Practical Management of NEPA Projects
Constraints of NEPA Projects

- Results
- Budget
- Time
NEPA Project Life Cycle

- Initiation
- Develop Detailed Plan
- Execution of Plan
- Produce Deliverables
- Final Approval
NEPA Project Initiation

- Conceptualize Project
  - Establish Project Objectives
  - Establish Deliverables
  - Estimate Costs
  - Estimate Schedule

- Obtain Project Authorization
Develop Detailed Plan of Project

- Describe Objectives
- Describe Scope
- Define and Sequence Activities
- Estimate Duration and Resources
- Develop Schedule
- Develop Budget
- Develop Formal Quality Plan
- Develop Formal Communication Plan
Executing the Project

- Organize and Acquire Staff
- Periodically Summarize Results
- Identify Changes in Scope
- Identify Changes in Schedule
- Identify Changes in Budget
Produce Deliverables

- Create Prototypes
- Create Partial Deliverables
- Complete Integrated Deliverables
- Obtain Approval of Deliverables
Finishing the Project

- Scope Verification
- Formal Acceptance of Deliverable
- Formal Acceptance of Project
- Administrative Closure
- Plan for Follow-up
Project Management Activities

- Define Scope
- Define Tasks
- Schedule
- Budget
- Team
- Coordination
- Monitoring
- Completion
- Action
- Periodic Reports
Define Scope of NEPA Project

- Specific Project Objectives
- Secondary Project Objectives
- Project Outcome
- Clarify Assumptions
- Document Decisions
Define Tasks

- Breakdown Project into Phases
- Visualize All Tasks by Phase
- Breakdown Tasks into Subtasks
- Sequence Activities
  - Network
  - Critical Path Method (CPM)
  - Program Evaluation and Review Technique (PERT)
Tasks in a NEPA Project

A. Preliminary Activities

1. Identify basic issues
   — need for action
   — technical alternatives
   — geographic alternatives
   — administrative/procedural alternatives

2. Identify authorizations needed for action:
   — sponsor's authority & budget to proceed; legislative, presidential & judicial
   — non-sponsor authority; budget; approval of specific parts of the action; permitting, licensing & special enabling action (as may be obtained by interagency land transfers, agreements, etc.)

B. Scoping

3. Develop mailing/notification list
   — federal agencies
   — state agencies
   — local authorities & Indian tribes
   — citizen & environmental groups
   — private parties with major stake in outcome

4. Prepare information package
   — describe proposed action & alternatives
   — describe potential environmental concerns
   — describe proposed scope of DEIS

5. Notify interested parties & invite comments:
   — publish notice of intent in Federal Register
   — mail notice and information package to selected government and private parties
   — make information package available to public at designated locations

6. Obtain and consider comments:
   — collect comments (public meetings optional, if so announced in item 5)
   — consider all comments

7. Develop EIS preparation strategy
   — incorporation by reference
   — tiering of NEPA documents
   — integration of other federal & state laws (i.e., concurrent compliance plan)
   — participation of other federal & state agencies
   — role of Indian tribes & local governments
   — preliminary assessment of motivations for judicial review
   — preliminary strategy to avoid judicial review (e.g., agreements, mitigation measures, etc.)
   — plan to manage public communications & to respond to public concerns
Tasks in a NEPA Project

C. Draft EIS (DEIS) Preparation
   8. Prepare EIS implementation plan:
      — work breakdown structure (WBS)
      — budget & schedule
      — responsibilities for preparation
      — page limits
   9. Prepare prelim. DEIS (Prepare checklist per WBS)
  10. Comply with internal agency review procedures
  11. Finalize DEIS
  12. Publish notice and invite comments
      — mailing list
      — availability in public places
      — optional scheduling of public meetings
  13. Obtain comments
      — correspondence
      — public meetings (optional)
      — coordination meetings with government agencies
  14. Respond to comments
      — make changes
      — enlarge EIS scope (new WBS elements)
      — negotiate & adopt mitigation measures
      — prepare written record of response to comments

D. Final EIS
  15. Produce final EIS (Expand checklist per new WBS)
  16. Comply with internal agency review procedures
  17. Distribute final EIS & invite comments
  18. Receive & consider comments on final EIS

E. Record of Decision (ROD)
  19. Prepare draft ROD
  20. Follow internal agency review procedures
  21. Publish ROD in Federal Register

Develop Schedule

- Use Project Task Sequence
  - Dependent Tasks
  - Independent Tasks
- Plan Start Dates
- Estimate Duration of Each Task
- Meet with Team
- Modify Schedule to Achieve Completion Date
- Prepare Gantt Chart
Prepare Budget

- Prepare Budget by Phase and Task
- Preliminary Labor Estimate
- Materials/Travel
- Overhead
- Consult with Team
- Modify Budget
- Prepare Budget
Budget Estimate for NEPA Project

<table>
<thead>
<tr>
<th>Phase</th>
<th>Task</th>
<th>Personnel</th>
<th>Rate</th>
<th>Hours</th>
<th>Labor Cost</th>
<th>Materials/Travel</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fringe Benefits
(35% of labor cost)

| Indirect Costs
(75% of Costs) |
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Project Total
Organizing Your Team

- Identify Project Needs by Phase and Task
- Identify Potential Problem Areas
- Request Team Members
- Involve Team in Planning
- Get Team’s Commitment
- Set Out Clear Responsibilities/Time/Budget
# Expertise Needed for NEPA Projects

<table>
<thead>
<tr>
<th>Natural resource</th>
<th>Subcomponent</th>
<th>Specialist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air</td>
<td>Air quality</td>
<td>Air quality/pollution analyst</td>
</tr>
<tr>
<td></td>
<td>Wind direction/speed</td>
<td>Air pollution control engineer</td>
</tr>
<tr>
<td></td>
<td>Precipitation/humidity</td>
<td>Meteorologist</td>
</tr>
<tr>
<td></td>
<td>Temperature</td>
<td>Noise expert</td>
</tr>
<tr>
<td></td>
<td>Noise</td>
<td></td>
</tr>
<tr>
<td>Land</td>
<td>Land capability</td>
<td>Agronomist</td>
</tr>
<tr>
<td></td>
<td>Soil resources/structure</td>
<td>Soils engineer</td>
</tr>
<tr>
<td></td>
<td>Mineral resources</td>
<td>Soils scientist</td>
</tr>
<tr>
<td></td>
<td>Tectonic activity</td>
<td>Civil engineer</td>
</tr>
<tr>
<td></td>
<td>Unique features</td>
<td>Geologist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Geotechnical engineer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mineralogist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mining engineer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engineering geologist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Seismologist</td>
</tr>
<tr>
<td>Water</td>
<td>Surface waters</td>
<td>Hydrologist</td>
</tr>
<tr>
<td></td>
<td>Groundwater regime</td>
<td>Water pollution control engineer</td>
</tr>
<tr>
<td></td>
<td>Hydrologic balance</td>
<td>Water quality/pollution analyst</td>
</tr>
<tr>
<td></td>
<td>Drainage/channel pattern</td>
<td>Marine biologist/engineer</td>
</tr>
<tr>
<td></td>
<td>Flooding</td>
<td>Chemist</td>
</tr>
<tr>
<td></td>
<td>Sedimentation</td>
<td></td>
</tr>
<tr>
<td>Flora and fauna</td>
<td>Environmentally sensitive areas: wetlands, marshes, wildlands, grasslands, etc.</td>
<td>Ecologist</td>
</tr>
<tr>
<td></td>
<td>Species inventory</td>
<td>Forster</td>
</tr>
<tr>
<td></td>
<td>Productivity</td>
<td>Wildlife biologist</td>
</tr>
<tr>
<td></td>
<td>Biogeochemical/nutrient cycling</td>
<td>Botanist</td>
</tr>
<tr>
<td>Human</td>
<td>Social infrastructure/institutions</td>
<td>Zoologist</td>
</tr>
<tr>
<td></td>
<td>Cultural characteristics</td>
<td>Conservationist</td>
</tr>
<tr>
<td></td>
<td>Physiological and psychological well-being</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Economic resources</td>
<td>Social anthropologist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sociologist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Archaeologist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Architect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social planner</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Geographer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Demographer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Urban planner</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transportation planner</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Economist</td>
</tr>
</tbody>
</table>
Coordination

◆ Provides Critical Links - team, information
◆ List of Team Members - e-mail/fax/phone
◆ Inform Other Managers - before/during project
◆ Meet with Team Member
  – Review Schedule
  – Review Budget
◆ Resolve Conflicts - other priorities
◆ Relay Exactly What is Expected
Monitoring

- Develop Quality Plan
  - Define Standards of Performance
  - Schedule
- Review On-Going Work
- Review Budget
- Review Schedule
- Identify Conflict Between Team Members
- Solve Problems as They Arise
Periodic Reporting

- **To Team**
  - Key Phases of Project

- **To Management**
  - Regularly with Accurate Information
  - Include Bad News with Solutions

- **To Client**
  - Regularly
  - Warn of Bad News Before It Happens
Supporting Documentation

- All Team Members Need It
  - Sequence of Phases and Tasks
  - Schedule
- Narrative Instructions
- Change in Schedule/Budget
- Change in Scope