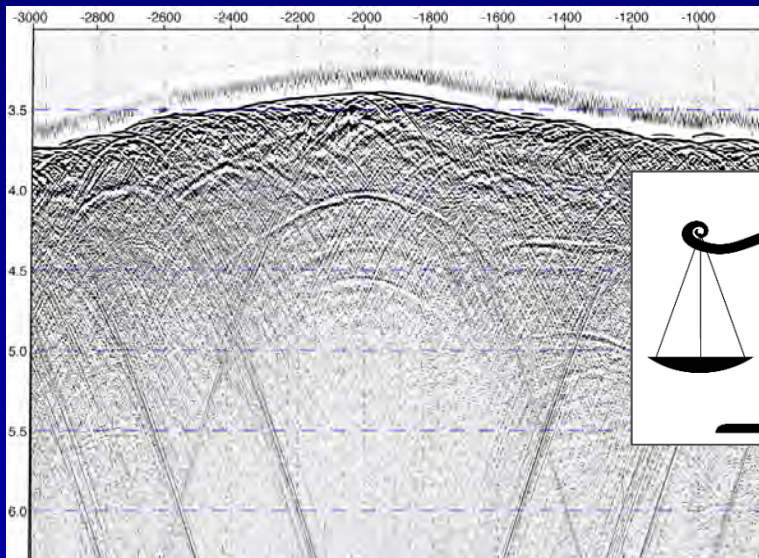


R/V *Langseth* Environmental Compliance (EC)



*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 Endangered Species Cultural Resources

Environment

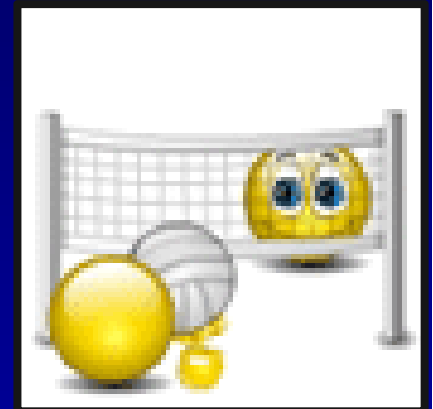
Coastal Resources

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*

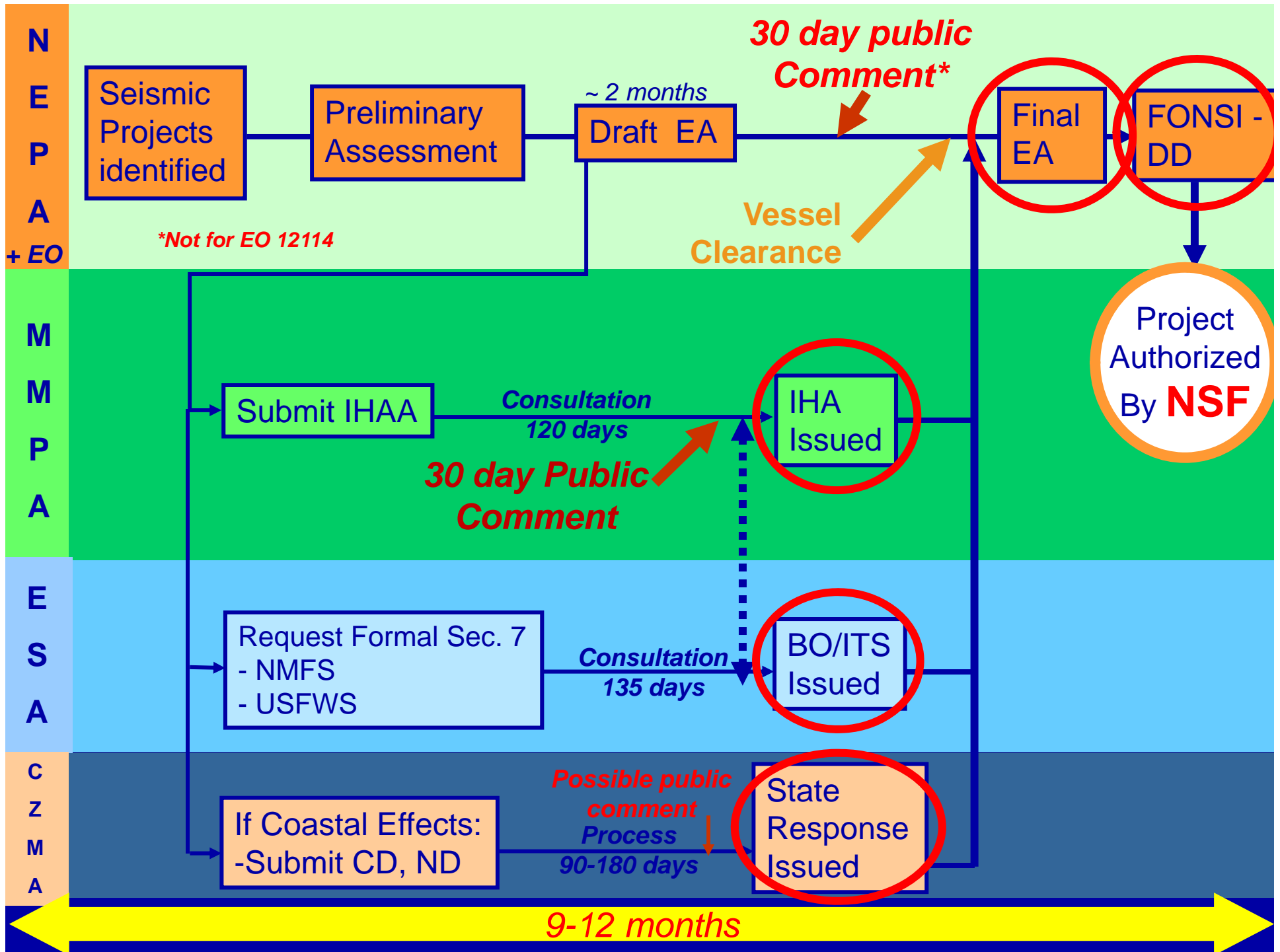


FUNDING AGENCY (NSF)

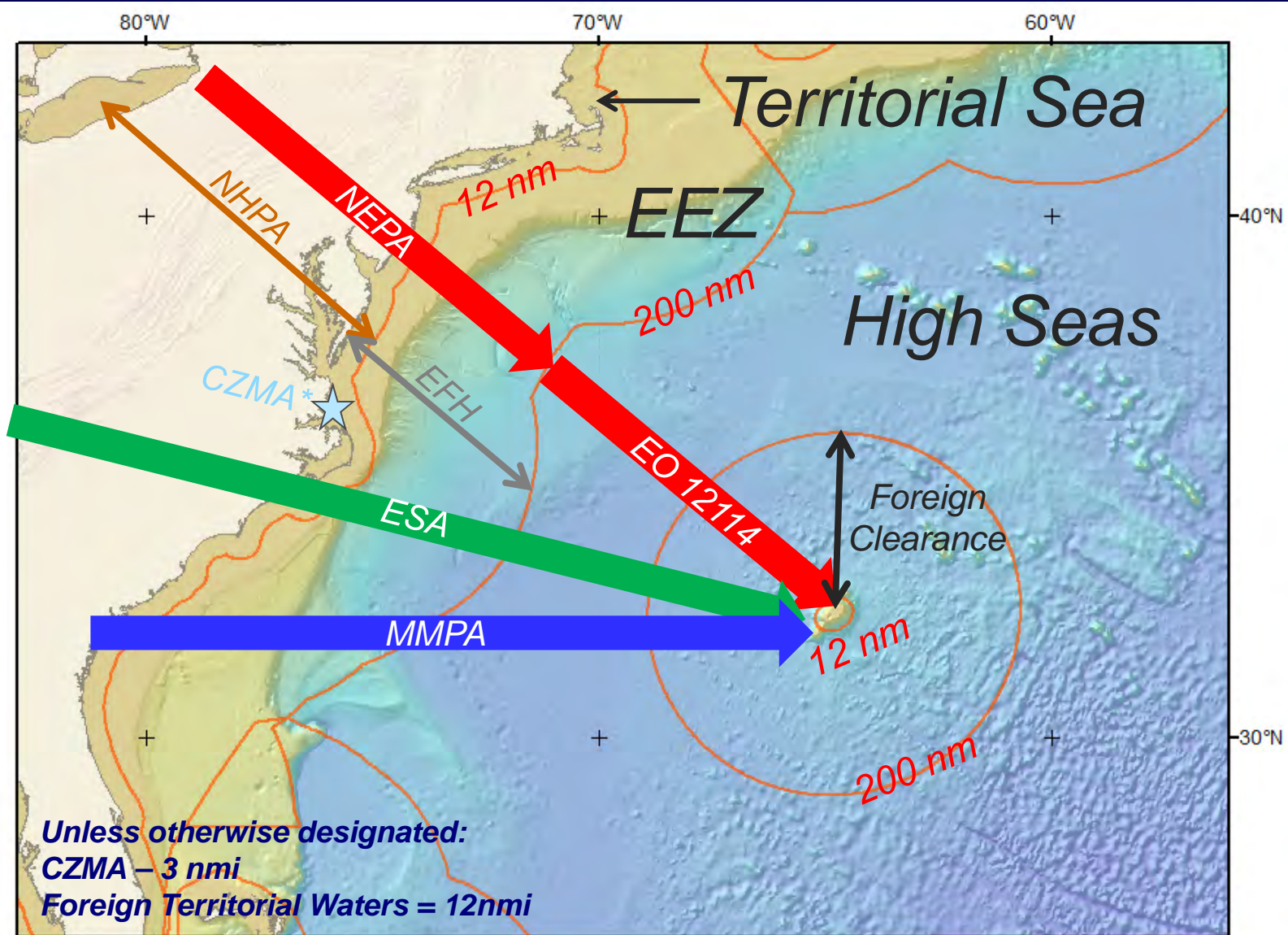
- *Issue final NEPA Document (e.g. Finding of No Significant Impact – FONSI) and Agency Decision to Authorize the Proposed Action to commence*

Next slide – how the process actually works

~12 months



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

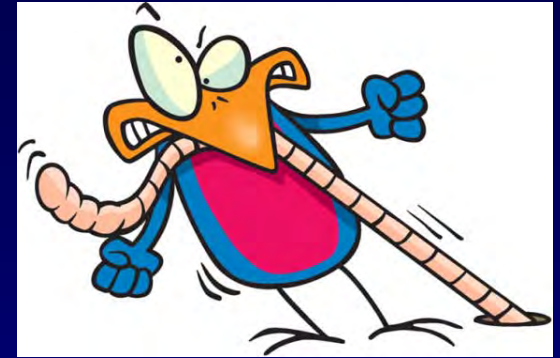
NSF

- 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.)



http://www.eaglewingtours.com/016_WhalesandWild/2714_EagleWingWhal.html



Airgun



OBS

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

- 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**

The image shows a screenshot of the 'INSTITUTION-ORGANIZATION ENVIRONMENTAL IMPACTS CHECKLIST' form. The form is divided into several sections. At the top, it asks for the Proposal Number and PI. Below that, it asks for the Institution/Organization and the Proposal Title. The main body of the form is divided into two columns: Part I.A. and Part I.B. Part I.A. asks if the proposal includes any of the following activities: 1. Interior alterations/renovations, 2. Theoretical and/or laboratory research, 3. Data analysis/Modeling, 4. Planning/conducting scientific workshops/conferences, 5. Conducting day-to-day management activities of federally funded research and development centers, and 6. Field work not affecting the natural environment. Part I.B. asks if the proposal includes any of the following activities: 1. Field work affecting the natural environment, 2. Drilling of the earth, excavation and/or use of explosives, 3. Weather modification, 4. Use of techniques that may alter or cause a major disturbance to the local environment, 5. The release of biological-control agents, 6. Construction (other than as stated in Part I.A.1), and 7. Transition of technology from the development stage to large-scale commercialization. Below Part I, there is a section for Part II, which asks if there are any extraordinary circumstances associated with the proposal. This section includes a table with columns for 'Yes', 'No', and 'Maybe', and rows for various potential impacts: 1. on threatened/endangered species or their habitat, marine mammals, migratory birds, or seasonal fish habitats; 2. on historic, cultural, or archaeological resources; 3. on an environmentally sensitive area (e.g., national park, national forest, national wildlife refuge, national marine sanctuary, ecological preserve, etc.); 4. on the air (e.g., resulting from emissions other than emissions from a single car or vessel); 5. on soils or geological/topographical features; and 6. on water (e.g., resulting from discharges into wetlands, floodplains, streams, rivers, lakes).

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.



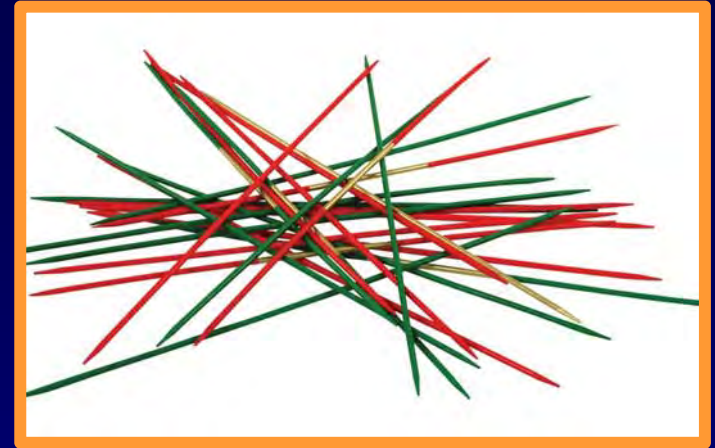
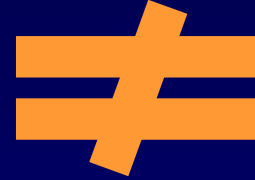
**PSO Authority to power/shutdown
trumps all**



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

WHY...?

Because...



www.mnh.si.edu



www.pbs.org



www.edu.pe.ca



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



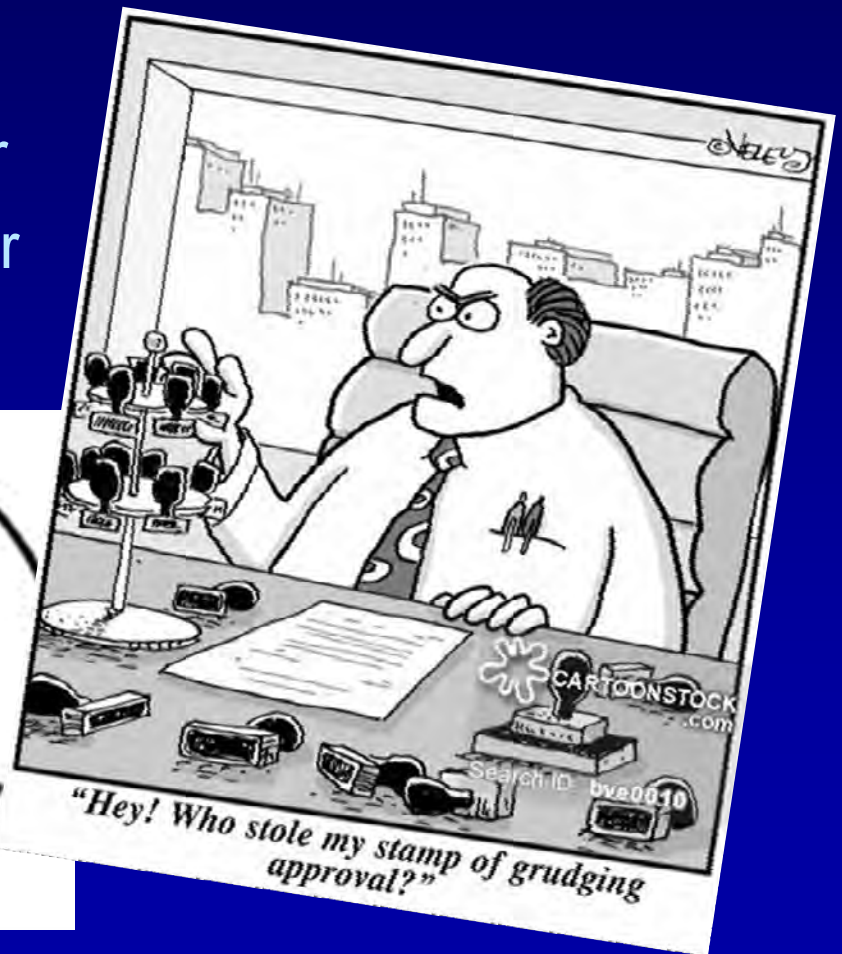
If due to **unforeseen** events a modification to the Science Plan is needed (e.g., weather), NSF approval is needed **BEFORE** the plan can be executed:

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

REJECT



www.cardiffrubberstampco.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!!