

# **Hydrologic & Environmental Systems Modeling Department**

## **Realignment Into A Project Management Matrix Structure**

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Department Director*

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*Hydrologic & Environmental Systems  
Modeling (HESM) Department*



[sfwmd.gov](http://sfwmd.gov)



# Why Modeling is Important

- Relatively inexpensive means for evaluating infrastructure changes (eg. CERP) and operating plans
- Operational Planning at a seasonal and multi-seasonal scale
- Helps provide understanding into complex water resources system behavior



# Strategic Modeling Plan

- **Developed in July, 2003**
- **Considerable progress in implementation**
- **Recommendations:**
  - **Centralize all regional-scale (system-wide modeling)**
  - **Centralize all model code development**
  - **Create the Office of Modeling (now Hydrologic & Environmental Systems Modeling Department)**



## Recommendations (cont.)

- **Standardized methodology for all model development**
- **Create a Library of all models**
- **Review of Statement of Works which includes any modeling**
- **Expert Peer Review of models**
- **Establish a Modeling Oversight Committee**



# Peer Reviews Accomplished

- **SFWMM (a.k.a. 2x2)**
- **Regional Simulation Model Theory (RSM)**
- **Everglades Landscape Model (ELM)**
- **Lower East Coast subregional groundwater model (LECsR)**
- **Kissimmee Basin Models**
- **Natural System RSM (NSRSM)**



# Interagency Modeling Center (IMC)

- A joint collaboration between SFWMD and USACE Jacksonville District
- All CERP & Acceler8 modeling tasks are cleared or conducted by IMC
- Located in the Headquarters of SFWMD
- The District employees of IMC report to Hydrologic & Environmental Modeling Department



# Modeling Oversight

- **Modeling Sub-Team of the District Leadership covering areas of:**
  - **CERP, Water Resources, Operations**
- **Modeling Oversight Team (MOT)**
  - **Department Directors**
  - **Program Managers**
  - **Division Directors**
- **Modeling Intake Process centers on the prioritization provided by above two teams**



# Re-alignment

- Hierarchical structure not suitable for emphasis on project management
- Separate functional managers from project managers
- Emphasizes accountability at project manager level while ensuring long term skill development through functional managers



# Previous Organization

## Hydrologic & Environmental Systems Modeling Department

**Interagency Modeling Center  
(joint venture w/USACE)**

- **CERP**
- **Acceler8**

**Programs:  
CERP & Acceler8**

**Model Development & Implementation Division**

- Complete RSM Implementation
- Further Development of RSM (WQ and Ecology)
- Development of models for the entire District using CMM principles

**Programs:  
Modeling & Scientific Support**

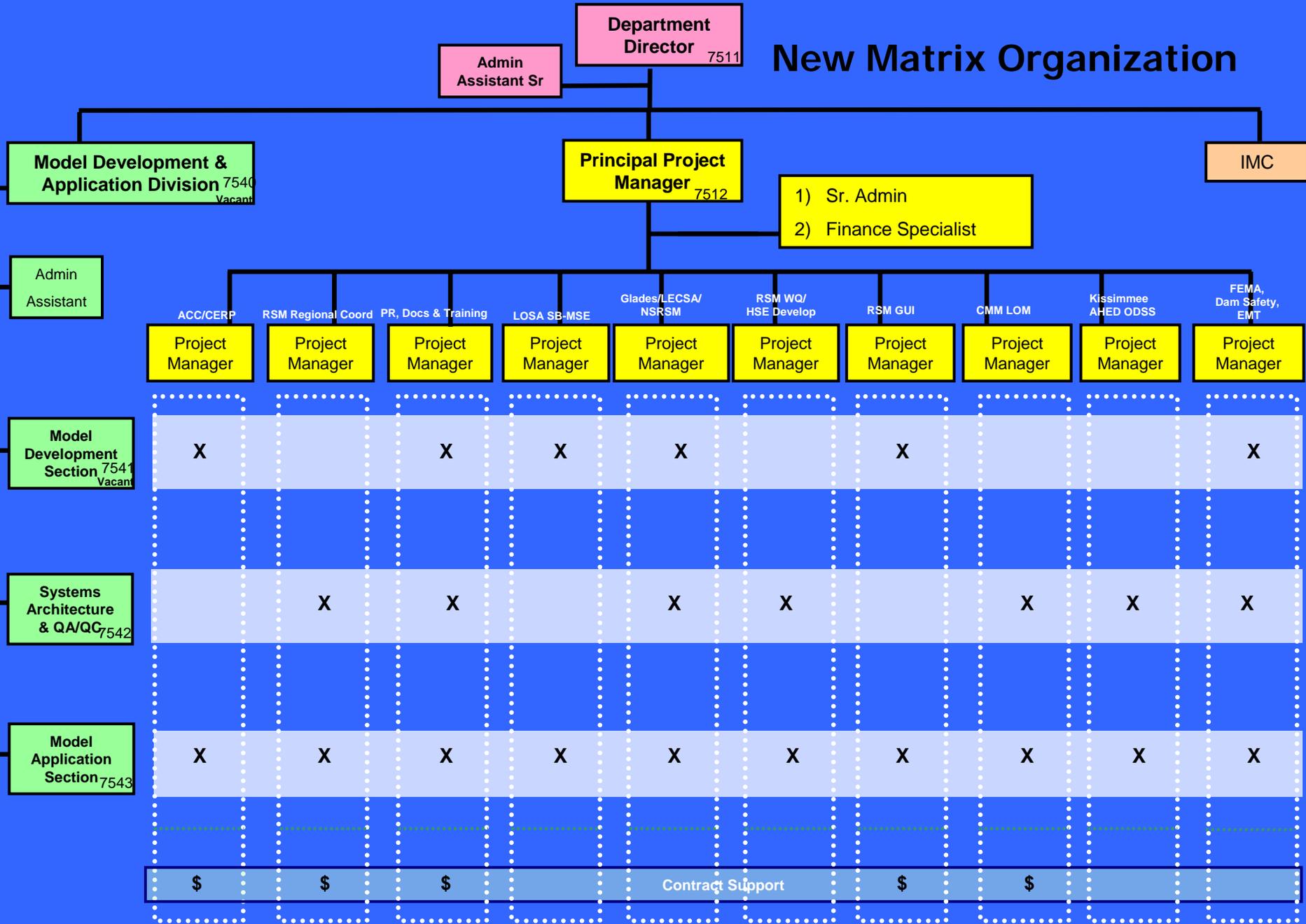
**Model Application Support Unit**

Modeling Application Support for the entire District

**Programs:**

- Water Supply
- Operations & Maintenance
- Kissimmee Restoration
- District Everglades
- Lake Okeechobee
- Coastal Watersheds
- Stormwater Management

# New Matrix Organization



**Model Development & Application Division**

Vacant

Admin Assistant

Vacant

**7541 Model Development Section**

Rivera (act.)  
New Position

Ray Santee  
Randy VanZee  
Wasantha Lal  
Clay Brown  
Nazrul Islam  
Kang Ren Jin  
Eric Flaig  
Joseph Park  
Jun Wang  
Naiming Wang

**7542 Systems Architecture & QA/QC**

Rivera

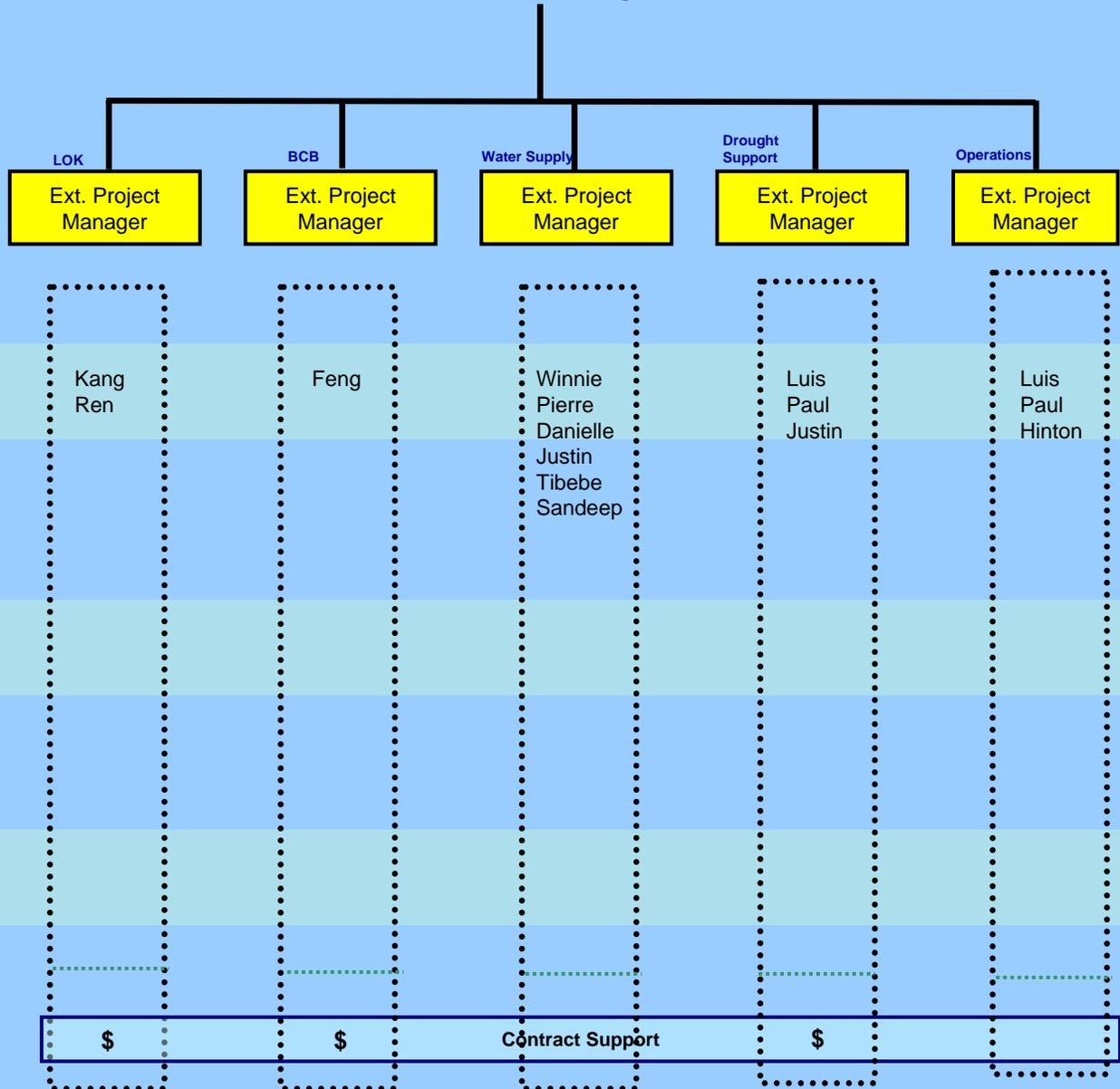
Rachelle Grein  
Joseph Rodrigues  
Jessie Potts  
Mike Warner  
Aimond Alexis

**7543 Model Application Section**

Cadavid

Pierre Massena  
Justin Niedzialek  
Raul Novoa  
Danielle  
Rama Rani  
Ke Feng  
Paul Trimble  
Winnie Said  
Liz Bologna  
Sashi Nair

# External Projects



# HESM Modeling Request Form

- Primary means for requesting work from HESM (except IMC which has a Modeling Services Request form)
- Simple tool for documenting work intake



## Modeling Request Form

Hydrologic & Environmental Systems Modeling (HESM)

**Requestor Information**

*Request Date:* \_\_\_\_\_ *Requested Due Date:* \_\_\_\_\_

*Requestor:* \_\_\_\_\_ *Phone#:* \_\_\_\_\_

**Project Information**

*Project Name:* \_\_\_\_\_

*Project Manager:* \_\_\_\_\_ *Phone#:* \_\_\_\_\_

*Timesheet Code/Fund:* \_\_\_\_\_ *Modeling Chip#:* \_\_\_\_\_

**Work Description**

<i>Modeling Request:</i>	<i>Request Type</i>	<i>Description</i>
<i>(Check request type. Please note that follow up requirements meeting required prior to starting work.)</i>	<input checked="" type="checkbox"/> Model Development	<i>Request for new model features and enhancements.</i>
	<input type="checkbox"/> Model Implementation	<i>Request for new model implementation.</i>
	<input type="checkbox"/> Model Application	<i>Request for model application and reporting criteria</i>
	<input type="checkbox"/> Model Data	<i>Request for creating / updating model data</i>
	<input type="checkbox"/> Model Analysis	<i>Request for model analysis</i>
	<input type="checkbox"/> Model Review	<i>Request for model review</i>

*Brief Description of Requested Work:*

HESM USE ONLY

*Bugzilla Ticket#:* \_\_\_\_\_ *PM Assigned:* \_\_\_\_\_

*Date Approved:* \_\_\_\_\_ *PM Meeting Date:* \_\_\_\_\_

*Component:* \_\_\_\_\_

*Meeting w/ Client Required?* \_\_\_\_\_

**Approvals:**

*Requestor:* \_\_\_\_\_ *Date:* \_\_\_\_\_

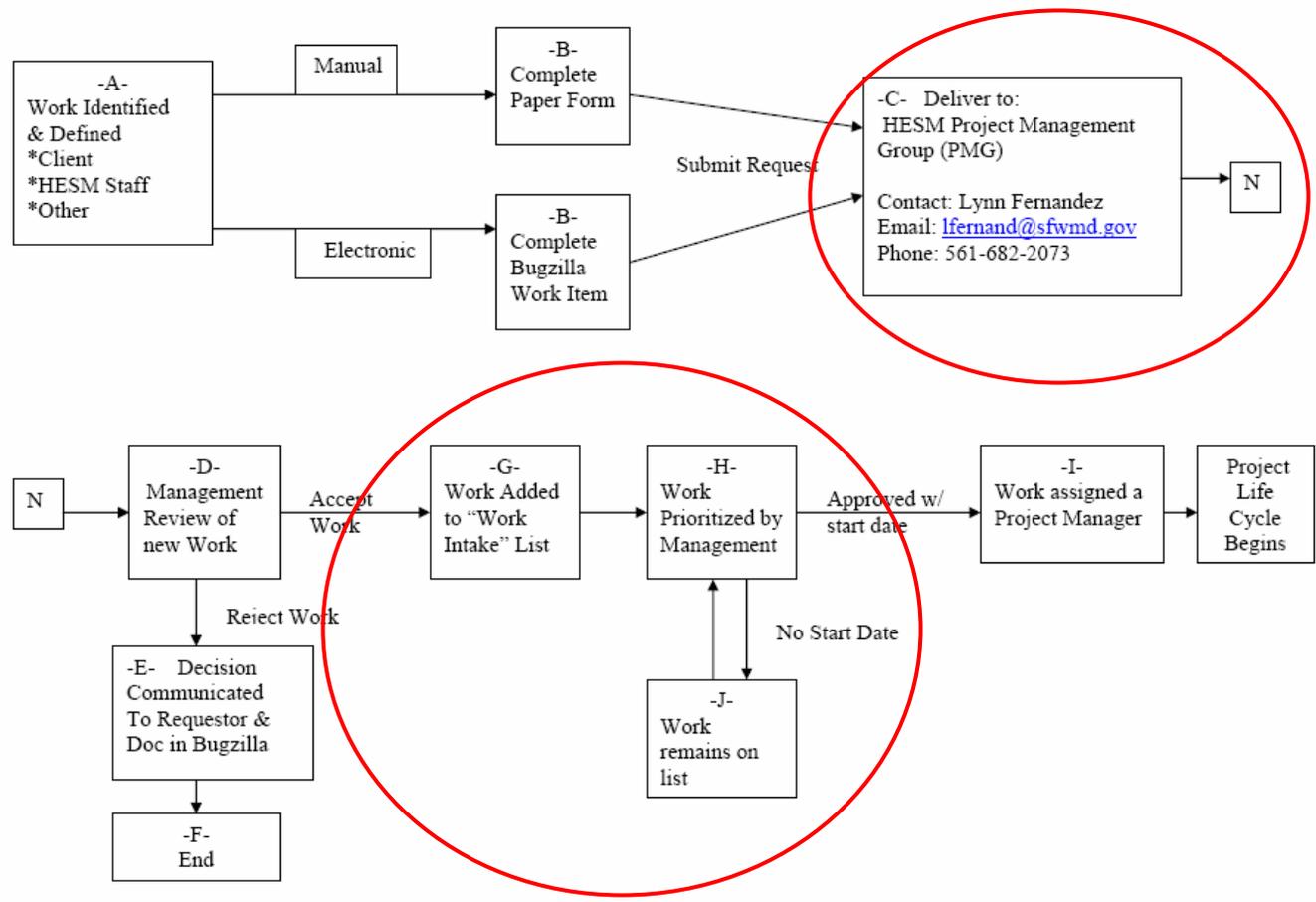
*HESM Manager:* \_\_\_\_\_ *Date:* \_\_\_\_\_

Work Accept                       Work Rejected



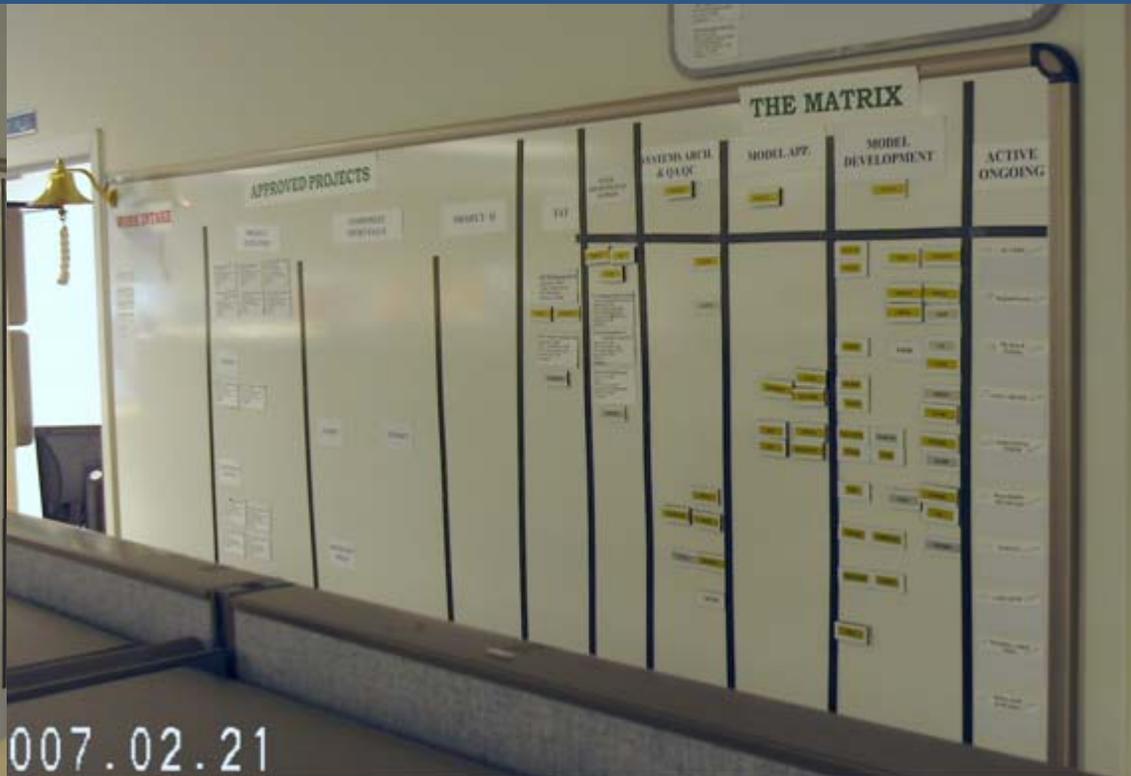
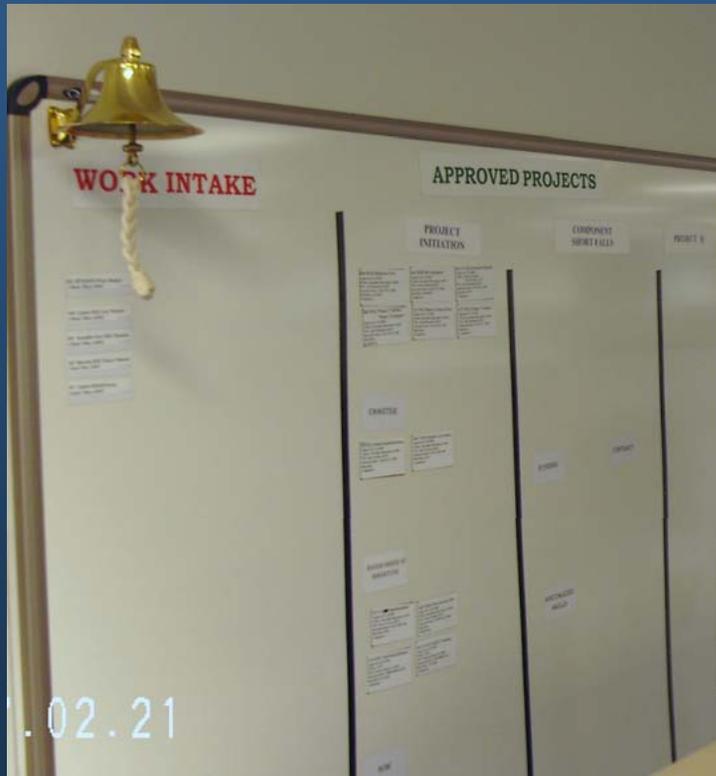
# "The Meat Grinder"

## HESM WORK INTAKE PROCESS





# HESM Battle Board





# The Project MATRIX





# Near Term "Portfolio" Management

## eProject



### Executive View: All Projects

Unread values are marked with ↑(increased), ↓(decreased), and **bold**

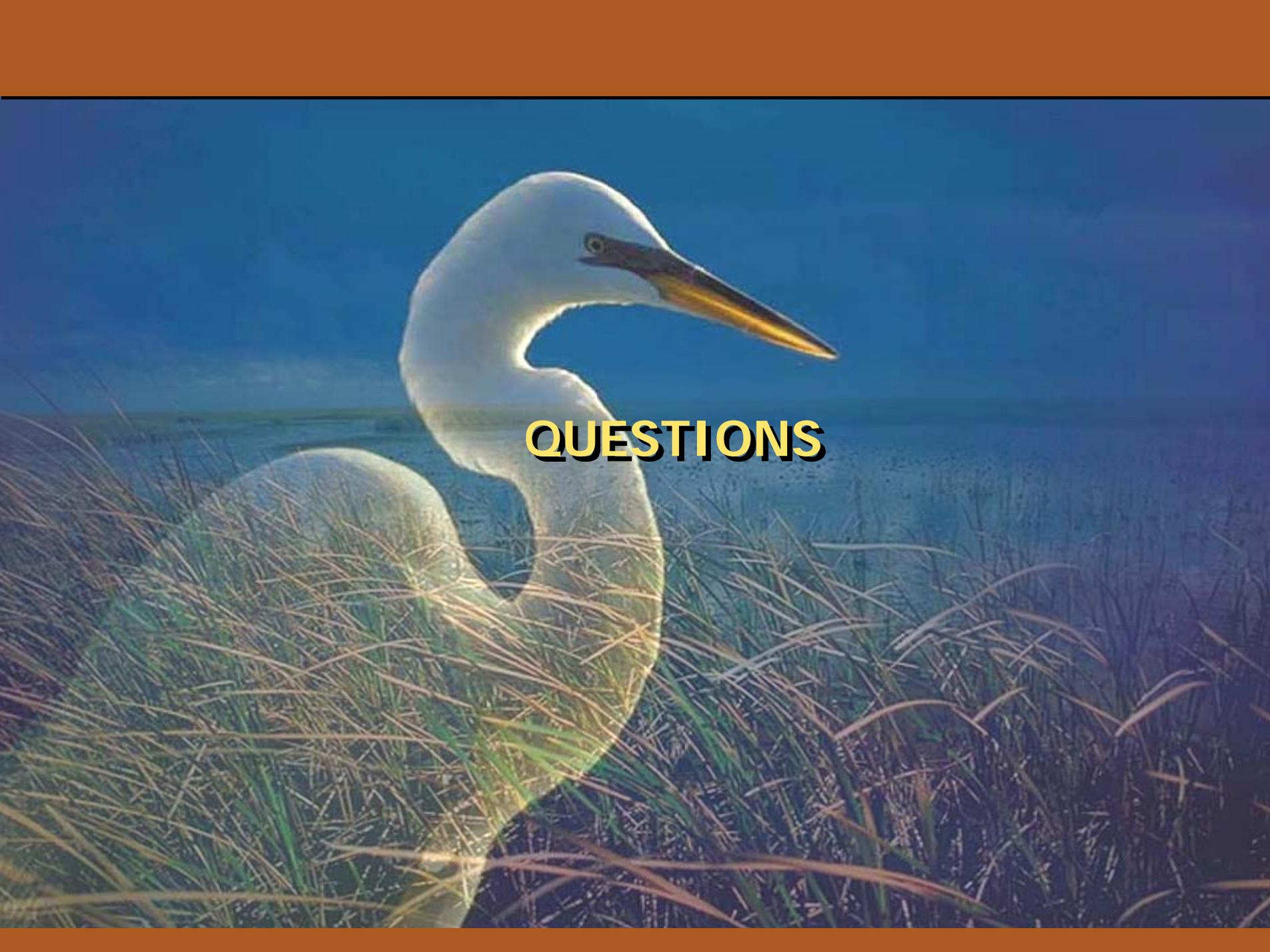
Change Format ▾									
eProject Name	Actions	%	Health	Budget	EAC	Var.			
<input checked="" type="checkbox"/> <b>Marketing Projects</b>		<b>+31%</b>	●	\$635,000.00	<b>↑\$635,000.00</b>	\$0.00	1/15		
<input checked="" type="checkbox"/> <b>Events &amp; PR</b>		<b>+21%</b>	●	\$423,000.00	<b>↑\$423,000.00</b>	\$0.00	1/1/2005	3/20/2005	John Doe
<input checked="" type="checkbox"/> <b>Trade Show Event</b>	▾	<b>+19%</b>	●	\$325,000.00	<b>↑\$325,000.00</b>	\$0.00	2/1/2005	9/20/2005	John Doe
<input checked="" type="checkbox"/> <b>Press Coverage</b>	▾	25%	●	\$98,000.00	\$98,000.00	\$0.00	1/1/2005	5/10/2005	John Doe
<input checked="" type="checkbox"/> <b>Internet Marketing</b>		<b>+41%</b>	●	\$222,000.00	\$222,000.00	\$0.00	3/1/2005	9/31/2005	John Doe
<input checked="" type="checkbox"/> <b>Search Engine Optimization</b>	▾	<b>+74%</b>	●	\$200,000.00	\$200,000.00	\$0.00	3/1/2005	5/31/2005	John Doe
<input checked="" type="checkbox"/> <b>Online Publications Coverage</b>	▾	<b>+10%</b>	●	\$22,000.00	\$22,000.00	\$0.00	5/20/2005	<b>+9/31/2005</b>	John Doe
<input checked="" type="checkbox"/> <b>Engineering Projects</b>		69%	●	\$424,000.00	<b>↑\$480,000.00</b>	<b>↑\$56,000.00</b>	1/1/2005	3/20/2005	John Doe
<input checked="" type="checkbox"/> <b>Research &amp; Development</b>		82%	●	\$137,000.00	<b>↑\$162,000.00</b>	<b>↑\$25,000.00</b>	4/1/2005	2/10/2006	John Doe
<input checked="" type="checkbox"/> <b>MetaMiner 5.0</b>	▾	80%	●	\$86,000.00	\$94,000.00	<b>\$8,000.00</b>	4/1/2005	2/10/2006	John Doe
<input checked="" type="checkbox"/> <b>File Stamp Pro</b>	▾	87%	●	\$51,000.00	<b>↑\$68,000.00</b>	<b>↑\$17,000.00</b>	4/1/2005	2/10/2006	John Doe
<input checked="" type="checkbox"/> <b>Hardware &amp; Infrastructure</b>		50%	●	\$287,000.00	\$318,000.00	<b>\$31,000.00</b>	1/1/2005	3/20/2005	John Doe
<input checked="" type="checkbox"/> <b>Server Upgrades</b>	▾	68%	●	\$278,000.00	\$290,000.00	<b>\$12,000.00</b>	1/1/2005	3/20/2005	John Doe
<input checked="" type="checkbox"/> <b>QA Testing Software Upgrades</b>	▾	45%	●	\$9,000.00	\$9,000.00	\$0.00	1/1/2005	3/20/2005	John Doe
<b>Grand Totals</b>		<b>45%</b>	●	<b>\$1,059,000.00</b>	<b>\$1,115,000.00</b>	<b>\$100,000.00</b>	<b>1/1/2005</b>	<b>2/10/2006</b>	
Change Format ▾									



# Ultimate "Portfolio" Management

**SAP..... P3e.....**

**We will shift to the Enterprise  
Management Solution when it is rolled  
out.....**



**QUESTIONS**