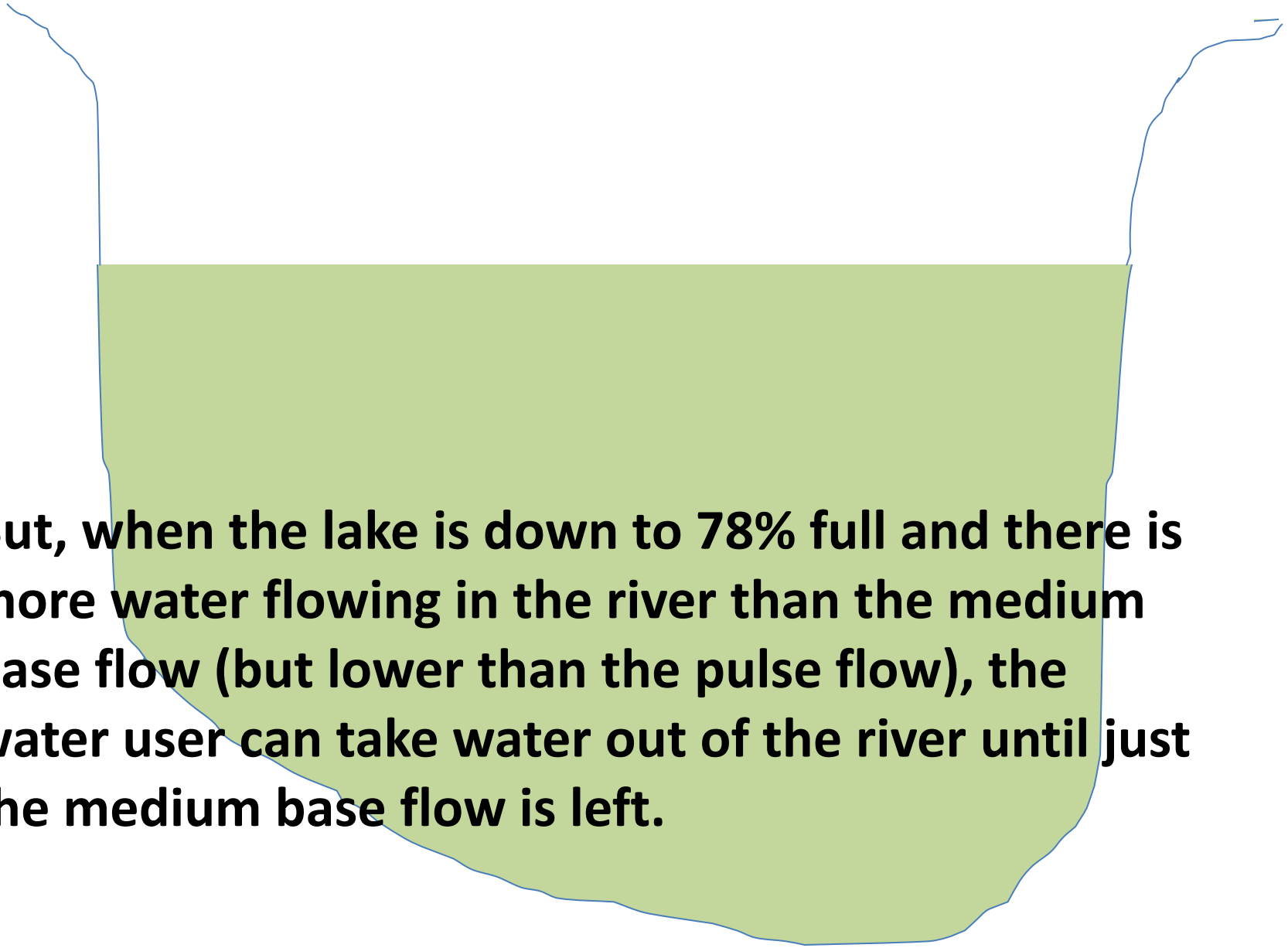
"You won't believe it, there is over 201,000 acre-feet of water every year that is not permitted yet. Wow!"

The stakeholders huddle and wonder, if this available water is going to be permitted, we need to decide when the different base flows will be applied!

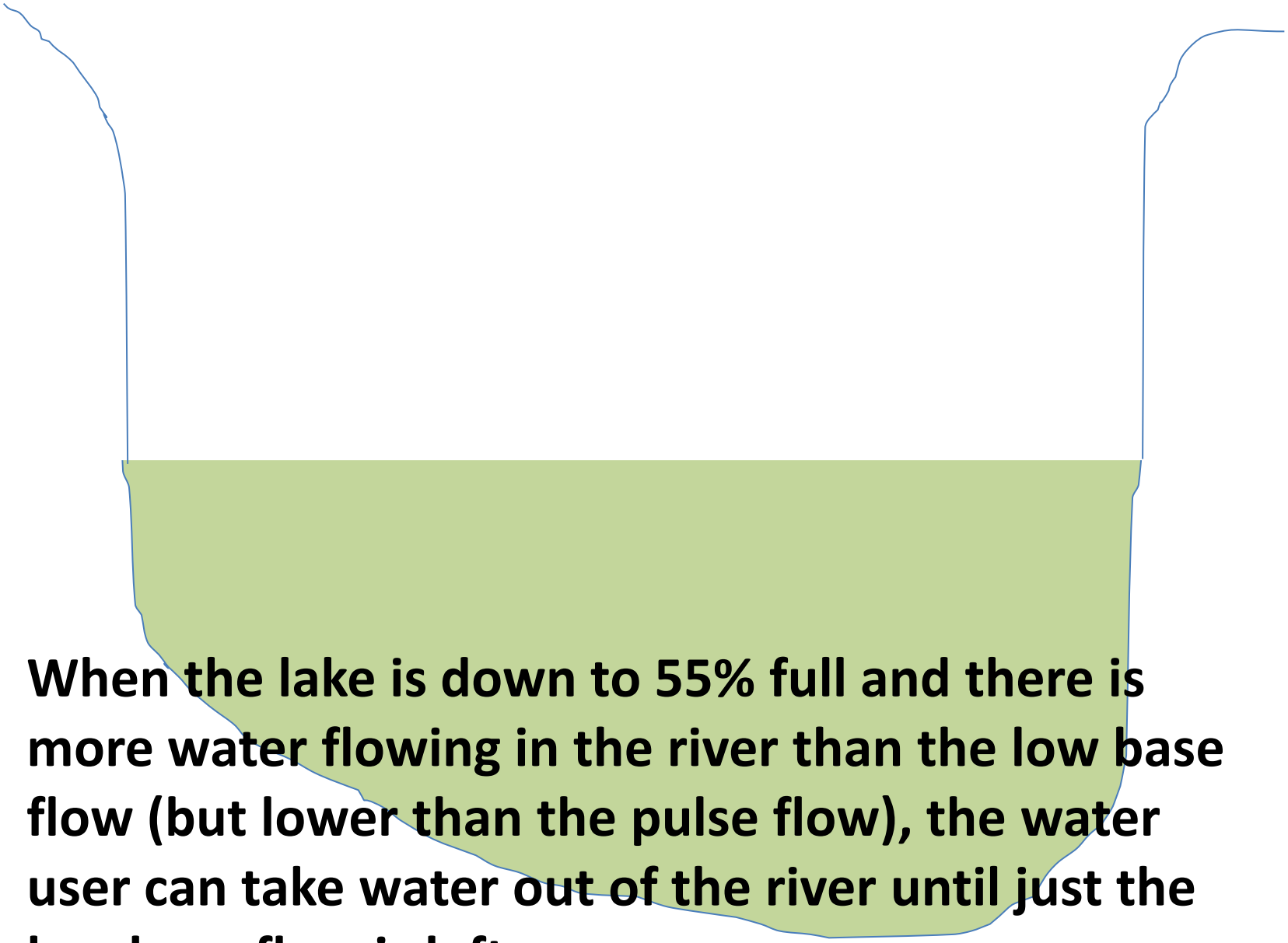
Joe says, “Why not use Lake Texana as your hydrologic condition? Its right next to the river. When the lake is full the river should be full and when the lake is low the river should be low, right?”

Joe says, “Here, I’ll show you how it could work.”

**When the lake is full and there is more water flowing in the river than the high base flow (but lower than the pulse flow), the water user can take water out of the river until just the high base flow is left.**



**But, when the lake is down to 78% full and there is more water flowing in the river than the medium base flow (but lower than the pulse flow), the water user can take water out of the river until just the medium base flow is left.**



**When the lake is down to 55% full and there is more water flowing in the river than the low base flow (but lower than the pulse flow), the water user can take water out of the river until just the low base flow is left.**

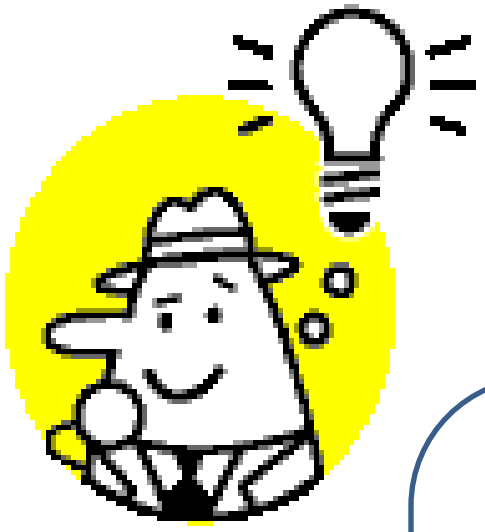
Dave says, “I heard Patrick was thinking of putting in an off-channel reservoir next to the Lavaca River that would store about 15,000 acre-feet of Lavaca River water.

**“If he uses Lake Texana as his hydrologic condition to decide when the different levels of base flow would be left in the river, I wonder if each level of base flow will occur often enough to keep the Lavaca healthy.**

Kirk says,

"Let me think about this, when we use the times Lake Texana would have been full from 1940 to 1996, I see we would have had high base flow 30% of the time.

Joe says, "That's not too bad. The BBEST said high base flow should happen 39% of the time in the Lavaca."



**Bryan says, “Hey, I’ve got an idea. Why don’t we ask the BBEST if there is a big difference between 30% of the time and 39% of the time for high base flow to occur?”**

And so it goes……..