

# PLANNING A WATER SYSTEM



# PREPARATION

- What you need to take with you to meet with your landowner/producer
  - Photo
  - Soils Map
  - Topo Map

# Photograph



# MEET WITH THE PRODUCER

- Listen
  
- Ask Questions
  - How many animals will this system service?
  - What kind of animals (i.e beef, dairy, horse, sheep, etc.)
  - What size animals (Avg. weight)
  - Calving season
  - Continuous Grazing or rotational grazing
  - What is present water system and/or supply?



# WHERE DOES THE PRODUCER WANT TO GO WITH THIS SYSTEM?

- What are the goals?
  - Provide water to existing grazing system.
  - Expand or develop a new grazing system

A photograph of a herd of cows in a grassy field. The cows are of various colors, including brown, black, and white. They are scattered across the field, some looking towards the camera and others grazing. The background shows a line of trees under a clear sky.

# ***HOW MUCH WATER IS NEEDED?***

**No. of Animals**

**Water Requirements Per Animal Per Day**

**No. of Drinking Events**

**Duration of Drinking Events**

# What Water Sources Are Available



# Determine Which System to Use

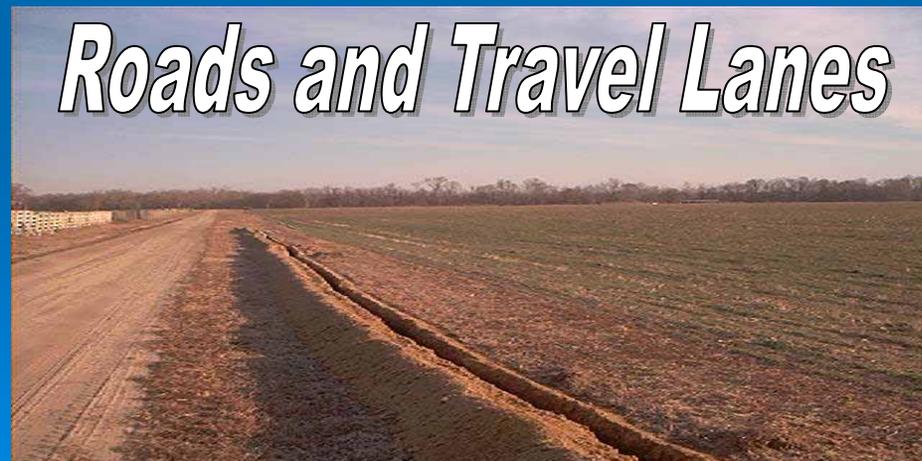
- What source(s) are available
- Where is water needed
- How much water is needed
- What are the limitations – if any
  - Topography
  - Power

# LOCATION

## ➤ Pipeline

- Shortest Distance
- Topography
- Run pipe cross slope where possible to avoid ditch erosion
- Avoid roads and travel lanes to avoid damage from vehicle or livestock traffic
- Avoid crossing streams with pipelines
- Future Expansion

# Avoid Obstacles



# LOCATION

## Trough

Grazing Distribution

Centralize

Reduce travel distance

## Topography

Avoid Low areas and Wet areas

Positive Drainage

Split Trough with Fence When Possible

Use Box Fencing Configuration to Reduce # of Troughs

# Poor Location?



# ***SPLIT FENCE LINES***

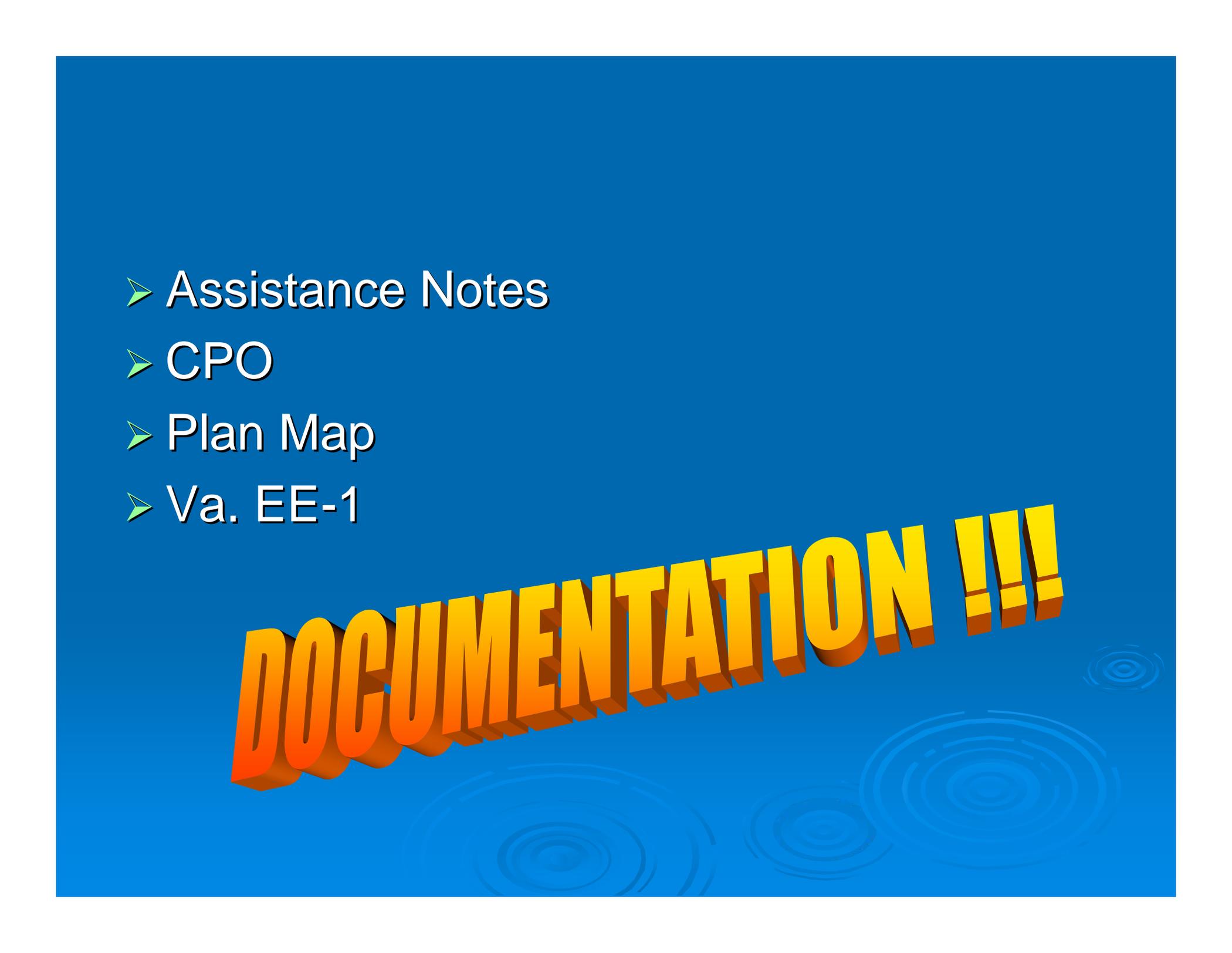


# ***USE BOX CONFIGURATION***



- Assistance Notes
- CPO
- Plan Map
- Va. EE-1

**DOCUMENTATION !!!**





## ENVIRONMENTAL EVALUATION 1/

County: \_\_\_\_\_ Date: \_\_\_\_\_ Compiled By: \_\_\_\_\_

\*\*\*\*\*  
Proposed Action: \_\_\_\_\_

ENVIRONMENTAL FACTORS	EFFECT 2/			REMARKS 3/
	Without Project	Short Term	Long Term	
* PRIME/UNIQUE FARMLAND				
CHANGE IN LAND USE (What is change?)				
SOIL EROSION (Quantify if possible)				
RIPARIAN AREAS				
SOIL CONDITION (Compaction, salinity, fertility, etc.)				
SURFACE WATER QUANTITY				
COASTAL ZONE MGT AREA				
WILD AND SCENIC RIVERS				
SPECIAL AQUATIC AREAS				
AIR QUALITY				
VEGETATION ALTERATION (Landscape/What is change?)				
* FLOODPLAIN MANAGEMENT				
* WETLANDS -(Includes riparian)				
FISH AND WILDLIFE HABITAT				
* THREATENED OR ENDANGERED SPECIES plants or animals				
* CULTURAL RESOURCES				
AESTHETICS (Appearance of)				
NATURAL AREAS				
OTHER				

1/ Use for individual practices, RMS, conservation treatment unit, or EWP, RC&D, small watershed projects (Refer to GM 190-410). This is the Virginia equivalent of the CPA-52 form.  
 2/ CODE ITEMS: (+) Beneficial Effect, (0) No Effect, (-) Adverse Effect, (N/A) Not Applicable.  
 Without Project = What are effects if no projects action? Short Term = Installation period.  
 Long Term = Period through duration of intended use life of project or restore to pre-condition. Assess off-site or cumulative impacts wells on-site.  
 3/ Explain all + or - effects and note if on-site and/or off-site.  
 (\*) CRITICAL ENVIRONMENTAL FACTOR addressed in Federal Regulations.

Va. EE-1

# CONCURRENCE

*Review Plan With Producer*

*Get Acceptance*



**"That's  
all  
folks!"**

