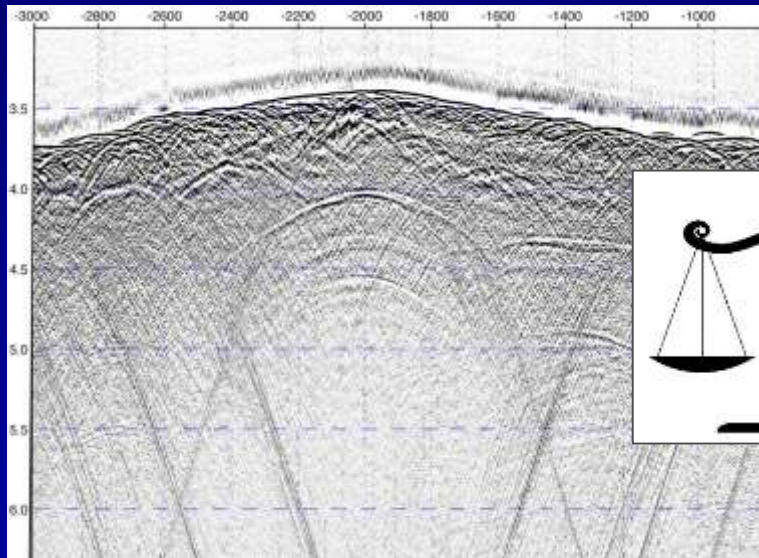


R/V *Langseth* Environmental Compliance (EC)



*Holly Smith, NSF
MLSOC Meeting
December 2015*



2015/2016 EC Activities for R/V *Langseth* Seismic Surveys

EC Completed:*

- APR 2015 – USGS Survey (Phase II)
- JUN 2015 – NJ Survey*
- NOV 2015 – Eastern Mediterranean Sea*

EC Initiated:

- JAN 2016 – South Atlantic Ocean
- JUN 2016 – Chile (3 Projects)

**Almost Completed!*



Photo: Dr. Louis M. Herman/NOAA

2015/2016 R/V *Langseth* EC Issues

NJ Survey!!!

- 4 airguns/3D/30 days/
25km to coastline
- Regulatory Framework:
NEPA, MMPA, ESA,
EFH, **CZMA**
- Congressional, eNGO,
media, fishermen, scuba
diving, general public
interest
- 2 lawsuits (2015)



*Still...**SUCCESSFULLY COMPLETED!***

2015/2016 R/V *Langseth* EC Issues

- Foreign Territorial Water boundary Issue
- Survey timing due to marine species (e.g., monk seals)
- Methodology for calculating takes
- Timeline for processing IHAs/BiOp



The “EC” Process, in review...



Environmental Compliance (EC)

Federal agencies are required to consider the environmental impacts of their proposed actions.



NEPA & EO 12114
(1970 & 1979)

The Laws

MMPA
(1972)

ESA
(1973)

EFH
(1996)

CZMA
(1972)

NHPA
(1966)

Marine Mammals Environment **Endangered Species** **Cultural Resources**
Coastal Resources

How the Agency Decision Making Process Works

NEED TRANSPARENCY & PUBLIC INPUT

FUNDING AGENCY (NSF)

- *Federal Action (e.g. grant funding)*
- *Assess regulatory framework – determine which regulations apply*
- *Prepare documentation (e.g. Environmental Assessment (EA))*
- *Contract for EC services if needed*
- *Review preliminary assessment of effects*
- *Submit documentation to Regulatory Agencies*



REGULATORY AGENCIES

- *Receive & Review EC documents*
- *Consult with Funding Agencies (iterative process)*
- *Issue Authorizations/Conservation Recommendations/Concurrences*
 - *IHA Authorization (MMPA)*
 - *Biological Opinion/Incidental Take Statement (ESA)*
 - *Effects for EFH, CZMA, NHPA*

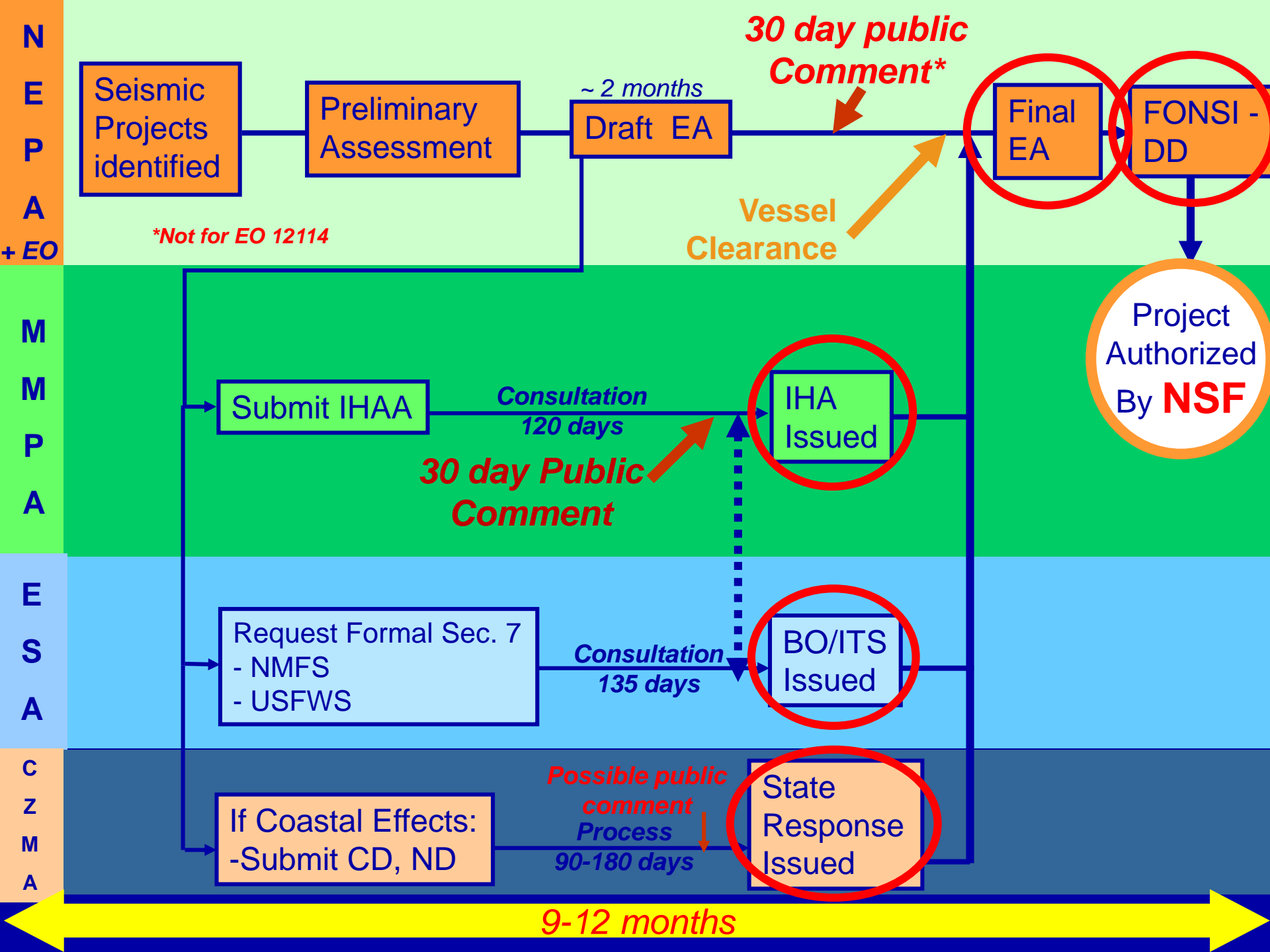


FUNDING AGENCY (NSF)

- *Issue final NEPA Document (e.g. Finding of No Significant Impact – FONSI) and Agency Decision to Authorize the Proposed Action to commence*

Next slide – how the process actually works

~12 months



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Seismic Projects identified

Preliminary Assessment

Draft EA
~ 2 months

Final EA

FONSI-DD

**Not for EO 12114*

30 day public Comment*

Vessel Clearance

Project Authorized By **NSF**

Submit IHAA

Consultation 120 days

IHA Issued

30 day Public Comment

Request Formal Sec. 7
- NMFS
- USFWS

Consultation 135 days

BO/ITS Issued

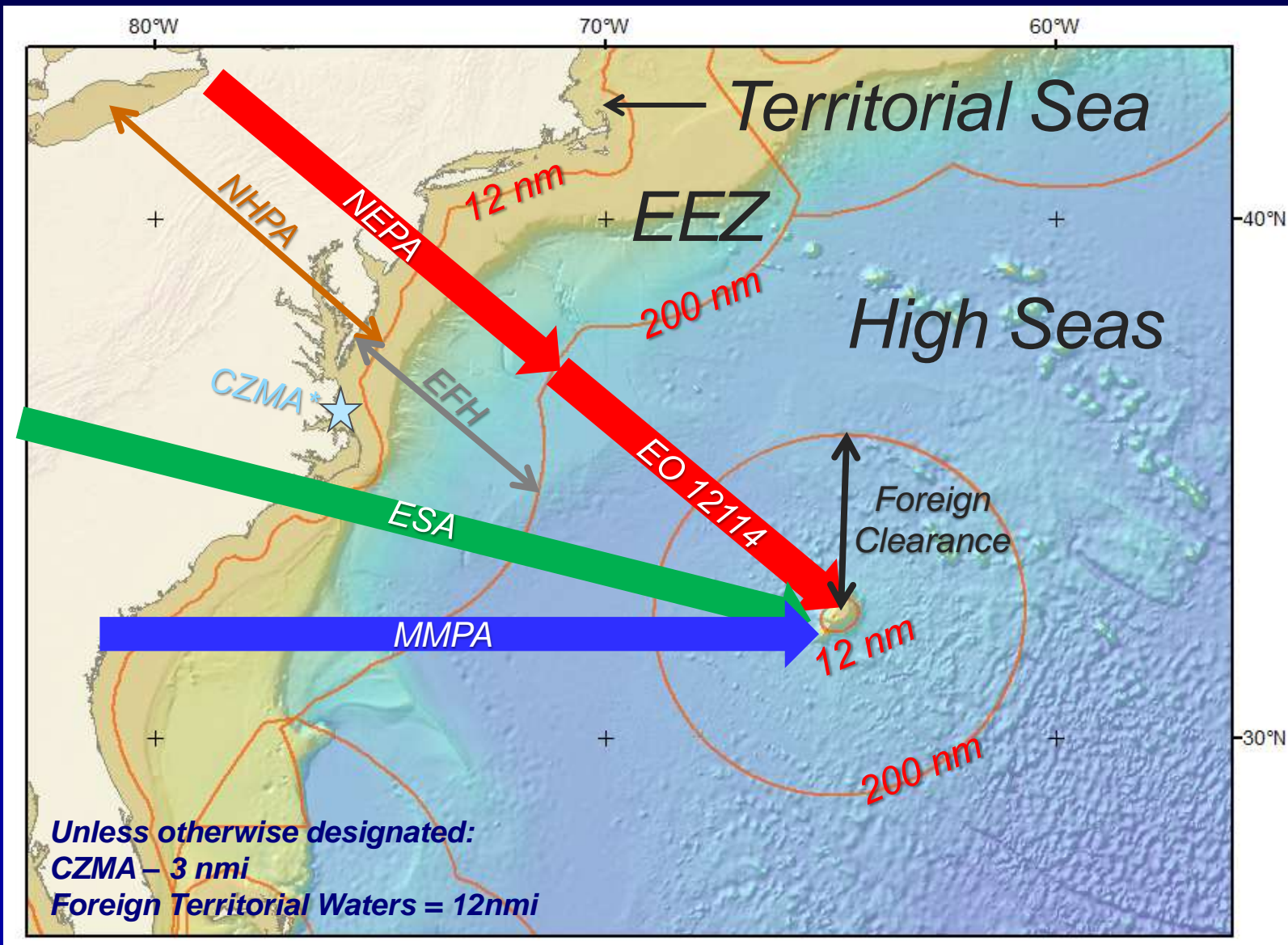
If Coastal Effects:
-Submit CD, ND

Possible public comment Process
90-180 days

State Response Issued

9-12 months

Applying the Laws: US & Foreign Waters



EC Roles/Responsibilities

PI's

- Pre-cruise planning - **5 P's !!!**
- Provide info for EC docs
- NSF EC Checklist
- Review EC docs
- Respond to questions (Regulators, General Public, Reporters)
- Understand conditions of IHA/ITS
- Enforce/Liable for IHA

EC

LDEO

- Provide EC contractor support
- Interface with contractor, PI, NSF, Regulators
- Review, submit EC docs:
 - **NSF for approval**
 - **IHA to NMFS**
- Enforce/Liable for IHA

NSF

- Interface with contractor, PI, LDEO, Regulators
- Review, approve, submit EC docs to Regulators
- **Final Project Approval**
- Enforce/Liable for IHA

When does the EC process start?

EARLY EARLY EARLY

- Pre-cruise Planning = Proposal submission
 - Minimal Source Size
 - Location
 - Why is your site critical for the science?
 - Are there alternative sites that would have less environmental impact?
 - Consider sensitive marine areas (MPAs, rookeries, etc.)
 - Timing (migration periods, weather, etc.)



PI Role Once NSF EC Initiated

- When a “Viable” proposal exists, NSF EC Process can begin:
 - NSF Checklist
 - Provide info for EC docs
 - Flexibility can be built into EC docs
 - You can do less but not more or different than what is proposed in EC docs
 - Review EC docs

The image shows a form titled "INSTITUTION ORGANIZATION ENVIRONMENTAL IMPACTS CHECKLIST". It contains fields for "Proposal Number", "PI", "If applicable, Collaborative Proposal Number(s)", "Institution/Organization", and "Proposal Title". Below these are two main sections: "Part I. A. Does the Proposal only include any of the following activities?" and "Part I. B. Does the Proposal include any of the following activities?". Each section has a list of activities with checkboxes. Below these is "Part II. Are any of the following extraordinary circumstances associated with this Proposal?" which is a table with columns for "Yes", "No", "Maybe", and "A. Potential impacts (including direct, indirect, and/or cumulative impacts)".

Yes	No	Maybe	A. Potential impacts (including direct, indirect, and/or cumulative impacts)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	1. on threatened/endangered species or their habitat, sensitive natural, migratory birds, or critical fish habitat
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	2. on historic, cultural, or archeological resources
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3. on an environmentally sensitive area (i.e., national park, national forest, national wildlife refuge, national system unit, ecological preserve, etc.)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4. on the air (i.e., resulting from emissions other than emissions from a single car or vessel)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5. on soils or geological/hydrological features
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6. on marine life, resulting from discharge into waters, dredging, stream, stream, lake,

- Submissions to Regulators
 - **Science Plan submitted is what will be executed, unless altered through consultation process**
 - Respond to questions (Regulators, General Public, Reporters)
- Authorizations
 - Understand & enforce conditions of IHA/ITS
- **NSF PROVIDES FINAL PROJECT APPROVAL**

PI Role at Sea

- Understand and uphold conditions of IHA/ITS
- Support Operational Monitoring/Mitigation Measures
- Adhere to Science Plan in EC docs

NSF is supportive of achieving the research goals. If due to unforeseen events the Science Plan needs to be altered (e.g., weather), NSF needs to give approval.

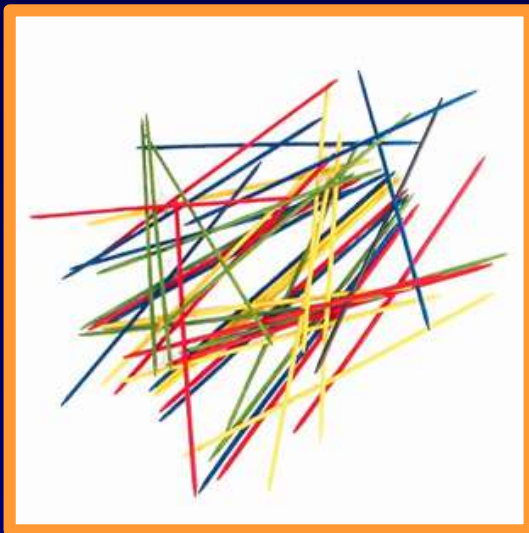
WHY...?



PSO Authority to power/shutdown trumps all

Robert Pittman - NOAA
(<http://www.afsc.noaa.gov/Quarterly/amj2005/divrptsNMML3.htm>)

Because...



Violation of the MMPA is a criminal offense!

- Authorizations are based on specific actions considered in the EC documentation and associated analyses
- NSF Approval is based on EC documentation and associated analyses AND conclusion of all environmental regulatory processes



If due to **unforeseen** events a modification to the Science Plan is needed (e.g., weather), NSF approval is needed **BEFORE** the plan can be executed:

- Science Program Officer
- Ship Operation Program Manager
- Environmental Compliance Officer



www.cardiffrubberstamp.co.uk



EC Process Conclusion

- PSO Report completed
- Submit to Regulators
- Accepted by Regulators



Draft Protected Species Mitigation and Monitoring Report

Juan de Fuca Plate Evolution and Hydration
in the Northeast Pacific Ocean

14 June 2012 - 8 July 2012

R/V Marcus G. Langseth



Take Home Messages...

- **EVERY PROJECT IS UNIQUE... LOCATION, LOCATION!**
 - Foreign Territorial Waters and EEZs
 - US and Foreign rules may apply
 - Avoid politically-sensitive disputed waters
 - Marine sanctuaries/protected areas may require additional monitoring/mitigation or can be harder/impossible to get authorization
 - “Deep” water is typically easier to get Authorizations
 - Assume people are interested in your project
 - “Outreach” may be required – **Create a website!**
 - “Rumor Mill” might be faulty – Contact LDEO or NSF
- **Provide your project info in a timely manner**
 - **No negotiation on statutory timeline**
 - **Delay in info or change of Science Plan = delay in schedule**
- Proposed Action is not approved to commence until NSF EC is completed
- If Proposed Action is Authorized/Approved:
 - Understand conditions of IHA & PSO Authority
 - **Only** the Science Plan **Approved/Authorized** will be executed!!!
 - Less is ok, but not more or different!

Contacts & Resources

- NSF ECO: Holly Smith, hesmith@nsf.gov, 703-292-7713
- NSF Environmental Counsel:
Caroline M. Blanco, Assistant General Counsel,
cblanco@nsf.gov, (703) 292-4592
- LDEO: Sean Higgins, sean@ldeo.columbia.edu
- MLSOC

- NSF EC: <http://www.nsf.gov/geo/oce/envcomp/index.jsp>
- NEPA: Council on Environmental Quality
(www.whitehouse.gov/ceq)
- MMPA: <http://www.nmfs.noaa.gov/pr/laws/mmpa/>
- ESA: <http://www.nmfs.noaa.gov/pr/laws/esa/>
<http://www.fws.gov/endangered/>
- CZMA: NOAA's Ocean and Coastal Resource Management Office
(www.coastalmanagement.noaa.gov)
- NHPA: Advisory Council on Historic Preservation (www.achp.gov)

Questions....



Steve Snodgrass <http://flickr.com/photos/10710442@N08/342406526>

Thank you!!

Extra Slides

National Environmental Policy Act of 1969,

42 U.S.C. 4321

- **Procedural** statute requiring federal agencies to take a “hard look” at environmental impacts of proposed action and determine if it **significantly affects** the quality of the human environment
 - Requires **informed decision-making**, including consideration of public input **prior** to activities being carried out
 - NEPA applies when there is a ‘federal hook’ - \$\$\$
-
- NSF regulations for complying with NEPA are set forth in: Title 45 C.F.R. PART 640—COMPLIANCE WITH THE NATIONAL ENVIRONMENTAL POLICY ACT
 - Most NSF awards are not “major Federal actions significantly affecting the quality of the human environment”
 - Some research may have potential environmental effects and require *at least* an environmental assessment:
 - technology transition from development stage to large-scale commercial utilization
 - Construction
 - field work affecting the natural environment will be conducted*
 - drilling of the earth, excavation, explosives, weather modification, or other techniques that may alter a local environment*
 - testing and release of biological-control agents for purposes of ecosystem manipulation and assessment of short- and long-term effects of major ecosystem perturbation*

* NSF Directorates may determine that certain “routine” projects do not require an EA but require specific approval

NEPA Compliance

- **Categorical Exclusions**
 - Agency determines that proposed activity has ***no significant*** impacts, individually or cumulatively, on the environment
 - Agency's determination of no significant impacts is documented in its regulations
 - NSF's categorical exclusions are set forth in 45 C.F.R. 640.3(b)
- **Environmental Assessments**
 - Activity is neither categorically excluded nor the type of activity which is anticipated to have significant environmental impacts requiring a more rigorous environmental analysis
 - Concise public document: briefly provides sufficient evidence and analysis to determine whether further analysis is warranted, or a Finding of No Significant Impact ("*FONSI*") should be prepared
- **Environmental Impact Statement**
 - Detailed written statement of the proposed activity and its anticipated impacts on the human environment
 - Designed to assist agencies in planning actions and making decisions
 - Prepared in accordance with CEQ regulations

Executive Order 12114:

Environmental effects abroad of major Federal actions

- Order which furthers the purpose of the National Environmental Policy Act, etc.
- Requires Federal agencies to be informed and take into account pertinent environmental considerations when making decisions on major federal actions taken outside the US, its territories and possessions.

Marine Mammal Protection Act (MMPA)

- Act established to protect marine mammals; to establish a Marine Mammal Commission; for other purposes.
- In 1994, MMPA section 101(a)(5) was amended to establish an expedited process (**120 days**) by which citizens of the U.S. can apply for an authorization to incidentally **"take"** numbers of marine mammals by **"harassment"** **Incidental Harassment Authorization**
- **"Takes"** is defined as:
 - **Level A** - any act with the potential to injure a marine mammal or marine mammal stock in the wild
 - **Level B** - any act that disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering, to a point where such behavioral patterns are abandoned or significantly altered.

CRIMINAL OFFENSE

Endangered Species Act (ESA)

- Requires agencies to consider impacts of their activities on endangered and threatened species, and their habitat.
- Agencies are to consult with the **US FWS** and **NMFS** under “ESA Section 7” regarding whether the proposed activity is likely to jeopardize the continued existence of any endangered or threatened species or result in the adverse modification of habitat of such species.
- Section 7 consultation with US FWS/NMFS can be informal or formal.
 - Informal: Not likely to have adverse effects. Get concurrence from USFWS *in writing*.
 - Formal (**135 days**): Likely to have adverse effects. Agency prepares biological assessment and USFWS/NMFS prepares biological opinion.
- Any takings of marine mammals listed as threatened or endangered under the ESA must be authorized under both the ESA and MMPA. The ESA takes are authorized by an Incidental Take Statement (ITS) under Section 7 (for Federal agency actions).

Coastal Zone Management Act (CZMA)

- Federal Statute requiring federal agencies to determine whether proposed federal activity is likely to have “effects” on coastal uses or resources
- 4 Types of federal actions:
 - Federal Agency activities (Subpart C – 90 day)
 - Federal license or permit activities (Subpart D – 60 day)
 - OCS Plans (Subpart E)
 - Federal assistance to state and local governments (Subpart F – 60 day)
- If effects are likely, federal agency must comply with the “consistency” provisions of the CZMA and consult with the coastal state to ensure that the proposed activity is “consistent to the maximum extent practicable” with the enforceable policies of the coastal state’s coastal management plan

Mock Whale Stranding Shows Potential Off-Shore Testing Effect

By Breanna Walden 09/01/2014 05:07



APP.com
I HATE THE JERSEY STATE HIGHWAY

April 17, 2014

Seismic testing poses threat

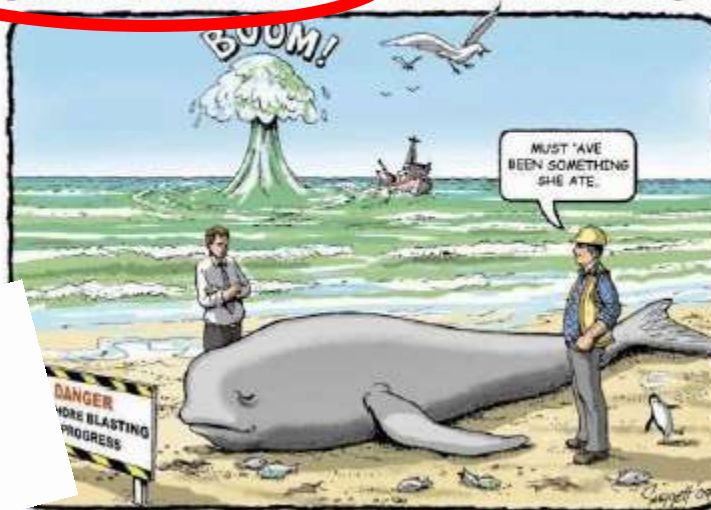
By [unclear]
@oswald@app

THURSDAY, MARCH 20, 2014

Action Alert Stop Seismic Testing Off New Jersey!

Environmentalists battle study of N.J. ocean bed

By Sandy Bauers, Inquirer Staff Writer
POSTED: MAY 25, 2014



OPINION Health of our Fisheries Demands Thorough Vetting of Proposed Seismic Testing

Federal Leaders Voice Opposition to Seismic Testing in the Atlantic Ocean

January 31 2013 | Ocean Ecosystems, Ocean Energy.
by Pete Stauffer

nj.com
True Jersey

Plan to carry out seismic blasts off NJ coast faces opposition

The Associated Press By The Associated Press

on March 26, 2014 at 12:46 PM, updated March 26, 2014 at 12:48 PM