SIGNIFICANT NEXUS DETERMINATION

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(Presentation shamelessly stolen from Charleston District…then altered)

CWA SECTION 404 JURISDICTION

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***Waters of the U.S.* include:**

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs

Jurisdictional by definition

- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs

Significant Nexus Determination required

SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the relevant reach of the tributary, in combination with functions collectively performed by all wetlands adjacent to the tributary, to determine if they have more than an insubstantial or speculative effect on the chemical, physical, or biological integrity of TNWs.

What Does Significant Nexus Mean ??

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"Wetlands performing functions that society values…

AND where there is evidence for the real potential to affect the physical, chemical, or biological integrity of traditional navigable waters"

AND when the evidence is more than speculative or insubstantial

What Are Wetland Functions ??

Physical functions:

- Flood storage volume
- Flood flow alteration
- Flow maintenance
- Groundwater recharge/discharge
- Sediment trapping
- Recreation

What Are Wetland Functions ??

Chemical functions:

- **Absorption of excess nutrients (nutrient cycling)**
- **Pollutant filtering**
- **Organic carbon export / retention**

What Are Wetland Functions ??

Biological functions:

- **Wildlife diversity and abundance (Plants too)**
- **Wildlife nesting, feeding, spawning**

So…What Constitutes A Significant Nexus ??

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There is a Significant Nexus when wetlands are performing some or all these functions…

AND there is a physical connection, chemical connection, or biological connection to the traditional navigable water.

Isolated wetlands can be important, but lack connection… the nexus must be significant, not simply the wetland.

Some Factors to Consider in Regard to Significant Nexus

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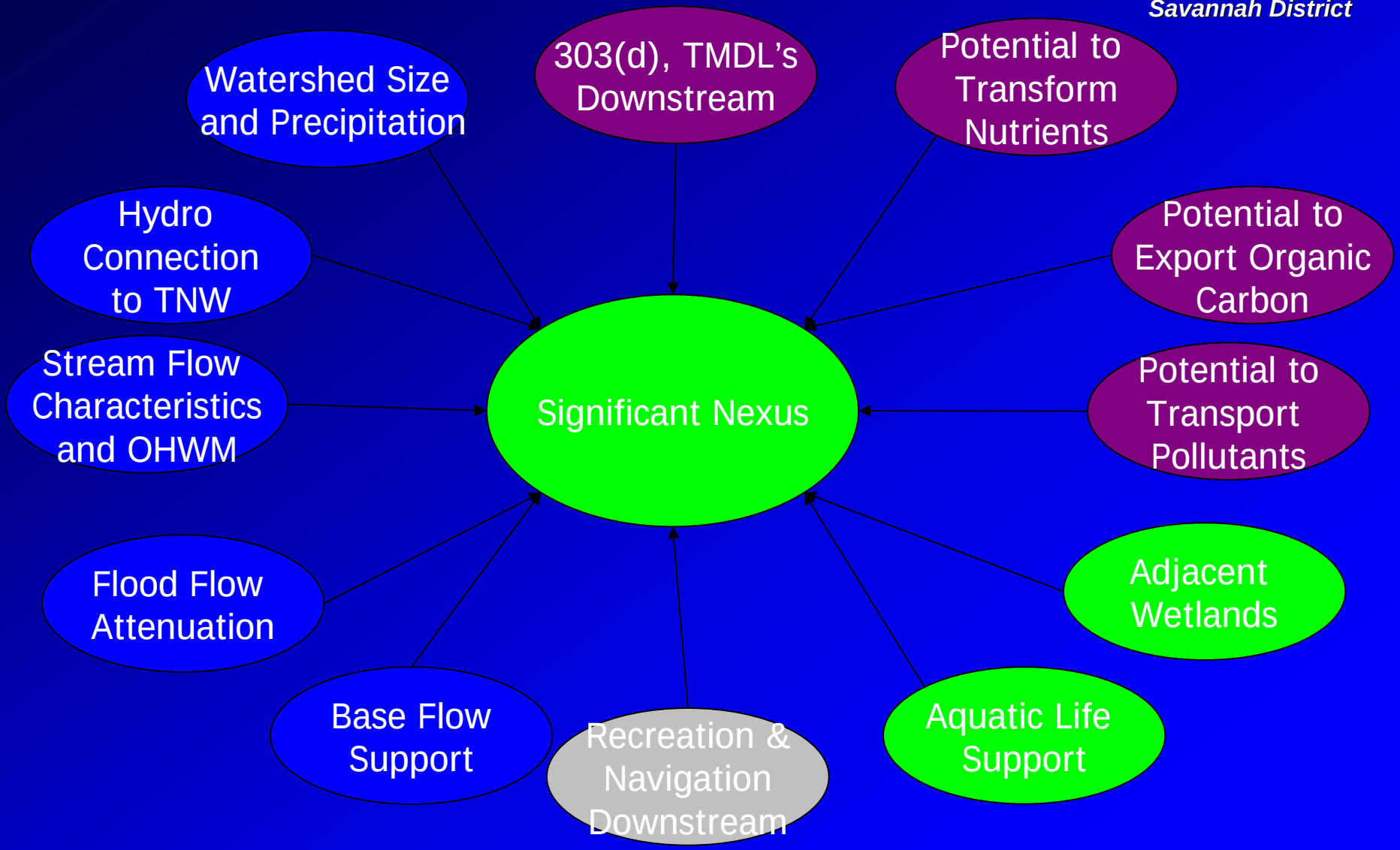
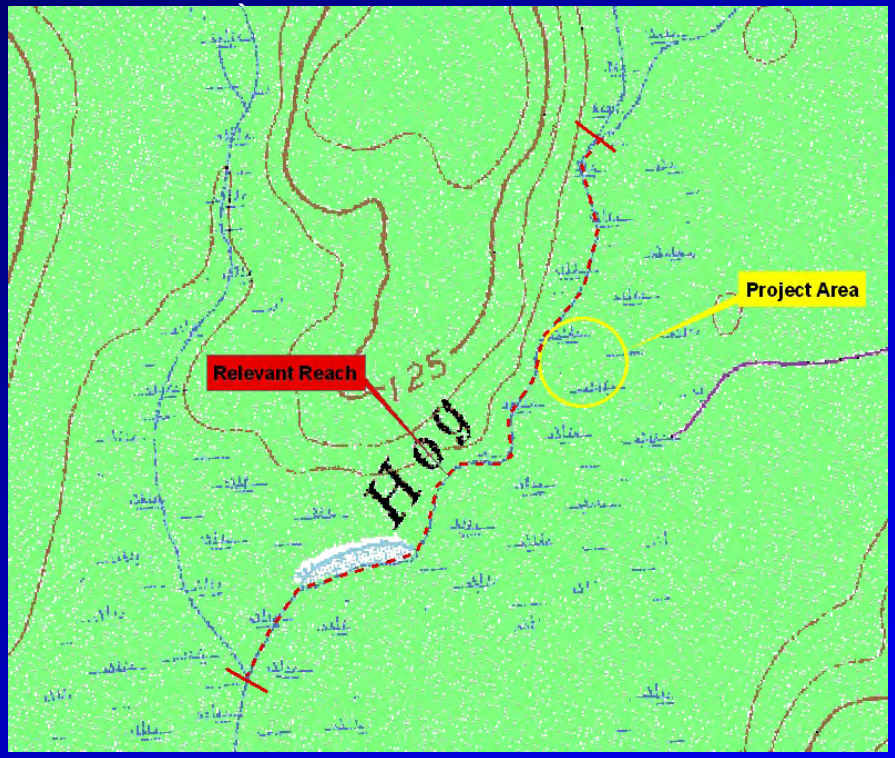


RELEVANT REACH

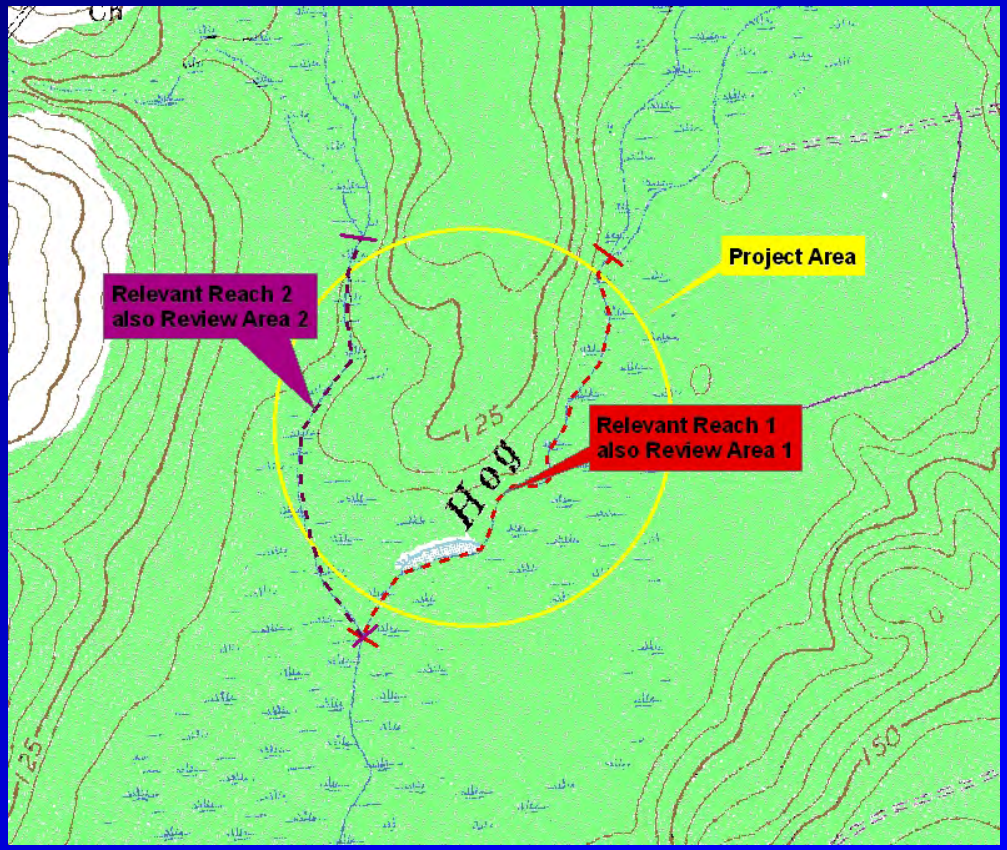
for the purposes of the significant nexus determination process, a relevant reach is the entire reach of the stream that is of the same order (i.e., from the point of confluence, where two lower order streams meet to form the tributary of interest, downstream to the point such tributary enters a higher order



The flow characteristics of a particular tributary will be evaluated at the farthest downstream limit of such tributary (i.e., the point the tributary enters a higher order stream).

REVIEW AREA

In the context of Significant Nexus determination, refers to the relevant reach tributary and all its adjacent wetlands…there can be multiple review areas in one project area.



CONTINUOUS SURFACE CONNECTION

-is a surface feature that is not a tributary (not an RPW or non-RPW), but clearly acts as a hydrologic connection between wetlands and tributaries

- a continuous surface connection does not require surface water to be continuously present between the wetland and the tributary.

Evaluation Factors for Significant Nexus for Tributaries

- OHWM present in field
- Site photos showing geographic features, bed and bank, etc.
- Culverts to pass flow present (if applicable)
- USGS contours
- Watershed size and specific drainage area
- Frequency and duration of flow (known or estimated)
- Observable on aerial photography
- Presence of fish and other aquatic life
- Wetlands are adjacent to tributary (considered cumulatively)
- TMDL, 303(d), watershed associations, drinking water intakes, etc. Hydrologic Flow and pollutant transport models predict flow and pollutant discharge
- Relevant literature on the functions and values of similar tributaries

Evaluation Factors for Significant Nexus for Wetlands

- **Hydrologic or Ecological Connection:**
  - Surface hydrologic connection present
  - Ecological connection (wetland and trib allow free exchange of aquatic and terrestrial organisms)

- **Functions Present:**
  - Flood water and runoff storage
  - Pollutant trapping or filtering
  - Improvement of water quality
  - The support of habitat for a wide range of species
  - Functions that contribute to water quality, commerce, navigability, and public health in navigable waters

What Amount of Detail Goes into the Write-up on the Form?

Short answer: whatever amount of detail of information is necessary to document the call you make

Instructions Taken Directly From the JD Form

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Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?

- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?

- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

What I Wrote On The JD Form…

Rather than bore you with 3 slides of text, examples of significant nexus determinations can be found at:

http://www.sas.usace.army.mil/permit.htm

Summary

- **Desktop tools are available for use in evaluating the presence or absence of a Significant Nexus.**
- **Linking your site to existing literature and reference conditions can be a framework for establishing Significant Nexus.**
- **Combining mapping and literature tools with careful field procedures can help demonstrate your call.**
- **Use your creative writing skills. You need to persuade the reader to agree with your call.**
- **A template is available…contact a project manager.**

QUESTIONS?

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