

Shared Vision Planning
Stakeholder Involvement in the
Technical Analysis

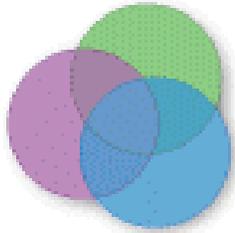
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Water management is characterized by...

- Persistent conflict
- complexity & uncertainty in natural systems (hydrology, ecology etc.)
- Groups with conflicting interests & values demanding involvement
- Need to understand how to integrate technical analysis into a public, multi-stakeholder decision process





Shared Vision Planning

- PLANNING PRINCIPLES
- SYSTEMS MODELING
- COLLABORATION

integrates tried-and-true **planning principles, systems modeling and collaboration** into a practical forum for making resource management decisions;



Shared Vision Planning relies on Collaborative Model-building

“the process of building a model is a way of working out a shared view of what is being managed and how the managing should be done.” K. Lee

SVP means **involving stakeholders in the technical analysis** – in the data and technical relationships

- Builds understanding of the system
- Builds confidence in the analysis
- Builds trust between stakeholders



Model Characteristics Support Collaborative Planning

- **Integrated** – All stakeholder interests and their interactions are in one place
- **User Friendly** – capable of being used by multiple stakeholders and decision makers
- **Understandable/Transparent** – assumptions, input, relationships, & output
- **Relevant** to the interests and values of stakeholder and decision makers
- **Adaptable/Flexible** to changing conditions or evolving process



What is different?

- The **integrated, technical model** sets SVP apart from other “collaborative” planning processes.
- The **collaborative, integrated, & transparent** nature of the **modeling** sets SVP apart from traditional technical analysis

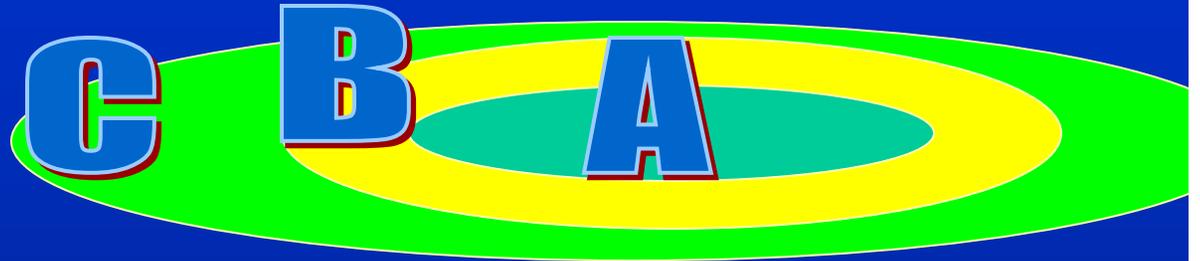


A Quick Example - Lake Ontario Regulation Study

- Five year, \$25 Million study on re-regulation of Lake Ontario-St. Lawrence River
- Co-sponsored by the US and Canada through the International Joint Commission
- Collaboratively-built models help interest groups identify and begin to quantify the relationships between hydrology and their interests.



Structured Stakeholder-involvement in Model building



Circle A

- Modelers from Corps + Envi Canada + contractors
- email, weekly teleconferences

Circle B

- Working groups on Navigation, Hydropower, M&I water supply, Environment, recreational boating, coastal (lake) erosion
- Working groups developed technical information and passed it to the Circle A team

Circle C –

- The most interested members of the public
- Technical experts in subsidiary studies
- Road Show presentations at stakeholder gatherings

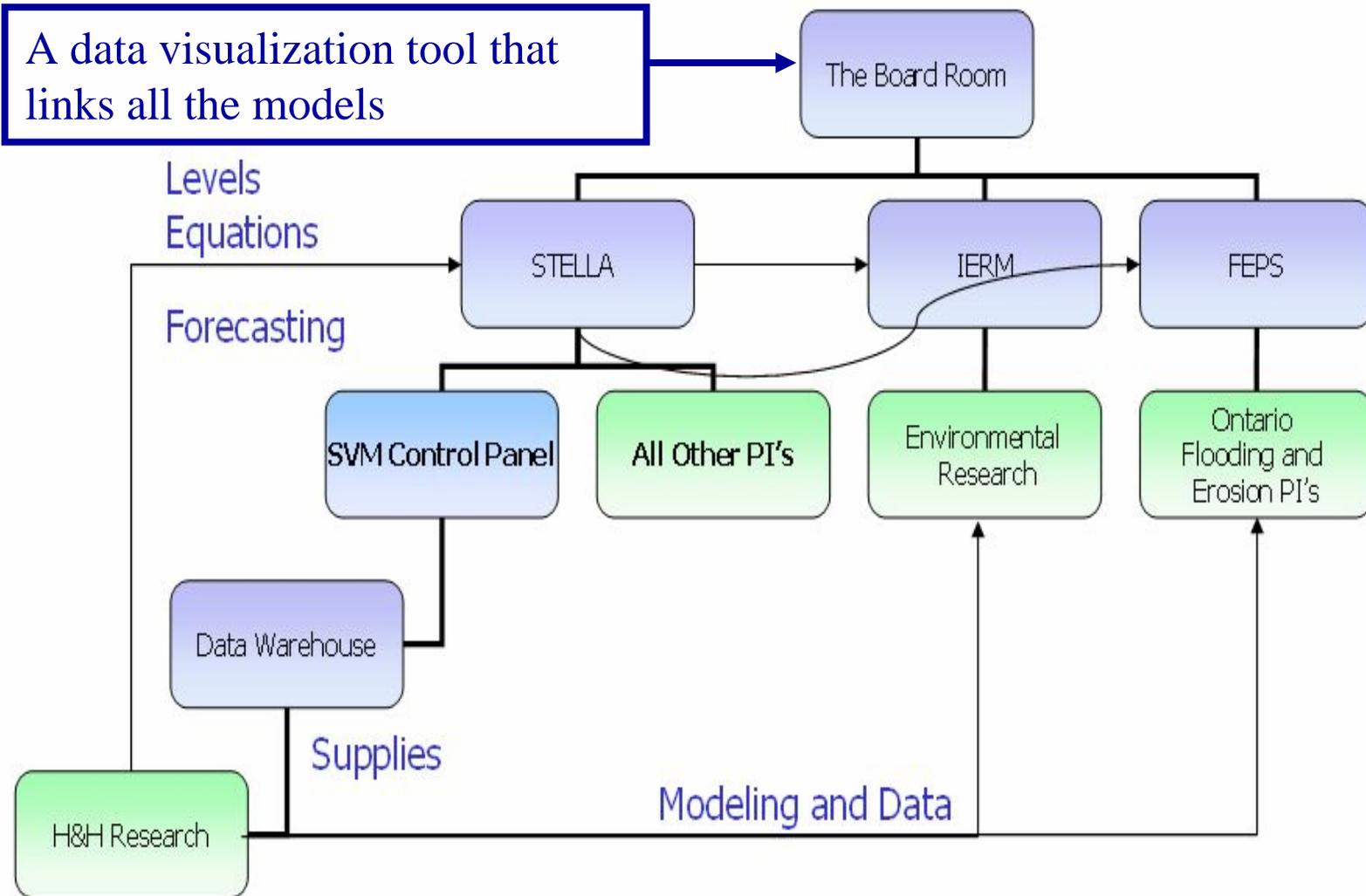
Circle D

- Practice Decision-Making workshop with US-Canada Study Board



Stella linked w/process models

A data visualization tool that links all the models



Evaluation using dynamic Excel spreadsheet in workshop settings

The screenshot displays a dynamic Excel spreadsheet with several key components:

- Environmental Performance Indicators Table:**

	A+	B+	D+	E	Much Disproportionate difference? Loss
Wetland Meadow Marsh Community	1.02	1.44	1.17	1.56	
Low Veg 18C - spawning habitat supply	0.89	0.95	0.94	0.88	7%
High Veg 24C - spawning habitat supply	1.05	1.00	1.01	1.08	7%
Low Veg 24C - spawning habitat supply	1.00	1.02	1.00	1.11	
Northern Pike - YOY recruitment	1.02	1.00	1.05	1.03	4%
Largemouth Bass - YOY recruitment	0.94	0.98	0.97	0.96	4%
Least Bittern (IXEX) - reproductive index	0.88	1.04	0.96	1.13	25%
Virginia Rail (RALI) - reproductive index	0.96	1.11	0.99	1.15	19%
Black Tern (CHNI) - reproductive index	1.03	1.12	1.01	1.16	15%
Yellow Rail (CONO) - preferred breeding habitat	0.96	1.01	0.98	1.01	5%
King Rail (RAEL) - preferred breeding habitat	1.05	1.10	1.03	1.27	23%
Low Veg 18C - spawning habitat supply	1.01	1.01	1.01	1.04	3%
High Veg 24C - spawning habitat supply	1.03	1.01	1.02	1.02	1%
Low Veg 24C - spawning habitat supply	1.01	1.01	1.01	1.04	3%
Northern Pike - YOY recruitment	1.05	1.03	1.01	1.06	5%
Largemouth Bass - YOY recruitment	0.99	1.00	1.00	1.00	
Northern Pike - YOY net productivity	4.02	2.08	1.17	4.08	291%
Virginia Rail (RALI) - reproductive index	1.16	1.27	1.31	1.33	17% Muskrat
Muskrat (ONZI) - house density in drowned river mouth	1.42	4.39	1.75	37.25	3583% Weight in Index
Golden Shiner - suitable feeding habitat area	1.00	1.00	1.00	1.03	3% Depinto
Wetlands fish - abundance index	0.87	0.90	0.84	0.97	13% Index
Migratory wildfowl - habitat area	1.03	1.03	0.97	1.00	6%
Least Bittern - reproductive index	1.03	1.06	1.00	1.06	6%
Virginia Rail (RALI) - reproductive index	0.94	0.97	1.06	1.00	13%
- Historic Water Supplies Chart:** A stacked area chart showing water levels in hectares of meadow marsh from 1875 to 1995. The chart is divided into categories: Meadow (top, blue), Marsh (middle, red), and Wetland (bottom, green). A legend on the left lists categories like 'Dry for last 30 yrs.', 'Dry for last 10 yrs.', etc.
- Plan D+ Lake Ontario Levels Chart:** A line graph showing water levels from 1970 to 2000. The y-axis represents water level (73.0 to 77.0). The x-axis represents quarter-months of the year (0 to 40). The chart is divided into four seasons: Winter (0-10), Spring (10-20), Summer (20-30), and Autumn (30-40). A blue line shows the water level, and a red dashed line indicates a target level. Text notes: 'Plan D+ meets coastal criteria 78%(winter); 71%(spring); 93%(summer); 78%(fall);'. A note below the chart states: 'Average winter coastal overage is 0.2 m.: spring 0.13m., summer 0.1m. and fall 0.12 m.'.
- Species at Risk Radar Chart:** A circular radar chart titled 'Species at risk' comparing scores to 195800. The chart shows scores for various species: Least Bittern (Ontario), Black Tern (Ontario), Yellow Rail (Ontario), King Rail (Ontario), Eastern Sand Darter (Lower River), Spiny Softshell Turtle (Lower River), and Bridle Shiner (Lower River). A central point is labeled '195800'. A legend lists species and their scores: Least Bittern (IXEX) - 1.04, Black Tern (CHNI) - 1.12, Yellow Rail (CONO) - 1.01, King Rail (RAEL) - 1.10, Least Bittern - 1.06, Eastern Sand Darter (AMRE) - 1.03, Spiny Softshell Turtle - 1.06, Bridle Shiner (NOBI) - 0.97.



Stakeholder Involvement in the Technical Analysis is not just Theory

- **Drought Exercises for the Potomac River** (DC) Interstate Commission for the Potomac River;
- **SVP Cases** - Five Pilots in the National Drought study, ACT-ACF, Rappahannock (Va), Mississippi Headwaters, Willamette TMDLs (OR), Cache la Poudre (CO), El Dorado Irrigation District (CA) Drought Preparedness
- **Middle Rio Grande River** (NM) water allocation and ESA issues – Sandia National Labs;
- **Roanoke River** (VA/NC)– Hydrologics, Inc., TNC;
- **Urban Water Management for Los Angeles** – CDM
- **Okavango River (southern Africa)** – Natural Heritage Institute;
- USGS, EPA, BuRec, all have initiatives



So, a “long-term vision” of applying SVP to Calif State Water Plan

- Can't be done –
 - SVP has always been applied to specific decisions that need to be made
 - Decentralized decision-making on technically intricate issues over a vast spatial scale
 - Too many well-informed, politically-savvy stakeholders
- Challenge is to adapt SVP
 - collaboration, systems modeling, and planning principles

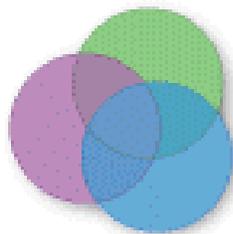


Some ideas

- Focus on the “why?” & “what” – objectives and vision of stakeholder involvement in technical analysis – assume iterative development
- Openness in the process and the modeling foments trust in both
- Multiple levels of models – simple to complex - based on “process” objectives
- Pilots & surveys of process ideas alongside technical tools
- Exercise & update both the technical analysis and the collaborative process
- Link the Process and Technical sides of water planning
- Make this a “shared vision” by engaging other groups (doable for 2009 update)



On to Jay Lund



Shared Vision Planning

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Institute for Water Resources

**Presentation for SWAN
December 10, 2007**

Some ideas

- 1st specify the “why?” - why involve stakeholders in the technical analysis for the water plan.
- 2nd - Develop a “vision” of what this involvement would look like.
 - Intersecting of regional plans,
 - what-if games with uncertainty analysis,
 - web-based,
 - linked to data from exist, smaller scale more detailed studies,
 - glossary's of terms,
 - validated in small, stakeholder groups,
 - linking/adaptive management tool,
 - ability to test delta, recovery/ecosystem restoration policies,
 - game for use in education for K-12 and use by legislators and governors,
 - ...
- 3rd Make this a “shared vision” by engaging other groups (doable for 2009 update)



Shared Vision Planning Steps

1. *Build a team* and identify problems. stakeholders, decision makers, & experts
2. Develop objectives & metrics for evaluation may differ from national objectives and metrics
3. Describe the status quo; what will the future look like if we do nothing? based on a collaboratively built model
4. Formulate alternatives to the status quo. done iteratively using the team
5. Evaluate alternatives and develop team recommendations. *team uses collaboratively built model to evaluate impacts*
6. *Institutionalize* the project or plan. collaborative decision is made, & implemented by decision makers
7. *Exercise and update* the plan (adaptive management). exercises ensure the plan is implemented as designed & *updated* based on new information



Tier I: Conceptual Framework

Tier II: Integrated Planning / Screening /
Negotiating Model

Tier III: Detailed Data Sets and Numerical Models

Quality

Hydrology

Ecologic

Economic



Applying SVP to State Water Plan

- Given that it will fail ...
 - how do we get useful things out of the process?
How can we incrementally move forward?
 - How can we establish relationships, ideas, and technical information that will make solutions and management easier in the future?

