



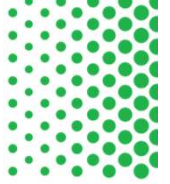
PD&E Studies and Permitting FDOT Project Management Academy

By Margie Kirby, Victor Muchuruza, Thu Clark

January 23, 2018



Learning Goal



Provide a working knowledge of project management practices specific to PD&E Studies and Environmental Permitting

Learning Outline



Statewide Acceleration and Transformation Process



Management of PD&E Studies and Re-evaluations



Project Commitments and Environmental Permitting



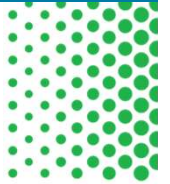
SWAT Process

by Marjorie Kirby

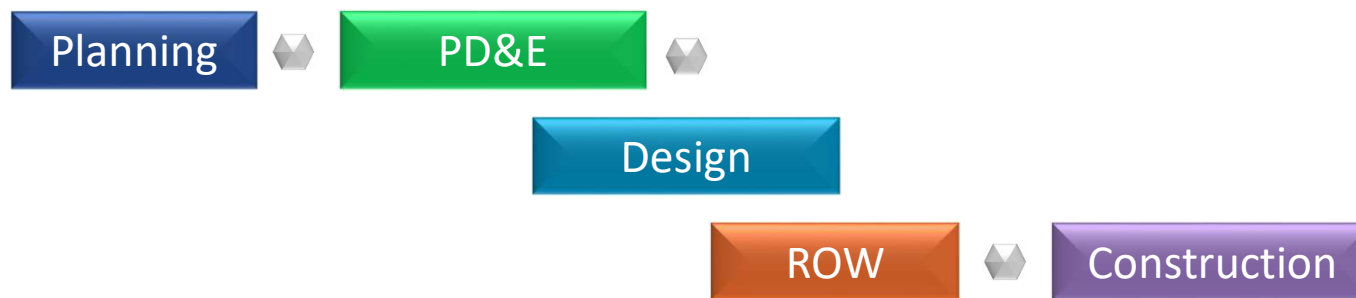
(State Environmental Programs Administrator; SWAT Coordinator)



2014 McKenzie Report



- Took a close look at time and cost of pre-construction activities.
- Although PD&E phase is least costly, it requires the greatest time.
- Recommended overlapping Project Phases to save time

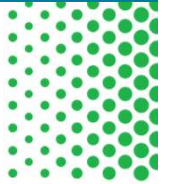


- Initially the SWAT Process focused on State-Funded-Only (SFO) projects; however the **Process** was found to be applicable to both State and Federal projects as a faster means for delivery.

Highly-experienced, District SWAT Teams were formed by Secretary appointment



District SWAT Teams



- **Recommended Composition**
 - Work Program (and Schedulers)
 - MPO Liaison
 - SIS Coordinator
 - Intermodal Systems Development / Planning
 - Design
 - Environmental Management
 - Other District Functional Disciplines can be invited to participate
- **District SWAT Planning, Strategy and SWAT Kick-off meetings**
- **Central Office SWAT Team support Districts implement SWAT, track Lessons Learned and provide Training**

Opportunity: Engage during the “Waiting Years”

Project is selected to the Five-Year Work Program



2-5 Years

PD&E Advertisement

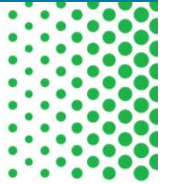


PD&E Phase Begins



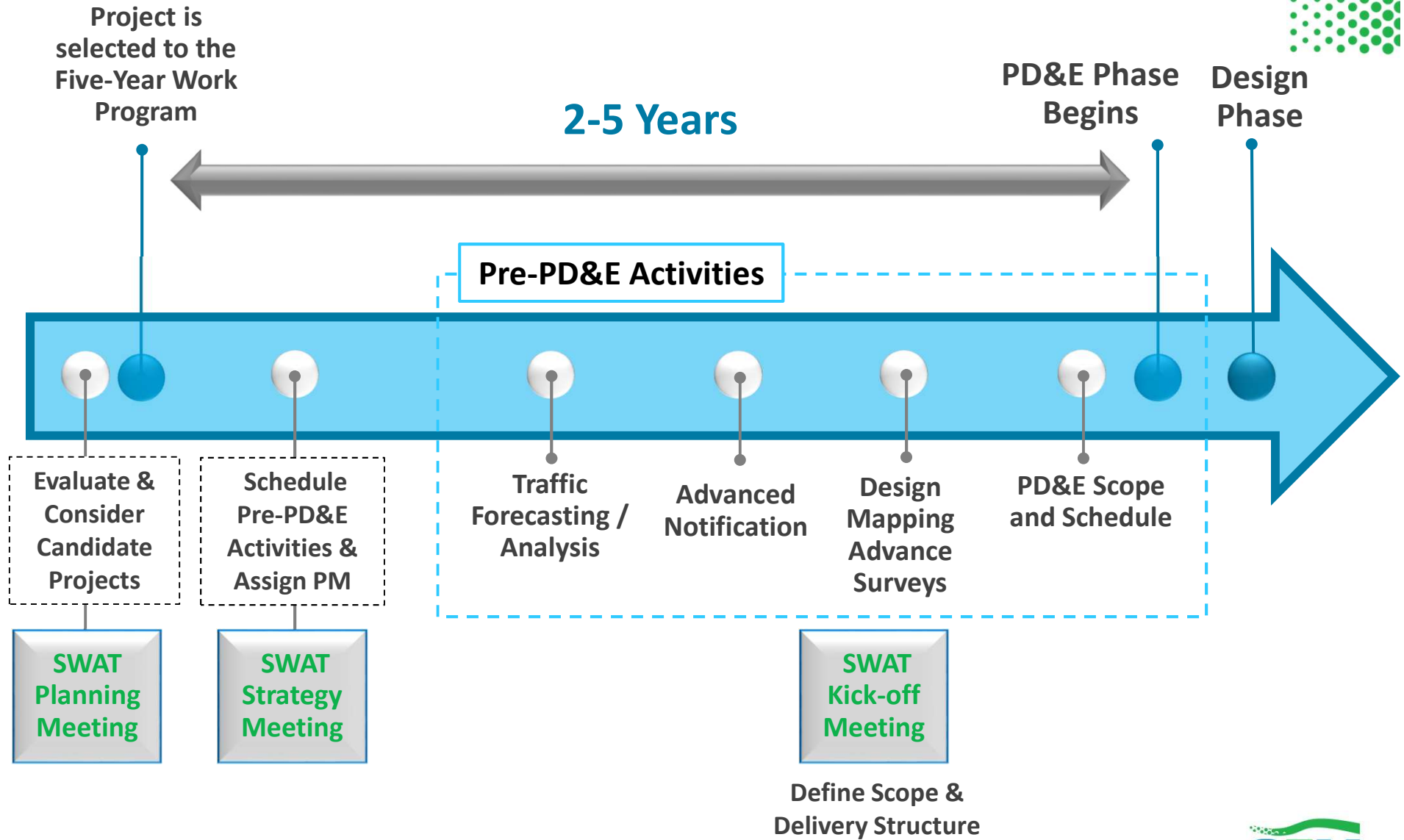
Which activities can progress in the pre-PD&E years?

SWAT Meeting Types (and tools/templates)

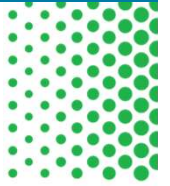


- **SWAT Planning Meeting** (Supports the Work Program Development Cycle)
 - Evaluates “candidate projects” for selection to the Work Program
 - Annually: May – October timeframe
- **SWAT Strategy Meeting** (for projects in queue to PD&E, including new selections)
 - Establishes project strategy/approach
 - Creates a production schedule for Pre-PD&E Activities
 - Annually: February - April timeframe
- **SWAT Kick-Off Meeting** (for each project approaching PD&E Phase)
 - Focuses on appropriate scoping and consultant advertisement
 - Prompts a new, detailed schedule for PD&E and Design

SWAT Process Components

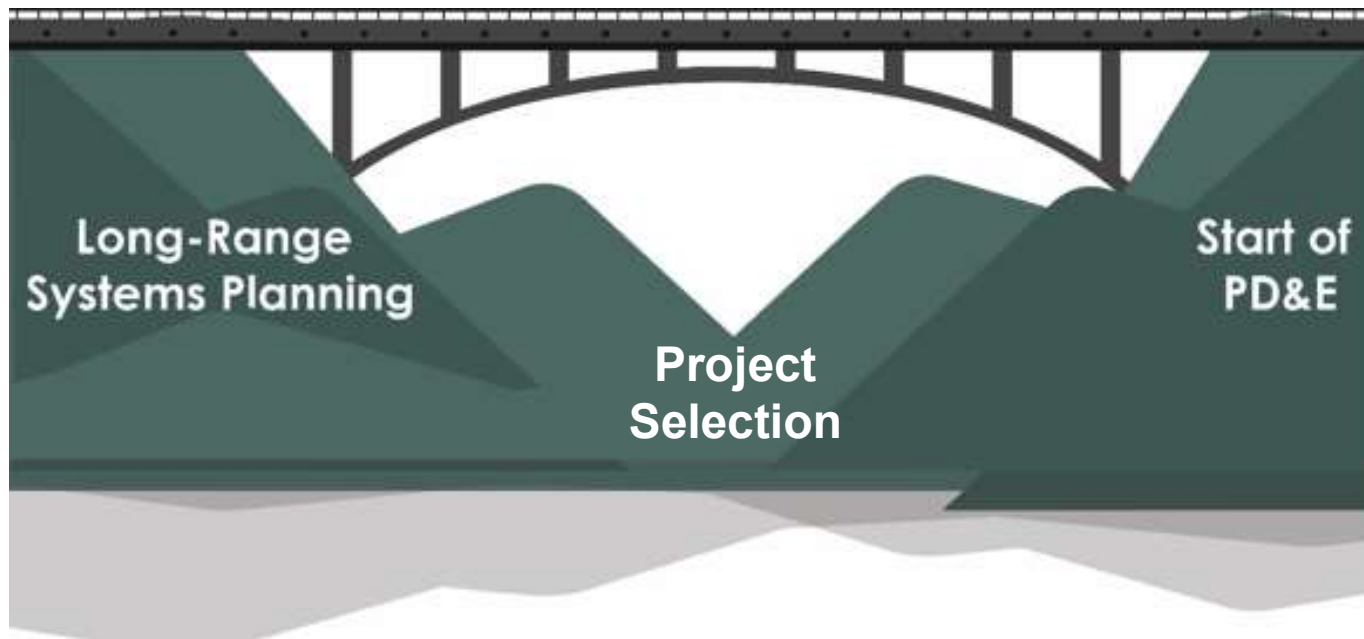


The SWAT Process

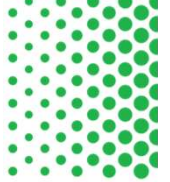


Bridges the entire "gap" from Planning to PD&E to Design

SWAT



The SWAT Process provides a framework for Success



- Provides tools and templates to assist Practitioners and provide program consistency
- Provides format to integrate Planning Products into PD&E
- Provides consistent tools to evaluate “candidate projects” for selection to the Five-Year Work Program
- Informs Work Program Development
- Establishes strategically-timed project reviews by veteran staff
- Enhances internal District communication between its own managers & subject matter experts.
- Develops schedules for certain Pre-PD&E Activities, with associated PSM codes
- Supports to scope of services development for PD&E and Design phases
- SWAT Process is outlined in the PD&E Manual

Slide 11

- DT3** Emphasize that through the SWAT initiative, we have developed this process that does these things
Devens, Ted, 8/7/2017
- DT4** as we continued... developed an integrative process that for strategic scoping and scheduling prior to PD&E and design
Devens, Ted, 8/7/2017
- DT5** fast forward... expectation is to continue concept of overlapping PD&E and design to the greatest extent possible.
Devens, Ted, 8/7/2017
- DT6** and... to implement this resulting, integrated strategic coordination for more highly-developed informed work program and scope of services development
Devens, Ted, 8/7/2017
- DT7** meant to streamline... more efficient, etc.
Devens, Ted, 8/7/2017

Next Steps

1. Continued Executive Support
2. Finalize SWAT Training Workbook and training materials
3. SWAT District & Turnpike Training – Winter/Spring 2018
4. Central SWAT Team provides support to District SWAT Teams
5. District & Turnpike Implementation
6. Future opportunities...



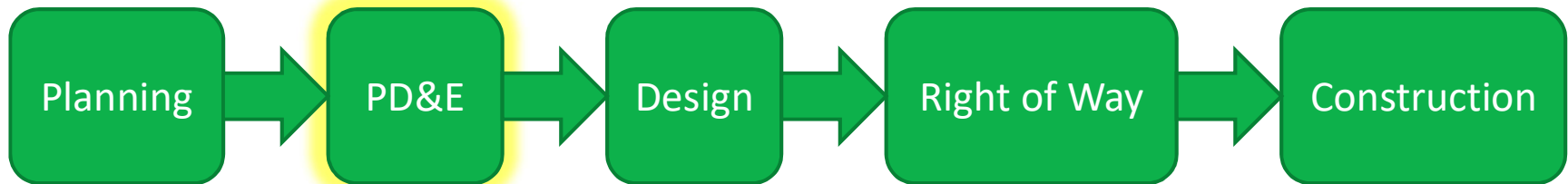
Management of PD&E Studies

by Victor Muchuruza, PhD, PE
(State Environmental Development Engineer)



PD&E Phase Activities

- Refine Purpose and Need
- Develop and analyze alternatives
- Involve the public and resource agencies
- Evaluate Environmental Impacts
- Prepare Environmental Document
- Obtain Location Design Concept Acceptance



Understand interdependencies among these project phases

PD&E Manual

- Developed/maintained by the Office of Environmental Management (OEM)
- Adherence to the Manual ensures FDOT NEPA compliance and other environmental laws
- Divided into two parts
 - + Part 1 (Process)
 - + Part 2 (Analysis and Documentation)

PD&E Training

<http://www.fdot.gov/environment/sched/train1.shtm>

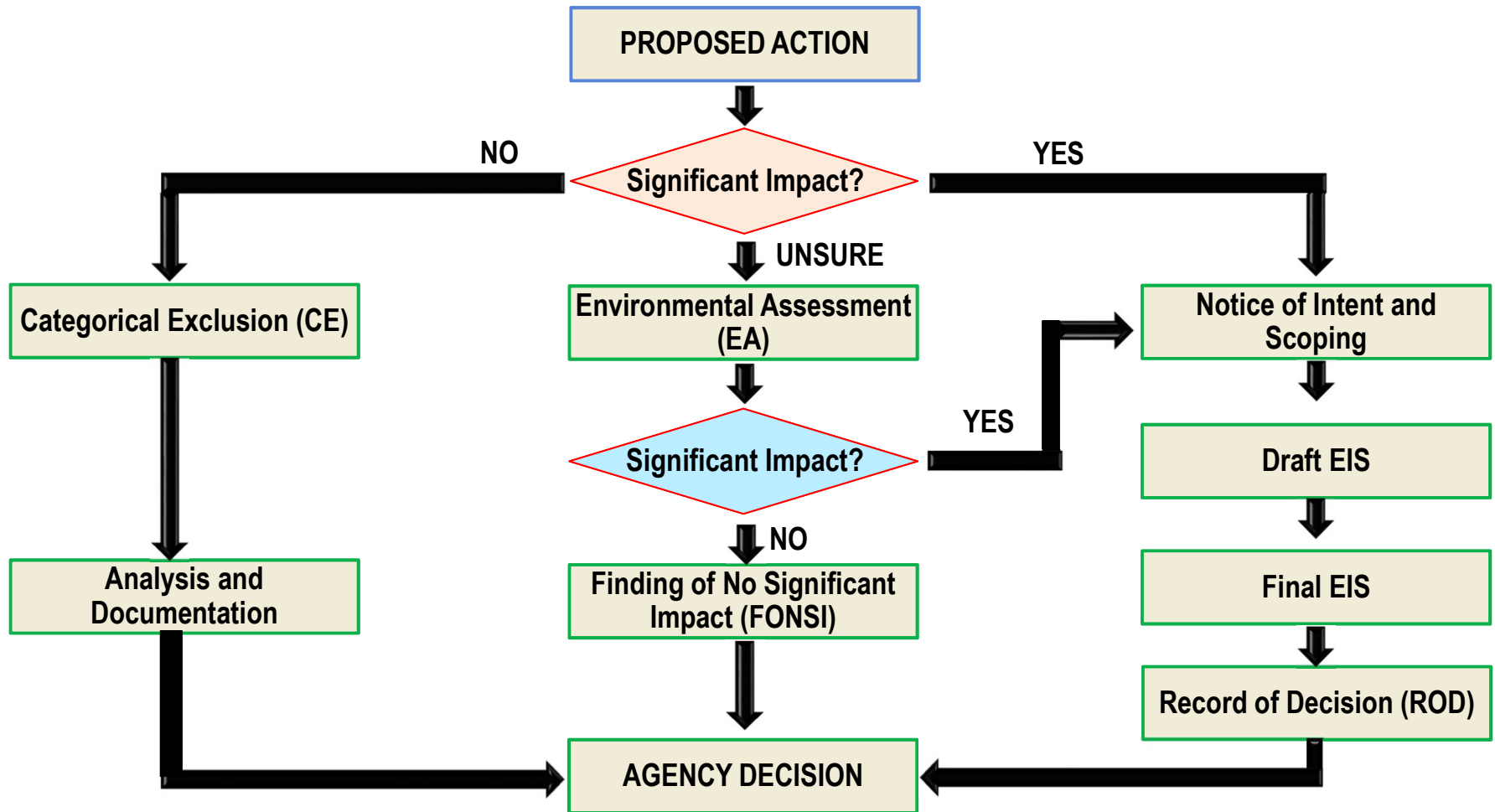


PD&E Studies

- Class of Action for Federal projects is based on the context and intensity/severity of impact per **40 CFR 1508.27**.
- There are three Classes of Actions
 - ◆ Environmental Impact Statement (EIS)
 - ◆ Categorical Exclusion (CE)
 - ◆ Environmental Assessment (EA)

To determine significance of an impact, you must analyze its context and intensity

Federal Classes of Action



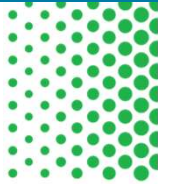
PD&E Studies

- Federal Highway Administration (FHWA) funded projects follow the PD&E Process that is outlined in [Part 1, Chapters 2-9 of the PD&E Manual](#).
- Local Agency Program (LAP) projects are required to comply with NEPA.
- Federal Transit Administration (FTA) funded projects follow the process documented in [Part 1, Chapter 14 of the PD&E Manual](#).

FTA Transit PD&E Projects are significantly different from Highways PD&E Projects

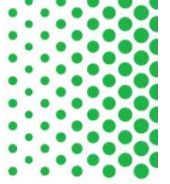
PD&E Studies

- State funded projects subject to state review and environmental documentation
- Class of Action based on the scope of work
 - Non-Major State Action Checklist (NMSA)
 - State Environmental Impact Report (SEIR)
- Local sponsored projects (off system) should prepare a PEIR, Project Environmental Impact Report



Part 1, Chapter 10 of the PD&E Manual for State, Local, or Privately funded PD&E projects

Responsibilities of the Project Manager



- Scope
- Schedule
- Quality
- Contract
- Cost
- Risk
- Communication

We all know importance of each of these basic elements of project management

Scoping a PD&E Study

PD&E Scoping process

- Starts at the end of the Planning phase
- Determines work activities to be performed
- Develops/refines key project parameters and requirements to define the project
- Identifies and considers various project related issues which may affect project development

NEPA scoping process for EIS (**23 CFR Part 771**) is a separate formal process required by **40 CFR § 1501.7** and covered in **Part 1, Chapter 8 of the PD&E Manual**

Scoping a PD&E Study

Linking Planning and Environmental Process

- Results or decisions from planning studies may be used in the NEPA analysis in accordance with **23 U.S.C. §168 and 23 C.F.R. §450.318**
- See Part 1, Chapter 4 of the PD&E Manual
- Examples are: Corridor master plan, Subarea and Corridor Studies
- PM must review previous studies

Major Benefit

Streamlining environmental review process by eliminating duplication of effort and delay

Scoping a PD&E Study

PM responsibilities for PD&E Scope of Services development

- Work with District and stakeholders to identify project needs/potential issues to be addressed in PD&E
- Consult with District environmental SME regarding potential impacts
- Identify work activities and deliverables
- Prepare preliminary project schedule
- Explore opportunities to adopt/incorporate by reference previous studies

Scoping a PD&E Study

When preparing the Scope of Services:

- Review previous completed reports/studies
- Conduct field review
- Review environmental issues relevant to the project from ETDM
- Modify a task if
 - + it was completed prior to PD&E
 - + it will be completed by others during PD&E
 - + environmental issue is absent
 - + design phase will overlap PD&E

Use web based tool to prepare the PD&E scope of Services

Scoping a PD&E Study

Environmental analysis

- Consider all issues that are present
- Pay closer attention to the following:
 - + Relocation Potential
 - + Nondiscrimination controversy
 - + Section 4(f) Resources
 - + Historic/Archaeological Sites
 - + Wild and Scenic Rivers (USFWS Coordination)
 - + Wildlife and Habitat (Section 7 Consultation - USFWS)
 - + Essential Fish Habitat (NMFS Coordination)
 - + Utilities and Railroads
 - + Navigation

Scopes and schedules must account for such things as data collection, public involvement, and coordination/consultation with the agencies.

Scoping a PD&E Study

Level of engineering analysis

- Dependent on project's complexity and size
 - Sufficient to evaluate and compare impacts, ideally 30% design
 - Concurrent PD&E and Preliminary Design
 - PD&E/Design concurrent decision comes from SWAT
 - SEIRs have more flexibility in advancing Design phase
- ✓ Consider any alternatives but analyze in detail only ones which meet the purpose & need and are feasible

Preferred alternative from PD&E should be able to proceed to Final Design without major design changes

Managing Scope

- Review Purpose and Need, ETDM screening
- Identify work activities and schedules
- Determine the level of analysis
- Coordinate with the District SWAT team lead
- Coordinate with other offices and SMEs
- Hold a SWAT Kick-off Meeting
- Prepare Scope of Services

Early input is essential to develop scope that is focused to project issues and needs

Managing Schedule

- Start with SWAT milestones schedules
- Use PD&E Schedule templates
- Work with District Schedulers
- Identify schedule issues and critical activities
- Recognize environmental issues
- Include time to review and perform quality control
- Value Engineering Study

PD&E process encompasses a complex regime of procedural and substantive laws, rules and regulation

Managing Quality

- Ensure deliverables conform to FDOT standards and criteria
- Start with PD&E Studies QC Plan templates
- Negotiate and schedule hours for QC
- Make sure the consultant implement QC Plan
- Coordinate reviews of reports and documents
- Coordinate issues with SME or discipline offices

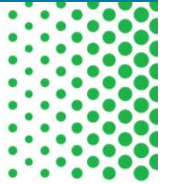
Communication among multiple authors

Managing Risk

- Numerous factors affect PD&E cost:
 - Complexity
 - Need for additional right-of-way
 - Controversy potential
 - Anticipated impacts
 - Need for mitigation measures
- Environmental related factors often emerge from ETDM Screening
- Other factors may come from planning, SWAT, knowledge of area/similar projects
- Use risk register to analyze, plan and monitor

Understand, Avoid, Minimize, and/or Mitigate risks

Coordination, Public Involvement



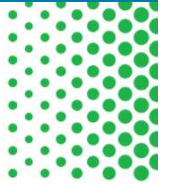
- Agency Coordination
 - Project Manager responsibility
 - Start during ETDM Process and continues throughout PD&E
- Public Involvement
 - Critical component of the PD&E Study
 - Required by both federal and state laws
 - Involve public early and continuous
 - Consider public input--minimizes controversy and builds consensus

DEPARTMENT PM is the representative of the DEPARTMENT for the Project

Managing Re-evaluations

- Changes to project scope during Final Design may require additional environmental analysis
- Is the approved Environmental Document still valid?
 - Conducted prior to advancement to next phase
 - Required for EIS if Final EIS not submitted within 3 years since preparation of Draft EIS
 - Document changes (design/regulations/impact)

Managing Re-evaluations



- Scope environmental analysis in Design phase
 - review both PER and approved Env. Document
 - communicate with District Environmental Office
- During Design
 - become aware of the design change and impacts
 - coordinate with District Environmental Office
 - participate in resource agency and OEM meetings
 - review and update the status of commitments
 - review re-evaluation document

Discourage unnecessary design changes that may re-initiate environmental consultation



Commitments and Environmental Permits

by **Thu-Huong Clark**
(Project Delivery Coordinator)



Project Commitments





What is a commitment?

An obligation to an external stakeholder to provide a feature or perform an action related to a project and can be made at any time and during any phase.

- To satisfy NEPA requirements
- Provide assurances to stakeholders or regulatory agencies
- To help advance a project

Who is responsible for project commitments?

The Project Manager at each phase:

- Is the primary point of contact for project commitments
- Must obtain approvals within the department prior to making any commitments
- Identify, document, and coordinate

Examples of Commitments

- Construct wildlife crossing
- Follow agency construction provisions for species
- No construction staging on park property
- Monitoring of archeological sites during construction
- No night time pile driving
- Further evaluation of Noise Barriers

Not Commitments

- Standard Specifications for Road and Bridge Construction
- State of Florida Erosion and Sediment Control Designer and Reviewer Manual
- Wetland mitigation
- To consult or re-initiate consultation with an agency
- To obtain an environmental permit



Commitments and Permit Conditions

- Some commitments, particularly those that stem from regulatory agency coordination/consultation may become permit conditions in USACE or WMD permits
- These permit conditions are tracked through compliance mechanisms

Approved:


Department of Transportation

Effective: November 14, 2012
Office: Environmental Management
Topic No.: 700-011-035-a

PROJECT COMMITMENT TRACKING

PURPOSE:

To provide guidance and establish a procedure for documenting Florida Department of Transportation (Department) project commitments throughout the Project Development, Design and Construction Phases.



STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROJECT COMMITMENTS RECORD

88000-01
Environmental Management
11/17

PROJECT DEVELOPMENT & ENVIRONMENT

Project Name: _____ Project Manager: _____ FMS: _____ FAP#: _____

Environmental Document Type: Type 1 CE Type 2 CE EA EIS NMSA SEIR

Environmental Document Approval Date: _____

Project Segment Number	Commitment	External Stakeholder	Env. Commitment? (yes/no)	Implementation Phase	Status	Transmittal Date	Completion Date	Comments

DESIGN

Project Name: _____ Project Manager: _____ FMS: _____ FAP#: _____

Project Segment Number	Commitment	External Stakeholder	Env. Commitment? (yes/no)	Confirmed no impact to Env. Commitment? (yes/no)	Commitment Approval Date	Implementation Phase	Status	Transmittal Date	Completion Date	Comments

RIGHT OF WAY

Project Name: _____ Project Manager: _____ FMS: _____ FAP#: _____

Project Segment Number	Commitment	External Stakeholder	Env. Commitment? (yes/no)	Confirmed no impact to Env. Commitment? (yes/no)	Commitment Approval Date	Implementation Phase	Status	Transmittal Date	Completion Date	Comments

CONSTRUCTION

Project Name: _____ Project Manager: _____ FMS: _____ FAP#: _____

Project Segment Number	Commitment	External Stakeholder	Env. Commitment? (yes/no)	Confirmed no impact to Env. Commitment? (yes/no)	Commitment Approval Date	Implementation Phase	Status	Transmittal Date	Completion Date	Comments

OPERATION & MAINTENANCE

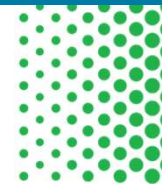
Project Name: _____ Project Manager: _____ FMS: _____ FAP#: _____

Project Segment Number	Commitment	External Stakeholder	Env. Commitment? (yes/no)	Confirmed no impact to Env. Commitment? (yes/no)	Commitment Approval Date	Implementation Phase	Status	Transmittal Date	Completion Date	Comments



Environmental Permitting





What activities require environmental permits?

- For any activity which is expected to be a source of air, ground, or surface water pollution, including the discharge of untreated rainfall moving over and through the ground; for dredging or filling in, on, or over waters of the State or the United States, including wetlands;
- For activities, including bridges occurring in navigable waters of the United States;
- For activities where protected species and/or their habitats may be impacted; and
- For activities associated with archaeological testing and research occurring on State-owned or controlled lands, including sovereign submerged lands.

Federal Permitting

Clean Water Act

Rivers and Harbors Act

Endangered Species Act

National Historic Preservation
Act

Federal Agencies



USACE Regulations

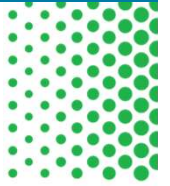
- [33 CFR Part 320](#) - General Regulatory Policies
- [33 CFR Part 322](#) - Permits for Structures in or Affecting Navigable Waters of the U.S.
- [33 CFR Part 323](#) - Permits for Discharges of Dredged or Fill Material Into Waters of the U.S.
- [33 CFR Part 325](#) - Processing of Department of the Army Permits
- [33 CFR Part 330](#) - Nationwide Permit Program
- [33 CFR Part 332](#) - Compensatory Mitigation for Losses of Aquatic Resources



USACE General Policies for evaluating permit applications (33 CFR 320.4)

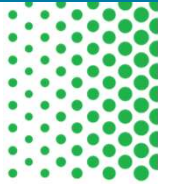
- Public Interest Review
- Effect on wetlands
- Fish and Wildlife
- Water Quality
- Historic, cultural, scenic, and recreational values
- Activities affecting coastal zones
- Activities in marine sanctuaries
- Other Federal, state, or local requirements

USACE Nationwide Permit



- For projects that have no more than minimal individual and cumulative adverse environmental effects
- Valid from March 19, 2017 to March 18, 2022 – only issued for 5 years and cannot be extended
- Require adherence to general permit conditions
- pre-construction notification to the USACE where the USACE has 45 days to notify the applicant if the NWP is authorized
- http://www.saj.usace.army.mil/Portals/44/docs/regulatory/sourcebook/permitting/nationwide_permit/20170106-Federal-Register-NWPs.pdf?ver=2017-03-17-083957-430

USACE Nationwide Permit



- **Maintenance (NWP 3)** replacement of bridge pilings; replacement of fender systems; repairs to roads damaged by storms; etc.
- **Scientific measuring devices (NWP 5)** rain gauges in mitigation areas.
- **Survey activities (NWP 6)** geotechnical borings in wetlands
- **Outfall Structures and Associated Intake Structures (NWP 7)** stormwater outfall structures that discharge into WOUS
- **Utility Line Activities (NWP 12)** fiber optic cable for operation of road signs.
- **Bank stabilization (NWP 13)** stabilizing canal banks or to place riprap in front of (waterward) of seawalls.
- **Linear Transportation Projects (NWP 14)** NWP for road projects.
- **U.S. Coast Guard Approved Bridges (NWP 15)**
- **Minor Discharges for small projects involving the discharge of less than 25 cubic yards of fill into jurisdictional areas (NWP 18)**
- **Minor Dredging for small projects involving the dredging of less than 25 cubic yards of fill from jurisdictional areas (NWP 19)**
- **Reshaping Existing Drainage Ditches (NWP 41)**



USACE Regional General Permit SAJ-92

- Can be used on projects that have a PD&E study
- Included capacity projects, but not new alignments
- Up to 5 acres of non-tidal wetland impacts per 1 mile segment, up to 50 acres
- Excludes Monroe County
- Require adherence to general conditions
- Valid until April 8, 2020

http://www.saj.usace.army.mil/Portals/44/docs/regulatory/sourcebook/permitting/general_permits/RGP/20150408_SAJ-92_FINAL.pdf



USACE Standard or Individual Permit

- Does not meet criteria of a General Permit (NWP or RGP)
- Requires public notice
- Requires evaluation of alternatives
- Typically requires 60 to 120 days for the USACE to process a complete application

USCG Regulations

- [33 CFR 114](#)- General
- [33 CFR 115](#) - Bridge Location and Clearances, Administrative Procedures
- [33 CFR 117](#)- Drawbridge Operation Regulations
- [33 CFR 118](#)- Bridge Lighting and Other Signals



USCG Bridge Permit

A bridge permit is necessary if a bridge project includes any of the following:

1. The construction of a new bridge over navigable waters;
2. The modification of an existing bridge that increases the travel capacity of the bridge (i.e., adding a travel lane); or
3. The modification of an existing bridge that would result in changes to navigation (i.e., changes to the horizontal or vertical clearances, fender systems).

USFWS Regulations

- 50 CFR Part 13 – General Permit Procedures
- 50 CFR Part 17 - Endangered and Threatened Wildlife and Plants
- 50 CFR Part 18 – Marine Mammals
- 50 CFR Part 21 – Migratory Bird Permits
- 50 CFR Part 22 – Eagle Permits

Slide 55

CK14

suggest adding NMFS to this slide (for ESA) and consider adding a separate EFH slide after the ESA slides

Cornwell, Katasha, 1/4/2018



NMFS Regulations

50 CFR 600 – Federal agency consultation with the Secretary

- Pursuant to the Magnuson-Stevens Act, federal agencies must consult with NMFS regarding any of their actions that may adversely affect Essential Fish Habitat
- EFH – “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity”

Section 7 of the ESA

- May affect, not likely to Adversely Affect requires Informal Consultation
- May affect, is likely to Adversely Affect requires Formal Consultation
- No Effect – no consultation is required
- Effect determination is made for listed species and designated critical habitat
- Process is followed when there is a federal nexus (USACE permit)

Section 10 of the ESA

An incidental take permit is required when non-Federal activities will result in “take” of threatened or endangered wildlife.

- ◆ The applicant is required to prepare a Habitat Conservation Plan and provide a NEPA analysis
- ◆ The USFWS will issue an Incidental Take Permit
- http://www.fws.gov/endangered/esa-library/pdf/HCP_Incidental_Take.pdf

Habitat Conservation Plan

The contents of a HCP are defined in Section 10 of the ESA and its implementing regulations. They include:

- an assessment of impacts likely to result from the proposed taking of one or more federally listed species.
- measures the permit applicant will undertake to monitor, minimize, and mitigate for such impacts; the funding that will be made available to implement such measures; and the procedures to deal with unforeseen or extraordinary circumstances.
- alternative actions to the taking that the applicant analyzed, and the reasons why the applicant did not adopt such alternatives.
- additional measures that the USFWS may require as necessary or appropriate.

Advisory Council on Historic Resources

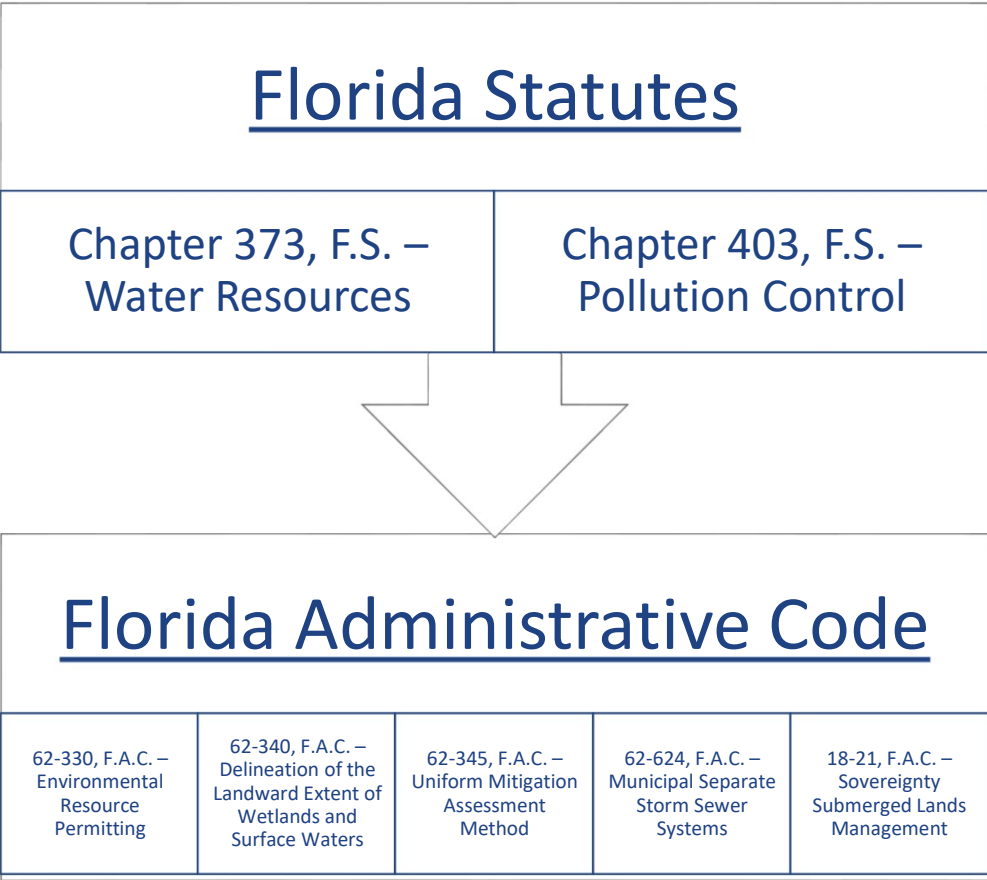
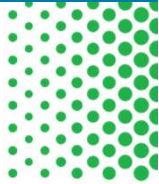
- The reviewing agency on permit applications where any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register Of Historic Places may be affected.
- They must be notified for projects that may have an adverse affect.
- Coordinate with the State Historic Preservation Officer or the Tribal Historic Preservation Officer

See Part 2, Chapter 8 – Archaeological and Historical Resources

http://www.fdot.gov/environment/pubs/pdeman/current/Pt2Ch8_061417-current.pdf

State Agencies



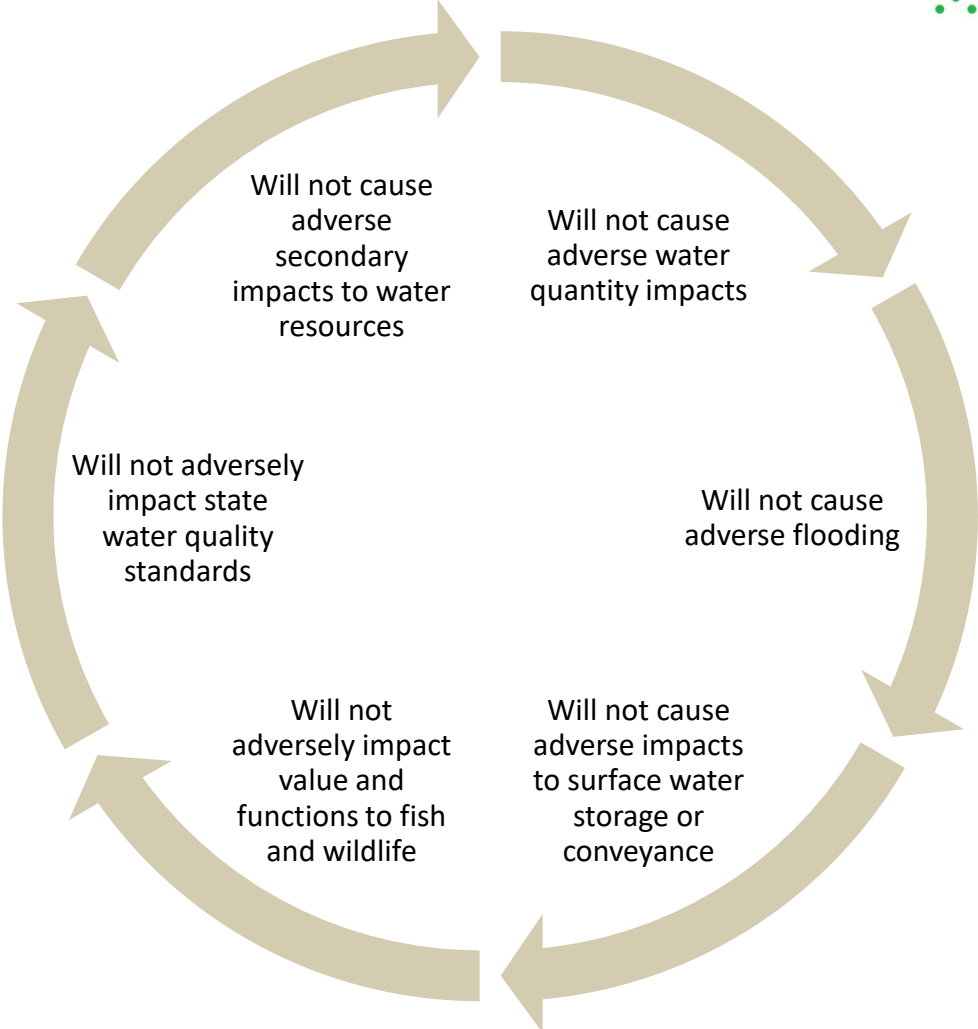






State Permits

- Environmental Resource Permits
- State-owned Submerged Lands Authorizations
- Right of Way Occupancy Permit
- Coastal Construction Control Line
- Consumptive Water Use Permits
- Class V Stormwater Well Permits

Conditions for issuance of Individual ERP (62-330.301, F.A.C.)





Additional
Conditions for
Issuance of an
Individual Permit
(62-330.302,
F.A.C.)

- Project must not be contrary to public interest. Must not adversely impact:
 - Public health, safety, or welfare or property of others
 - Conservation of fish and wildlife
 - Navigation or flow of water or cause erosion
 - The fishing or recreational values or marine productivity
 - Significant historical/archaeological resources



State species regulations

Chapter 379.2291, F.S. - Endangered and Threatened Species Act

“...it is the policy of this state to conserve and wisely manage these resources, with particular attention to those species defined by the Fish and Wildlife Conservation Commission, the Department of Environmental Protection, or the United States Department of Interior, or successor agencies, as being endangered or threatened.”

68A-27, F.A.C. - Rules relating to endangered or threatened species

Florida's Imperiled Species Management Plan





Florida's Endangered and Threatened Species List

The Florida Fish and Wildlife Conservation Commission maintains the state list of animals designated as Federally-designated Endangered or Threatened, State-designated Threatened, or State-designated Species of Special Concern.

<http://myfwc.com/media/1515251/threatened-endangered-species.pdf>

When is all of this done?

- Permitting is typically handled in Design, but if enough detailed information is available, it can be completed earlier
 - FDOT Project Managers should involve Permit Coordinators early in project development
 - FDOT Project Managers should coordinate with District Environmental Management Office
 - Information gathered in PD&E should be used in project permitting



Permit Coordinator

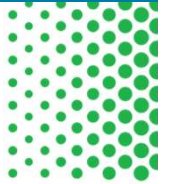
- Review and sign permit applications
- Obtain permits and modifications, as appropriate
- Ensure mitigation is addressed and credits purchased, as applicable
- Track pre-construction conditions
- Certify Permits Clear
- Transmit permits to construction



Project Manager's tips for success

- Know your Permit Coordinators and Environmental Management Team
- Participate in regulatory agency coordination meetings
- Understand Permit regulations and time frames
- Understand issues that may add time to your project (Species consultation, Cultural Resource issues, Design Changes)
- Participate in hand-off meetings

Need More Info or Resources?



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- » [USCG and FDOT Coordination Guidance](#)
- » [NEPA Assignment](#)
- » [Public Involvement Program](#)
- » [Section 4\(f\) References and Guides](#)
- » [Final Natural Resources Evaluation Guidance](#)



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