

Nowcast - Needs (session 1 ●)

NEEDS

- ASSESSMENT - BEST METHODS
- MORE RELEVANT TIMESCALES
- INTEGRATING MODEL RESULTS W/ OTHER METHODS
↓ DECISION
- Q: HOW MUCH SAMPLES
- ASSISTANCE UPDATING
- * MORE ACCURATE & TIMELY INFO. 'ROBUST'
- TRANSLATE INTEL 2 ACTION
- HOW Q: HOW TO INTEGRATE IMPAIRED HQs
- STANDARDIZING THE MODELING
- COMPARE TO GOLDSTAND / VALIDATE / QA.
COLLECT
- INFO ON HEALTHY RISK
- Q: MORE AVAILABILITY OF NOWCAST
- WHAT ABOUT ONE-A-WEEK BEACHES?
- MODEL ADJUSTMENTS - HOW / WHEN
- SUSTAINABILITY - EPA \$
- CHANGING DAILY CONDITIONS - WAY TO ACCT FOR
- UPDATES - REC'S
- COMMUNICATE (BENEFITS TO DECISION
DISSEMINATE MANAGERS
- INTEGRATE SOURCE -
TRACKING INTO NOWCAST PILOT STUDY

Nowcast - Needs (session 2 ●)

NEEDS

BETTER METHODS → FASTER IN-FIELD TESTING

MORE BEACHES W/ NOWCASTS

EDUCATION & TECH. SUPPORT

STANDARDIZED THRESHOLDS

HOW TO INTEGRATE PCR / NOWCAST

INLAND LAKE MODEL

BUY-IN FROM PUBLIC & M.F.T.

→ EDUCATION: PUBLIC & USERS

GUIDANCE ON TECH DEVELOPMENT — IN-SITU MEASUREMENTS

INFORMATION ON VALIDATION METHODS & RESULTS

Q: HOW DOES MODEL FIT W/ DECISION TIME
GETTING MORE ACCT. & TIMELY

NOWCAST OF B-G ALGAE INFO ON WA

BASIC INFO / EDUCATION FOR STAKEHOLDERS

ID OF POTENTIAL USERS & BARRIERS → LAB PEOPLE:

Q: WHAT ARE MINIMUM REQUIREMENTS

RELIABLE DATA SOURCE (ENDDAT)

ASSISTANCE EVAL. & IMPROVE MODELS

Nowcast - Needs (session 3 ●)

NEEDS

INTEGRATE SOURCE TRACKING / NOWCASTING
NEW UP-TO-DATE MODELS

K-A HAVING A MODEL, ALREADY...

~~DISCREET~~ K-A NEEDS DATA THEY ARE
CONFIDENT → MODELING

KENOSHA ...

LIST / GUIDANCE ON WHAT DATA YOU
A (BETTER) WAY DATA → MODEL ^{NEEDS}

BETTER CALIBRATION / INFO ON WHEN &
BASIC TRAINING HOW TO RE-CALIBRATE

INFO. ON QPCR → NOWCAST CORRELATION

COMPARISON OF NOWCAST TO COUNTEST / GOLD ^{STANDARD}

ENOUGH DATA TO MAINTAIN NOWCAST

COMMUNICATION ABOUT BENEFITS OF NOWCAST
& HOW MUCH DATA YOU NEED

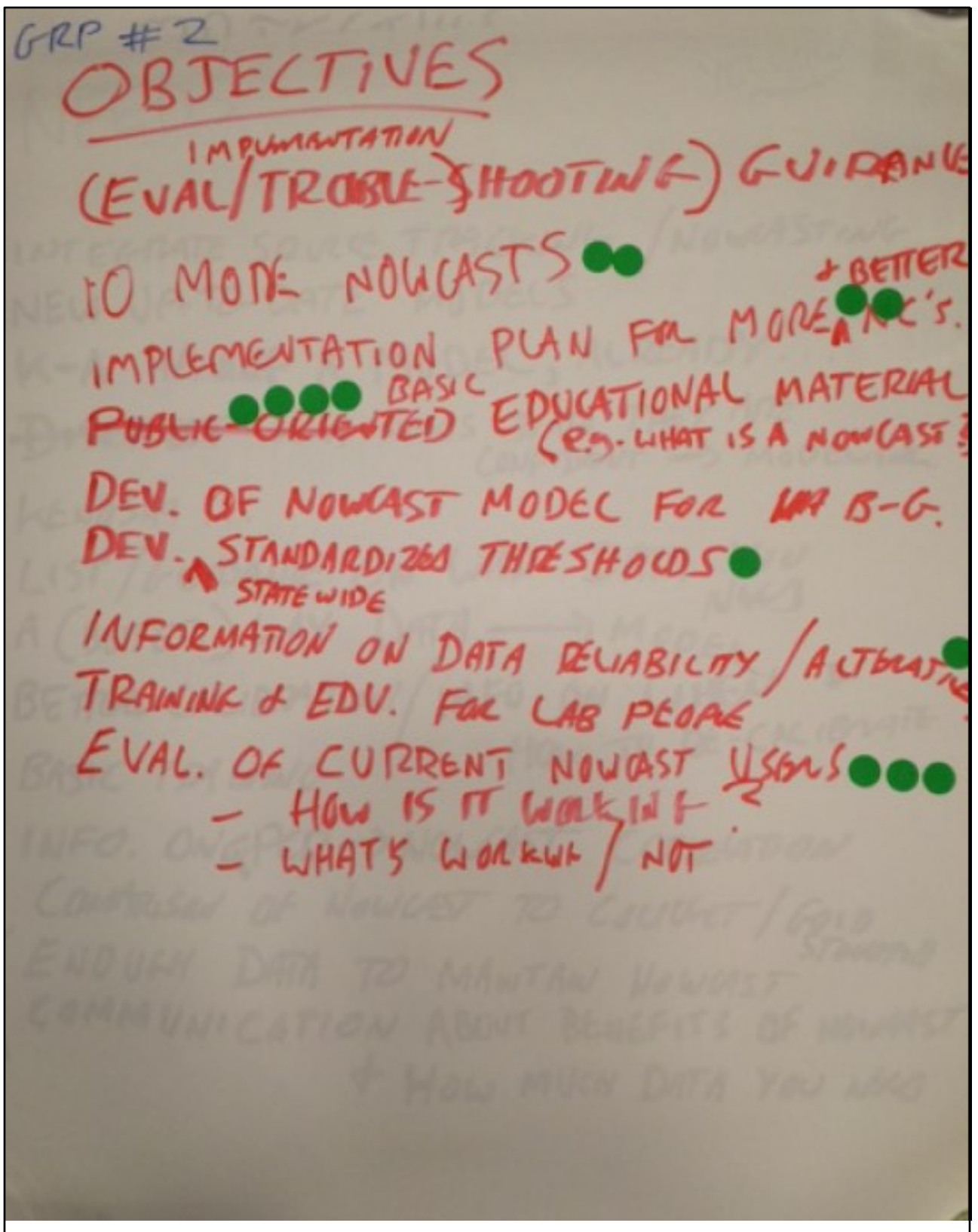
BETTER

Nowcast - OBJECTIVES (session 1 ●)

#1 OBJECTIVE

- MORE MODEL/MODELING ●●
- ~~DECIDE~~ STUDY NEEDED FREQ.
- VEHICLE FOR TRAINING < MAY 31
- SUMMARY INFO ON LIKELY/EXPECTED IMPACT
- INCREASE # USERS
- ~~DATA~~ TIMELY HELP; e.g. CHAT BOX
- INTEGRATE & COMPARE NOWCAST/PCTR
- STANDARD & TIMELY PROCESS FOR EVAL/UPDATE EXISTING MODELS
- BEST PRACTICES USING MAINTAINING FEEDBACK MECHANISM - FROM TO USER TO ~~WHO?~~ DEV./ DEC. MGMT

Nowcast - OBJECTIVES (session 2 ●)



Pic 2 (Sheet 24)

Nowcast - OBJECTIVES (session 3 ●)

OBJECTIVES

yellow
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WEBSITE OF
A BASIC INFO FOR PEOPLE UNAWARE
- TRAINING INFO

- FIND OUT WHO IN POSITION TO DO NOWCAST / COMMUNICATE TO BENEFIT THEM

ONLINE CLASS

●● OUTREACH PROGRAM ●●

2-DAY TRAINING PROGRAM

1 - HANDS-ON EXISTING CASE STUDY

2 - BUILD SITE-SPP. MODELS

MODEL REVIEW COMMITTEE

MORE MODELS ●●●●

Source Tracking - Needs (session 1 ●)

MST: Needs

- training and BMPs
- WI source tracing guide
- open to new ideas; discussion of the science
 - * → understand mol. MST limitations
- day-to-day variability for sources
- ensure methods are effective
- understand all the supplemental methods
- make clear the time frame of MST
- info. sharing for beach managers (developing sampling plans, remediation plans)
- info. on sampling locations, frequency, etc needed to understand source
- have been managers ID the information that they would act on.
- guide on when beaches ~~should~~ should be ^{Permit} closed

Source Tracking - Needs (session 2.a ●)

Source Tracking: Needs (2)

- lab. resources ^($\$$) needed to perform these methods
- standardize source tracking methods
- help w/ data interpretation
- communication of findings
- understanding the diff. between academic and regulatory agencies needs
- after we determine the source, then what?
- incorporating beach assessments into source tracking
- link to human health risk (use of E. coli) and pathogens.
- collaboration of many agencies
- day-to-day variability (intra-day variability)
-challenging from a business standpoint.

Source Tracking - Needs (session 2.b ●)

Needs (continued)

(2)

- incorporating ^{fecal} sources (ex. gulls) into models
- mitigation through community education (ex. feeding the gulls)
- Best management practices for proactive source mitigation
- hydrologic characteristics of the surrounding landscape
- build collaborations w/ researchers
- frequent & rapid methods to obtain info. about source I.D.
- need a tiered approach for source IP
 - some rapid & some long-term
 - link to a predictive model

Source Tracking - Needs (session 2.c ●)

- develop different models that can be used for real-time ID of fecal sources. (2)
- how much data/info. is required to develop remediation plans?
 - what kind of sampling/data needed?
- what does it take for beach managers to take action?
- data sharing (ex. sanitary survey data)
- how do we prioritize source mitigation?
 - ↑ what carries the greatest risk?
- models should be used to supplement long-term beach management.

Source Tracking - Needs (session 3.a ●)

(3)

Source Tracking: NEEDS

- how-to-guide of how to get started w/ MST
- connection of beach managers & MST researchers.
- limit MST overlapping studies
- flowchart for Source Identification to standardize methods.
- need MST best practices
- need tools for beaches w/ less monitoring data available.
- get input from several agencies about ^{All} potential sources

Source Tracking - Needs (session 3.b ●)

Source Tracking: NEEDS ③

- routine and annual Sanitary Survey (S.S.) on All beaches
- training on sanitary surveys and data interpretation.
(eg. video how-to)
- identifying which beaches need regular monitoring vs. MST
- turn around time
- understanding of land use practices & how that can relate to poor H₂O quality
- guidance on what to do after a source has been identified.
- basic education for different methods
- MST success story reporting

Source Tracking - Needs (session 3.c ●)

NEEDS continued:

(3)

- real-time data needed to identify complex sources.
(eg. creeks, rivers, stormwater)
- data interpretation for coastal vs. inland lakes.
- standard study design and standard methodologies.
- incorporating chemical source tracking w/ molecular methods.
(eg. optical sensing methods)
- in what situations should MST be used?

Source Tracking - OBJECTIVES (session 1 ●)

MST: objectives

- * develop guide tool that will provide info. on previous studies and available ~~to~~ methodologies.
 - specific to freshwater systems
- * ~~will~~ closed website/database
- * Common framework for beach management
 - support out reach to connect managers

Who: WI Sea Grant, USGS

What: Platform/directory for project sharing

- Link to:
- existing restoration plans
 - in-progress projects

Source Tracking - OBJECTIVES (session 2 ●)

MST: OBJECTIVES (2)

- Develop tool / Kit for beach ~~man~~ managers.
- partner beach managers & researchers to begin joint projects
- Strategic use of available tools
 - min. cost, max results.
- daily vs. long-term source tracking to meet the needs of regulators & researchers
 - limit information overload
 - documentation for data interpretation best practices.
- policy fact sheet of MST for decision makers, to engage policy makers and funding agencies (ex. DMR)

Source Tracking - OBJECTIVES (session 3 ●)

SOURCE TRACKING: OBJECTIVES ③

- identify which beaches need MST ●●● vs. which require regular monitoring ●
- inventory of where sanitary surveys are being used. ●●●●●●
 - and inventory of which beaches have managers
- expert plan on MST Success Stories ●
- ~~Reg.~~ Reg. beach managers rather than or in addition to many managers.
- List of pros & cons for MST methods ●●
 - which labs offer which methods?
 - minimal study design for MST success
 - training on sanitary surveys (workshops)

Advisory Comm. - Needs (session 1.a ●?)

BEACH Advisory Communications

TRANSLATING RESULTS INTO POSTINGS
- signs not accurately posted

What advisory means to swimmers

Location for signs

Linkage to information - more details

Connections with conditions / e.g. algae

Communication methods - flow of info
Fax - OLD ■ SCHOOL

MISSING INFO ON SAMPLE

LINKAGE TO NOWCAST

BEYOND POSTING - ANNOUNCEMENT? TO PEOPLE AT BEACH

CLARIFY PURPOSE OF COMMUNICATION

BEHAVIORAL RELATIONSHIP

OUTREACH PLAN

OVERLAP OF BACT. & DANGEROUS CURRENTS

Advisory Comm. - Needs (session 1.b ●?)

COMMUNICATION WITH FIELD STAFF

MEDIA COMMUNICATION

MESSAGE TO SWIMMERS

I.D. INFO SOURCE CLEARLY

OUTREACH FOR INFO AVAILABILITY

- PUBLIC MESSAGING

HEALTH MESSAGE

CUSTOM TOOLKIT FOR RELATED
HAZARDS

COMMUNICATION ABOUT TIMING OF ADVISORI

Advisory Comm. - Needs (session 1.c ●?)

Reduce # information hand-offs
Wifi @ beaches - technology sign
Facebook - Twitter
Standard signs - National messaging

Advisory Comm. - OBJECTIVES (session 1 ●?)

Objectives

- Near-term outreach plan ●●● 8
- Develop messages for people on-the-ground
- Outreach campaign - link to colors ●●
- Central website - integrate info on multiple levels ●●●● 5
- Signage toolkit ●●
- Improve timing for messages ●
- Messages for lag in results
- Messages for "no testing" locations

Advisory Comm. - Needs (session 2 ●?)

Advisory Needs

Delayed messaging- less

Community awareness of info

Meaning of message

Temperature drives behaviors

Confusion with bacteria / surf
- Signs not specific

Broad areas for currents advisory

Ability to reach "electronic" generation

Enforcement of closures?

Location of signs

Sign content- less words

Too many signs

Labor in postings - timing for staff

Advisory Comm. - OBJECTIVES (session 2 ●?)

Objectives

Reduce # wrong sign postings ●

Link webpage for park\$ to B.H.

Design integrated info site ●

- mgmt

- hosting

Web cams

Reduce lag in results

New signs

Public service announcements ●●● (8)

IV Evidence-based best practices on
P.H. message effectiveness ●●● 3

Guidance on posting conditions - bact/suff

Address integration issues

Simple messages

School program outreach ●

Advisory Comm. - Needs (session 3.a ●?)

Needs

Sign language-

Use of green sign - always
Not no danger

"Not monitored" sign

Management of dangerous currents
signs - More frequent than monitoring

Reach disparate audiences

Multiple info sources

Agreement with media

Standardized communication - messages

Timely notices

Reliable systems

Shared Twitter account

Technology link - alerts on related apps

Results come too late - reduce delay

Advisory Comm. - Needs (session 3.b ●?)

Target audience - esp. teens

Improve continuity - data to posting

Address vandalism

Understanding messages - esp.
with two systems

Supporting information for postings

Electronic signs - multiple messages ?

Identify target audiences
- integrating schools

Communication to decision & policy-makers

Advisory Comm. - OBJECTIVES (session 3 ●?)

Objectives

- Unified advisory info - displayed as appropriate
- Advisory tool kit - use as locally needs
- Expand locations for advisories automatically - Facebook, Twitter, Apps radio, TV - multimedia, counsels, churches
- Timely notices - reduce time for results to posting
- Expand outreach
- Consistent signage
- Improve awareness of P.H. messages