San Bernard
Watershed Protection Plan

May 20, 2010

Why use Models?

- Cost
- Faster
- Predictions for the future

What will the Model tell us?

- Identify the sources and causes of pollution
- Estimate the necessary load reductions

Create a WPP - Nine Elements of Watershed Protection Plans

A. Identify the sources and causes of pollution
B. Estimate the necessary load reductions
C. Describe Point Source and Non-Point source management measures
D. Assess the technical and financial assistance needed
E. Design an informational/ educational component
F. Develop a schedule of implementation
G. Set interim measurable milestones for progress
H. Establish criteria to determine load reductions
I. Create a monitoring component

Models under review for the San Bernard Watershed?

- Load Duration Curves
- SELECT
- BLEST
- HSPF
- EPD-RIV1
- SWAT

Load Duration Curves

- Easy and Quick to develop and understand
- Extensively used by EPA and TCEQ
- Inexpensive
- Limited information
- Requires flow data
- Will not work for Tidal areas

SELECT

- Used in similar watersheds, TCEQ/EPA accepted
- Moderately inexpensive with limited support
- Requires flow data
- Limited information
- Requires a “comparison step”
- Will not work for Tidal areas

BLEST

- Used in an urban area TMDL, TCEQ/EPA accepted
- Relatively inexpensive, support available
- Specific for Bacteria, with limited but good information
- Requires flow data
- Will not work for Tidal areas

HSPF

- Widely used and TCEQ/EPA accepted
- Great support available
- Moderately expensive
- Very complex and time consuming
- Excellent data quality
- No flow data needed
- Will also work for Tidal areas

EPD-RIV1

- New and open source
- Developed by the EPA, not a lot of support available yet
- Moderately expensive, very complex
- Not very time consuming to run
- Excellent data quality
- No flow data needed
- Will also work for Tidal areas

SWAT

- Widely used and TCEQ/EPA accepted
- Good support available
- Expensive and very complex
- Time consuming
- Excellent data quality
- No flow data needed
- Will also work for Tidal areas

Other Suggestions?

- Quick
- Easy
- Inexpensive
- Excellent data quality

Any Questions,
Comments
or
Concerns?