

# **National Ecological Observatory Network**

## **Environmental Analysis & Permitting**

J. Bolyard/Director EH&S

# Introduction



- **Roles / Responsibilities:**
- Reviewing permits to confirm the permit conditions are typical and reasonable
- Conducting environmental audits on NEON Projects to ensure effectiveness, efficiency and conformity with state/federal laws and regulations
- Safety training and program safety inspections
- Environmental compliance during both construction and operations
- GIS support for product teams and permit activities
- Accident investigation and return to work efforts

# Issues & Concerns

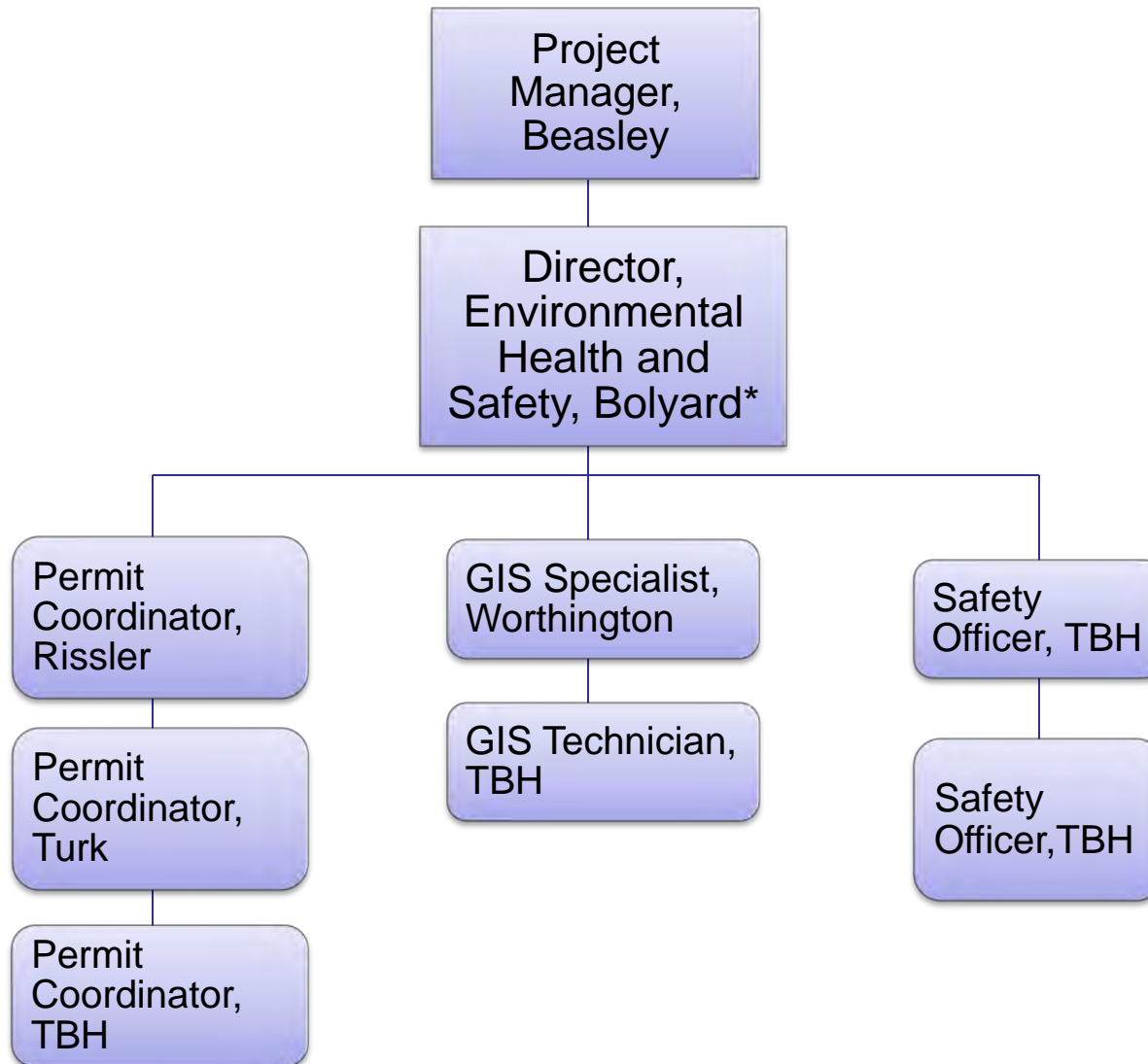
- Safety Training programs to be implemented upon hire of safety staff.
- Environmental compliance during construction activities will require oversight and preparation to ensure the environment is protected.
- Permit delays are not readily predicted.
- Schedule impact to the project needs to be monitored for permit loss/delay.
- Land use agreements need to be addressed early
- Urban sites boundary conditions and additional landowners

# Permitting Strategy

- The NSF NEPA Environmental Assessment completed, public comments received and final publication pending.
- Leverage off EA work to minimize need for additional environmental studies.
- Early start in obtaining Land Use Agreements.
- Additional permitting staff hired/planned.
- Environmental consultant agreements in place for additional permit support.
- 6-month rolling wave planning approach + modeling



# EH&S Organization, Construction



# EHS Documents

## Project

Safety Policy and Program Manual,  
NEON.MGMT.EHS.004300.MAN

Environmental Protection Manual,  
NEON.MGMT.EHS.004301.MAN

EHS Contractor Compliance Manual,  
NEON.MGMT.EHS.004302.MAN

EHS Administrative Manual,  
NEON.MGMT.EHS.004303.MAN

NEON Environmental and Site Permitting  
Plan, NEON.MGMT.EHS.004305.PLA

NEON Security Plan,  
NEON.MGMT.EHS.004304.PLA

## Requirements

EHS System Safety Design  
Requirements,  
NEON.MGMT.EHS.004307.REQ

## Design and Development

NEON Candidate Aquatics,  
V8.0,  
NEON.DSDV.EHS.004308.DSN

NEON Candidate Core  
Sites, V8.0,  
NEON.DSDV.EHS.004309.DSN

NEON Candidate  
Relocatables, V8.0,  
NEON.DSDV.EHS.004310.DSN

# **National Ecological Observatory Network**

## **Environmental, Safety & Health Budget & Schedule Information**

J. Bolyard/PMCS Team

NEON Project Team

# 2.04.30 ES&H - WBS

WBS	Title
2.04.30	Environmental, Safety & Health (ESH)
2.04.30.10	ES&H Management
2.04.30.20	Environmental Assessments
2.04.30.30	Domain Permits

# 2.04.30 ES&H - FTE Spread by FY



# WBS Review

- **2.04.30.10 – EH&S Management**

- Environmental oversight including domain specific policies, employee training, and environmental inspections during the NEON construction activities.
- Safety oversight including domain specific policies, employee training, and safety inspections during construction activities with transition to operations. This element includes personal protective equipment (PPE).
- Security oversight including domain specific policies, employee training, and inspections during construction activities. Not included are security features required during construction actions.
- GIS support for science teams and domain specific questions. Software and computing hardware included elsewhere.

- **2.04.30.20 – Environmental Assessments**

- Environmental Audits and Assessments - Includes the effort to provide assessment actions related to NEPA compliance. This element also included Includes services to conduct studies and assessments related to environmental and NEPA compliance.

- **2.04.30.30 – Domain Permitting**

- This element includes the activities related to environmental permitting at domain locations. Extends through construction with transition to operations. Includes travel, permit fees, labor, but excludes any penalties and or fines.

# EHS

- Key assumptions
  - Safety items installed on the tower, project site, including associated infrastructure are not included in this WBS.
  - Security hardware and software necessary for site and domain security enhancements are not included in this WBS.
  - GIS analysis for development of algorithms for Data Products is not included.
  - Specialized GIS imagery for PTs is not included
  - Cost for permitting and environmental assessment actions assumes current location is actualized. Any sites that require relocation to a new property are not costed and will be a risk realized cost.
- Major Contracts/Procurements
  - WBS Item 2.04.30.20 – Environmental Assessments, suite of Environmental Consultants on board (3) with varying specialties including archaeological, wetlands, sensitive species, other.
  - WBS Item 2.04.30.30 – Domain Permitting, suite of Environmental Consultants on board (3) to assist as needed with permitting efforts.
- Staffing
  - In addition to the current staffing level, EHS will hire an additional Permit Coordinator, two Safety Specialists, and one GIS technician for the duration of construction.

# EHS Operations

- Transition to operations –begins as sites are accepted.
- One permit coordinator will be a term position and will not transition to operations.
- By the end of the first year of construction, one Safety Specialist will transition to operations under the current construction schedule.
- Work includes monitoring of EHS safety and environmental protection procedures.
- Development of an Operations Safety Manual designed to identify site specific requirements; supplement to the existing suite of EHS documents.
- Ensuring continuity of existing environmental permits.
- Oversight of decommissioning efforts in the case of relocatable sites.
- Similar activities for permitting and environmental assessments for new relocatable sites.
- Ongoing safety and environmental inspections and audits at the sites.

# EHS PDR Progress

## Permitting Contingency

**Contingency for permitting schedule and costs have been increased to reflect our current understanding of the risk associated with permit acquisition.**

## Permitting Risk

**NEON senior management is involved in the risk analysis and mitigation activities associated with permitting. The risks are managed day-to-day by the Director EHS. As described earlier, the risks for permitting have been reevaluated and the associated risks properly categorized. Evaluation of the relative risk and impacts associated with permitting is ongoing.**

## Alternative Sites

**Alternative sites are under exploration for those sites currently perceived to present a permit risk. In addition, a process with specific criteria has been developed to allow early identification of potential high risk locations.**

## Environmental Consulting Support

**Outsourcing of permitting and compliance activities has been initiated. A suite of 3 environmental consultants has been selected and the first task order prepared for assistance in USFWS permit acquisition.**

# EHS PDR Progress

## Safety Documentation

**The Policies and Procedures Manual has been modified to ensure the link between the documents is clear.**

## Safety Training Program

**The EHS Administration Manual now includes a specific training requirements that clearly defines the roles and responsibilities for safety training. NEON training roles and responsibilities will be presented more clearly at FDR.**

## Workers Compensation Program

**EHS is now the single point of contact for initiating Workers Compensation claims. A Workers Compensation claim process has been developed to ensure prompt medical care and claim reporting. EHS will continue to liaise with Human Resources and the Fiscal Departments to ensure that the claims have the appropriate compensation information needed. EHS is responsible to coordinate the Return to Work Program and will coordinate with Human Resources to ensure that appropriate tasks are available for returning injured employees.**

# EHS SUMMARY

- **The EHS budget has increased to provide additional resources in the form of FTEs and contracts for environmental consulting services.**
- **Permitting activities have been moved forward to mitigate the risks associated with permit delays.**
- **The EHS risks have been reevaluated, contingency allocated, and mitigation plan developed.**
- **Safety training responsibilities have been detailed and safety training program initiated.**



The National Ecological Observatory Network is a project sponsored by the National Science Foundation and managed under cooperative agreement by NEON Inc.