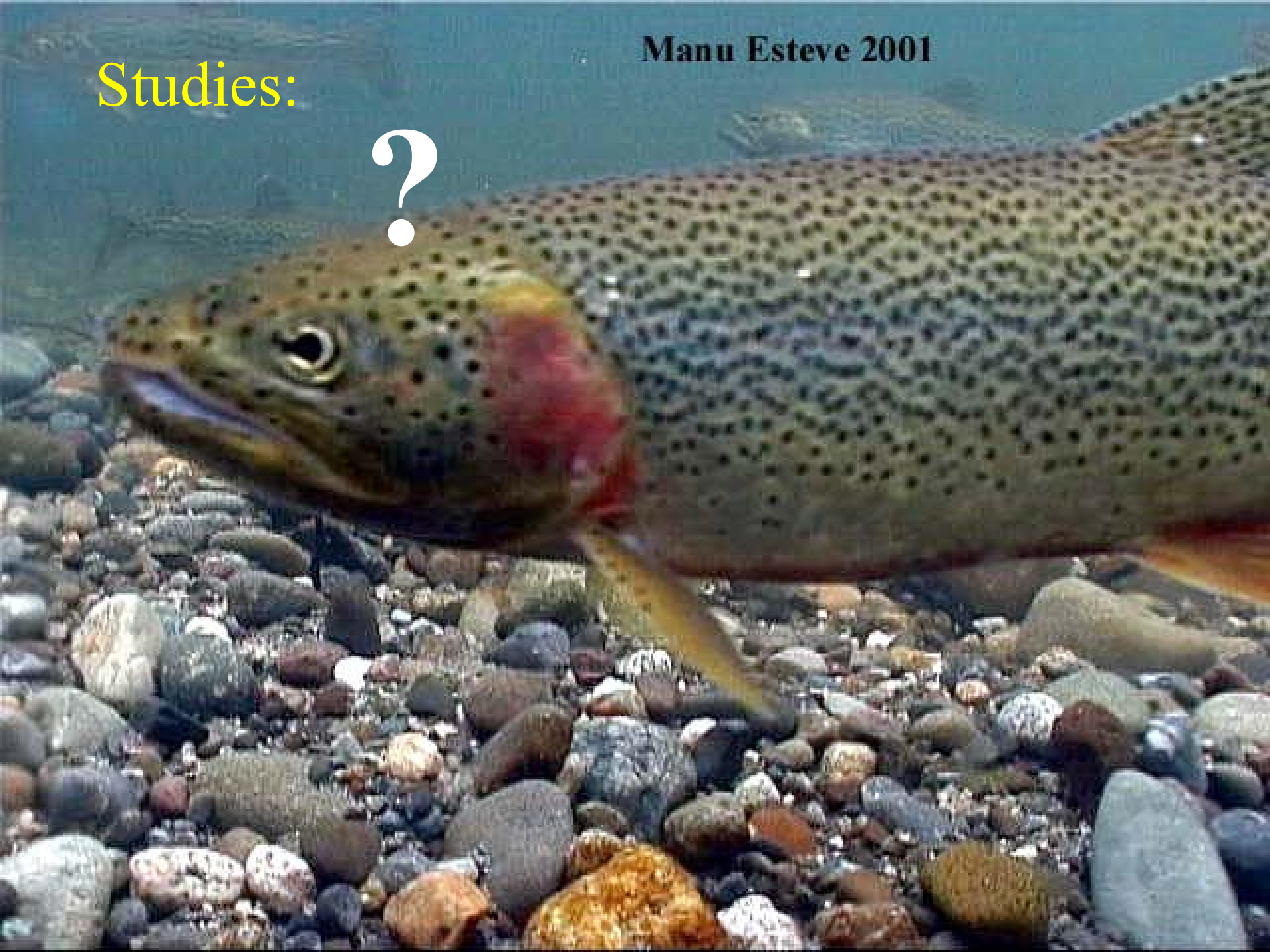


Manu Esteve 2001

Studies:

?





KING KONG

IN THEATERS DECEMBER 14

Relevance of PAD

- PAD is the basis for developing the formal study requests!
- You have to provide input as to how to obtain the information you believe is missing in the PAD

ILP Study Plan Development Process

- Agency submits study requests (that conform to criteria in (§ 5.9)) with its initial response to PAD (§ 5.8)
- Applicant Files Proposed Study Plan(18 CFR §5.11) (90 days to step 8) or Commission issues SD2, if necessary (30 days to step 7) (18 CFR §5.10)
- Study Plan Meeting(s) (informal resolution of study issues) (60 days to step 8) (18 CFR §5.11)
- Comments on Proposed Study Plan (30 days to step 9) (18 CFR §5.12)
- Applicant files revised Study Plan for Commission approval - Agencies may file reply comments within 15 days (30 days to step 10) (18 CFR §5.13)
- Commission issues Study Plan Determination (20 days to step 12) (18 CFR §5.13)

Project Level

- You have a working knowledge of the following:
 - Layout and landscape of the project;
 - How the project operates;
 - Physical limitations of project features and structures; and
 - Effects of various project features or operational aspects to the target resource;

Agency Level

- You clearly understand:
 - Agency Policy and practice;
 - Land Mft Plan goals and objectives;
 - Agency Strategy;
 - Line officer goals and objectives and desired outcome on the ground;

USGS Review Findings of FOREST SERVICE Participation

- Technical Studies should facilitate negotiation;
- Studies should focus on information to resolve issues and facilitate negotiation of various alternatives;
- Off the shelf “descriptive studies” offer little value towards resolving differences;
- Information needs should tier to the Agencies’ strategic focus.



Not a FISHING
EXPEDITION!

WAHOO!!!!



USGS Findings:

“Similar to what we observed in other cases, the early-to-middle stages of the ... consultation were marked by gathering data and mining the results to find support for positions.”

Summarize information needs

- Understand project proposal completely;
- Ensure resource impacts are attributable to the project;
- Identify data gaps where information is needed to determine how and why the project affects the target resource;
- Work with line officer to identify resource objectives to be implemented to meet Land Mgt Plan objectives.
- Think about establishing a Null Hypothesis:
 - e.g. dewatered channel constrains frog breeding and viability;

Study Requests

- Request for information necessary to support decisions about the future operation of the project
- Based on the resource management objectives of the agency
- Is the study request reasonable? Ask yourself:
 - *What is the connection to the project?*
 - *How will the results be used to make decisions?*
- Project related verses baseline

Study Request Criteria (§ 5.9)

1. Describe the goals and objectives of each study proposal and the information to be obtained
2. Explain the relevant Agency resource Management Goals
3. If the requestor is not a resource agency, explain the relevant public interest
4. Describe the existing information concerning the subject and the need for additional information
5. Explain the NEXUS between the project operations and direct, indirect or cumulative effects and the resource to be studied and how the study would inform the development of license requirements

Study Request Criteria (§ 5.9)

Cont'd

6. Explain how proposed study methodology is consistent with generally accepted practice in the scientific community or as appropriate considers relevant tribal values (includes any preferred data collection and analysis techniques, a schedule and duration)
7. Describe considerations of level of effort and cost and why any proposed alternative studies would not be sufficient

Tacoma Hydroelectric Project

- **MO:** Provide a stream flow that provides adequate pool habitat for over-wintering survival of salmonids (Nov-Mar).
- **AC:** Count the number of pools (>1.5 feet maximum depth), noting pool size, within a representative study Reach at each study flow.
- **MO:** Provide a stream flow that provides adequate resting/holding refuge waters for all fish species and life stages (Jul-Sept).
- **AC:** Quantify the number of pools and cover-associated resting-holding habitats within a representative study reach
- **MO:** Provide a stream flow that provides adequate depth, velocity, and wetted perimeter in riffles for connectivity and fish passage between pools (year-round).
- **AC:** Measure channel width, depth and velocity along a fixed transect(s) at Delphi team-selected locations that may limit fish movement at current and target flows

Tacoma Hydroelectric Project

- Resource team then developed Priority Weighted Attainment Scores
- Jointly rated scores and documented results
- Applicant incorporated results into Study Report Filed at FERC (substantial evidence record)

Typical Studies

- Unregulated verses Regulated hydrology
- Stream channel / riparian conditions surveys
- Erosion and sedimentation
- Fish, wildlife, and plant surveys (T, E, & S)
- Transportation system analysis (road and trail condition, use levels, etc)
- Recreation – Use surveys, demand estimates, facility condition survey
- Noxious weed surveys
- Heritage Resource surveys



Terms and Conditions

- Protection, Mitigation, and Enhancement (PM&E) measures
 - Operational restrictions (flow releases)
 - Structural improvements (campgrounds)
 - Habitat improvement (gravel placement)
 - Species management (bald eagle plans)
 - Monitoring (temperature)
 - Administrative (annual consultation)
- Fixed conditions
- Adaptive Management



Descriptive studies

- Do an IFIM;
- Survey for Region #'s sensitive species (then hand over the Regional Foresters Sensitive Species List);
- Quantify day use in or near the project reservoir;
- Identify all known bird breeding sites;

Strategic Studies

Water is the common currency in hydroelectric licensing negotiations!

- Agency staff and Line Officers must understand how a unit of water moves into a system, is stored, and the quantity diverted or released downstream (PROJECT OPERATIONS integrated with system HYDROLOGY);
- This knowledge is the basis for resolving issues related to project operations;

Agency Context

- Without a Project Level Strategic Approach, Agency Technical Staff typically will work in independent technical teams with a resource centric approach;
- This could create problems when trying to integrate the information pertaining to the various resource interests to resolve issues;

What studies?

- Do a Physical Habitat Simulation to determine the relationship between flows and rainbow trout habitat?
- Conduct a water temperature study to determine the relationship between flow and water temperature?
- Quantify the number of recreation users in this area during the peak rec season?

Do we need a study?

- Issue: Proliferation of noxious weeds along pipeline:
 - The utility proposes to continue managing vegetation along the pipeline (i.e. herbicide or cut to maintain access). Similar to agency mgt. objectives for clearing road rights-of-way;
- Issue: Some dead raptors have been reported under the power lines in the past 30 years:
 - literature shows that the current power line configuration is known to be hazardous to larger raptors.

Suggested Approach

- **ADHERE** to the Prescribed FERC Content of Study Request format (§ 5.9)
- Clearly articulate the resource management objective;
- Establish the Null Hypothesis that relates proposed project operations or facilities to constraining achieving the Land Mgt Plan objective;
- Define the metrics and establish the level of detail of the information vs. telling them to implement a methodology;
- Define the scope of the analysis to facilitate negotiations or alternatives analysis;
- Describe how the results will be interpreted

New Fields of Expertise

- Much of the information needs and analytical techniques are unfamiliar to FS technical staff or require digging into “stale” college textbooks or requires you to access peer reviewed literature;
- Standards and burden of proof are higher in FERC quasi-judicial proceedings than typical FS decisions:
 - The Energy Policy Act of 2005 increased the thresholds due to Trial Type Hearings
 - Why is 5 cfs better than 3 cfs & how many more fish will the stream produce?;
 - How many more forest visitors will there be at 1,100 cfs vs. 2,000 cfs?

Help is on the way....

- Seek assistance or training from experts in understanding what has been done before, study design, and analytical techniques;
- Expertise pool: Regional or National “experts”, other agency staff specializing in particular fields related to hydropower, academia, consultants with a proven track record of developing technical information.

Peer Review

- Typically missing from most study needs determinations, proposed techniques or analysis of results;
- One of the more notable design components missing from >99% of studies in licensing proceedings is “sound statistical design.”
- Begs the question: are studies designed to resolve problems or strengthen positions?



In order to effectively Participate and achieve Desired outcomes, the Following may apply:



ALL IN!

Summary of R5 FERC project meetings 2000 – 2005

(scheduled days)

Kickoff/ Public Meeting	Plenary	Combined Aquatics WG (with subgroups)	Cultural Resources WG	Land Management WG	Recreation WG (with subgroups)	Terrestrial WG
5	28	116	43	34	48	47

- 312 meetings
- Aquatics consumed at least 1/3 of effort
- Doesn't include prep or post-meeting discussions

ILP Study Dispute Resolution

- Mandatory Conditioning Agencies can request formal dispute resolution of a FERC Study Plan (§5.14)
- Must be filed within 20 days of FERC Final SPD
- Must refer back to criteria in (§5.9)
- FERC convenes 3 person panel: FERC & Agency staff not involved w Project & an Independent 3rd Person (on list maintained at FERC)
- FERC not bound by Panel Findings
- Director's decision constitutes a “final” amendment to SPD

Take Home Message

- Line officer establishes strategic management objectives for the agency participation!
- This sets the context and scope for defining information needs leading to technical studies!
- Specify level of detail of information need and why proposed methodology will yield needed information.
- Get help in areas you are not an expert or current with literature/status of technology!

Resources

- **Good web based tools at FERC.GOV**
 - **Industries = Hydropower**
 - **Legal Resources = Order No. 2002 (ILP)**
- **ILP Effectiveness Study Report (March 2011)**
- **Agency comment letters on ILP**

Summary

- “Counter Cultural”
- MUST play by FERC’s rules
- Work with Legal team
- Know and Adhere to rules and formatting!
- Not “duties as assigned”
- Seek help from experienced staff
- Ensure line officer engagement on strategic focus