

# Breakout Group Products

Fisheries GIT Meeting

December 2, 2014

# Forage Outcome

WHAT  
ABOUT  
PLANKTON?

## Forage Key Elements

Objectives	#2 Baseline	#3 Participating Stakeholders
<p>③ - WHAT DO WE HAVE THE TOOLS TO MANAGE (DEVELOP N.G. TOOLS)</p> <p>① - DEFINE "FORAGE SPECIES (ROLE - FOOD SOURCE - ECONOMIC VALUE) ALLOCATION</p> <p>② - DETERMINE STATUS OF FORAGE BASIS</p>	<p>#2 Baseline</p> <ul style="list-style-type: none"> <li>- ESTIMATES OF HISTORICALY "PRISTINE"</li> <li>- STOCK ASSESSMENTS FOR PREDATORS</li> <li>- BIOMASS TARGETS IN FMPs</li> </ul>	<p>#3 Participating Stakeholders</p> <ul style="list-style-type: none"> <li>Reduction &amp; Bait fisheries for menhaden</li> <li>ASAMFC } HAB. MANAGERS</li> <li>ACFHP } INCL. STATES, ACOE</li> <li>Sportfish Groups - CCA, MSSA</li> <li>Commercial Harvesters MWA - VWA</li> <li>Charterboat Assoc MCA - VCA</li> <li>CHES. BAY ECOLOGICAL FOUND.</li> <li>General Public</li> <li>MD Sea Grant</li> </ul>
<p>3 OF MOST IMP. WE KNOW LEAST ABOUT</p>	<p>PREDATOR SPECIES?</p> <p>* STRIPED BASS</p> <p>BLUMS IL WEAKFISH</p> <p>SEE ASAMFC</p> <p>+ 3 ARE MANAGED: SP. FLOUNDER SPECIES: SP. COD = C.R.G.L. LIMITS OR SIZE FOR THESE</p>	<p>SHOULD HAVE APPLICATION BUT DON'T LIMIT TO THESE</p>

3 OF  
MOST  
IMP.  
WE  
KNOW  
LEAST  
ABOUT

# Forage Outcome

- \* OUTCOME NOT LIMITING  
→ NEED TO APPLY TO MGT.

## #4 Factors Influencing

### natural system factors

### human system factors

sufficient knowledge

monitoring/ survey capacity

data synthesis/ analysis

metric development

benchmark current status

### effective policy in place for achieving goals

Political will to sustain necessary monitoring and research

Jurisdictional cooperation

### adequate financial resources (administration and incentives)

### adequate extension infrastructure (outreach and tech assistance)

Access to expertise

- DITCHES / FOREST TO SUPPORT FORAGE SPECIES

## #7 Monitoring Progress

## #5 Current Efforts and Gaps

↳ WHAT IS W. Q.  
NEEDED TO SUPPORT FORAGE SPECIES

- SEDIMENT
- NUTRIENTS
- TOXINS (INC. ENDOP. DISR.)
- UNDERSTANDING OF PLANKTON
- GIZZARD SHAD?
- FOOD WEB INTERACTIONS

## #8 Assessing Progress

- CONSIDER YEAR CLKS STRENGTH AND TEMPORAL NEEDS OF FORAGE SPECIES  
⇒ LOOK FORWARD

## #6 Management Approach

- SUITE A INDICATORS

- MONITORING PROGRAMS - MAX. EFF. OF EXISTING/BUILD ON

- LOWER SIZE LIMIT ON TSI PREDATORS

- PROCESS TO INCORPORATE FORAGE INDICATORS INTO MGT (O.G. bluefish / predator/prey rel.)

## #9 Adaptively Manage

\* BE ICERNY TO CHG AN INDICATOR

RESTORE HABITATS THAT SUPPORT FORAGE SPECIES

↳ LINKAGE TO ENVIRON. CONDITIONS THAT AFFECT FORAGE RISK

- INC. CLIMATE

↳ DECLINE OF BAY ANCHOVY IN OCEAN

↳ AVAILABILITY OF HABITAT

"FLIP" MULTI-SPECIES MODELS FOR PREY SPECIES

- CONSIDER GROUPINGS SUITE OF FORAGE SPECIES  
\* PERUVIAN ANCHOVY FISHERY  
"KELW" WAF

# Forage OBJECTIVES

objectives we are trying to achieve with this outcome?

Does this outcome mean to you? *How much Do we have, How much Do we NEED?*

What tangible actions that this outcome calls for?

What are your expectations of the outcome?

DECIDE WHAT THE METRICS ARE (w/STATUS QUO, DES. LIM.)

→ DITTO TO 1<sup>st</sup> 2

- TON OF INFO, MAKE IT USEFUL

- NUTRITIONAL MONITORING  
PROGRAM - LIFECYCLE FORAGE IN DAY?

- Do we know what <sup>KEYS, REPARTES</sup> they eat, Do we know what <sup>KEYS, REPARTES</sup> they need? (AT ALL LIFE STAGES)

- TROPHIC BALANCE

- UNDERSTAND DYNAMICS & TOOLS  
TO ADJUST / PREVENT IMBALANCE

- ECONOMIC RULE OF  
FORAGE PITCH

- TOOLS THAT MGRS. CAN USE  
(A LOT OF DATA, BUT NEED)

TO FILL GAPS - SHALLOW (WATER)

- UNDERSTAND WHERE & WHY  
PASTURE ARE - NOT JUST PASTURE  
AVAIL.

Outline

does information from this morning's presentations fit into this

?

Other elements can we fill out? Where could this information come

Existing information?

Baseline/Outcomes (Element 2)

Factors Influencing (Element 4)

Current efforts/gaps (Element 5)

Management Approach (Element 6)

- CONSISTENT PROTOCOLS  
FOR ASSESSMENT

- IMPACT OF ENV.  
CONDNS. ON DAY  
FORAGE

# Fish Habitat Outcome

## Objectives

1. Identify threats to fish habitat (both manageable and unmanageable). Consider Baywide vs. local/regional threats.
2. Compile and identify available data on habitats and fish utilization at ~~fish~~ different life stages.
3. Prioritize for protection/restoration, management, decision-making. Different priorities depending on species, location, etc. Improve awareness of positive & negative actions ~~on~~ impacts of actions

what we lose?

~~Challenges  
Opportunities~~

(Public activism)  
policy-makers

Local

(trade off's)

- sense of place; community

## #2 Baseline

What do we need to characterize/identify key habitats?

What tools currently have or need to inform decisionmaking?

None

Need to define? What baseline?

- Stock assessments
- Suite of indicators
- Maps what we have (aerial) - % threatened

- Set threshold
- Connectivity
- Impermeability threshold

## #3 Participating

### Stakeholders

- VASG analysis  
bridging organizations  
→ reach decisionmakers  
- ACFHP (Lisa Havel)

Specs  
do for S17  
35-12/2017  
XZ  
48  
FEB 14 2017  
18  
11  
10  
9  
8  
7  
6  
5  
4  
3  
2  
1  
1000

# Fish Habitat Outcome

Human decisions vs  
human as part of system  
(coupled social-natural systems)

What can  
be  
influence?

- water  
flow /  
withdrawal  
TOXIC /  
enterine

IN  
HAB

Impervious  
%

## #4 Factors Influencing

### natural system factors

#### conditions/structure

- fish passage strategies, coordination with other (e.g., habitat & WQ outcomes)
- community composition, changes in species assemblages (e.g., carp, catfish, phragmites, hydro)

#### Climate Change

- sea level rise
- meteorology (rainfall intensity/freq., storm intensity/freq.)
- physical: temp, salinity, DO, turbidity

### human system factors

#### sufficient knowledge

Ability to characterize critical spawning areas

Ability to characterize critical nursery areas

Ability to characterize critical forage areas

#### Critical areas for critical life stages

- data availability (fish pop. & habitat use, distribution)
- data analysis
- continued monitoring

### Shoreline + landward condition

effective policy in place for achieving goals

- Jurisdictional coordination

### Watershed Landuse

adequate financial resources (administration and incentives)

adequate extension infrastructure (outreach and assistance)

### Regulations and policies

### Dollars + jobs (decisions)

- Short vs long-term outcome

## #5 Current Efforts and Gaps

- Habitat mapping → Airports AREAS
- Monitoring

- integrating existing info.
- + what tools - HAVC + Need
- + How to decide + Act

### Local vs. Regional vs State community

### Economic valuation comprehensive

- Land / H<sub>2</sub>O - watershed Level

### Ecosystems services

- Protection vs. Restoration costs

- SERC - Land-water interface

### Climate / SLR / Temp.

- MAFMC - Habitat Pilot project

- Local life action plan (SWATs)

- Multiple agency coordination gap (FISH)

## #6 Management

### Approach

- use tool to inform mgmt.

- improve awareness  
+ / - Actions toward fish habitat outcomes

- Outreach to public  
- political savvy

- Empower people -  
Influencers - Public Relations  
- Be specific  
i) hardened shorelines

- focus on things we can influence

- Broad overview / Review  
Threats, challenges, opportunities

- identify key habitats + spp

- Regulatory Review  
inventory of all regulations

- WQ benefitting

WQS  
SPP  
SPECIES  
ID

MIDER