

A scenic landscape photograph of a lake with mountains in the background and reeds in the foreground. The text is overlaid on the image.

ASSESSING PROPER FUNCTIONING CONDITION for LENTIC AREAS

Introduction

Riparian Proper Functioning Condition (PFC)

- **Term “PFC” is used in two ways:**
 - Qualitative Method **for assessing the physical function of riparian-wetland areas (which may include using *quantitative* data to validate checklist items)**
 - Condition Description: **An on-the-ground condition of riparian-wetland areas determined by completing the “PFC” assessment process. This results in describing the “functionality” of a system (PFC, FAR, or NF)**



As a condition description, PFC describes:

- **How well the physical processes are working**
- **How well the riparian-wetland area will hold together during wind & wave actions or overland flow**
- **The system's ability to maintain and produce both physical and biological values**



As an assessment technique or method, PFC:

- Is a *qualitative* procedure based on *quantitative* data
- Provides a *consistent* approach for considering hydrology, vegetation, and soil attributes and processes in a synthesized manner to determine the health of the site



The PFC assessment is:

Intended to be performed by a trained and experienced ID team



How is information from the PFC Assessment used?

- **Condition Description**
- *Communication Tool/Common Vocabulary*
- **Provide a *general/broad scale assessment of the condition of riparian/wetland areas***
- **“*Coarse filter*” used to prioritize management, restoration & monitoring efforts**



The PFC Assessment Method is not designed to:

- Monitor Trend – PFC is too coarse of a tool to detect most changes in condition (trend). The PFC method can only detect *gross* changes
- Independently make management changes



The Interdisciplinary Team Performing PFC Assessments

- **Determines potential and capability**
- **Define issues that need to be addressed**
- **Determines appropriate monitoring**
- **Determines where to place Designated Monitoring Areas (DMAs)**
- **Helps select appropriate management practices**



PFC is not:

- **A replacement for biological inventory or monitoring protocols**
- **The only methodology for determining the health of riparian or aquatic components of the riparian-wetland area**

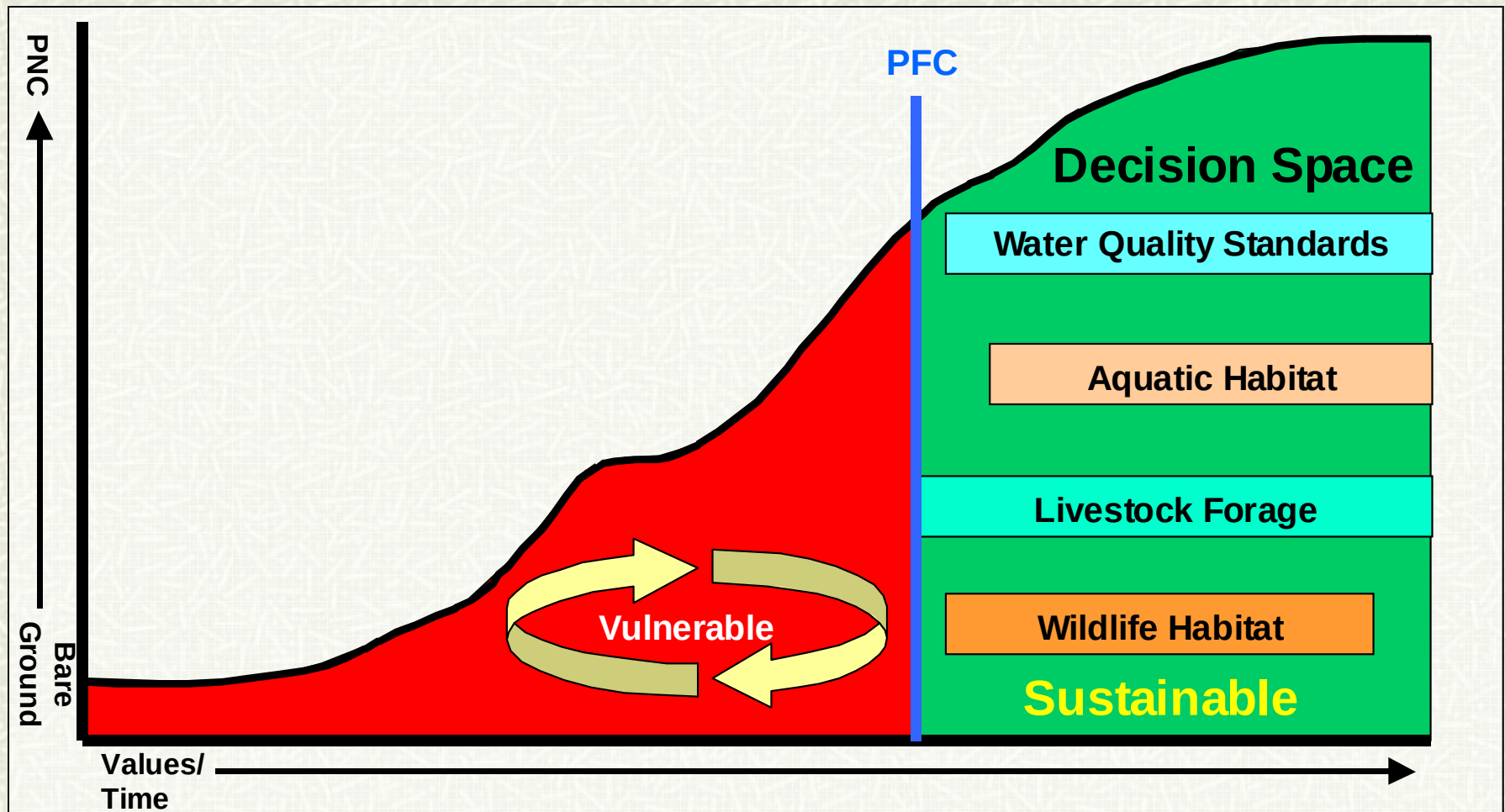


“PFC” is not synonymous with:

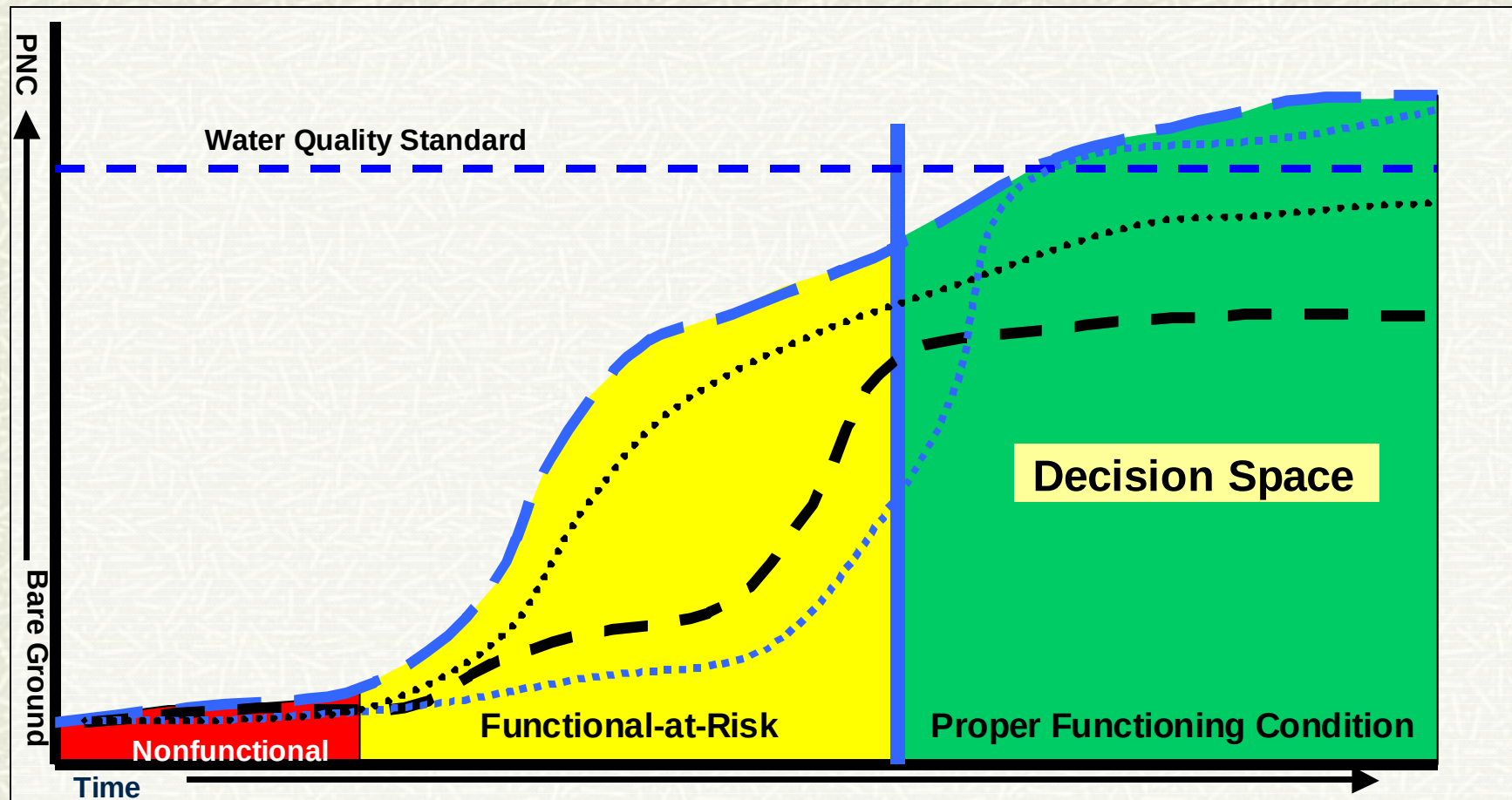
- **Potential Natural Community (PNC)**
- **Desired Plant Community (DPC)**
- **Desired Future Condition (DFC)**



Riparian Vegetation Recovery



Resource Status and Values



Vegetation

— — —

Aquatic Habitat

.....

Livestock Forage

.....

Wetland Stability

- - -

PFC does not replace existing

- **Forest Plan Standards or Guidelines**
- **BLM Land Use Plan Decisions**
- **Legal Requirements, e.g., ESA, CWA**



Lentic Checklist

Page 61-62 (TR 1737-16)

- **Write-up area descriptions**
- **20 Questions**
 - **Hydrology**
 - **Vegetation**
 - **Erosion and Deposition**
- **Summary Determination**
- **Contributing Factors**

General Instructions

- 1) **This checklist constitutes the Minimum National Standards required to determine proper functioning condition of lentic riparian-wetland areas.**
- 2) **As a minimum, an ID team will use this checklist to determine the degree of function of a riparian-wetland area.**
- 3) **An ID team must review existing documents, particularly those referenced in this document, so that the team has an understanding of the concepts of the riparian-wetland area they are assessing.**
- 4) **An ID team must determine the attributes and processes important to the riparian wetland area that is being assessed.**

General Instructions

- 5) Mark one box for each element. Elements are numbered for the purpose of cataloging comments. The numbers do not declare importance.**
- 6) For any item marked “No,” the severity of the condition must be explained in the “Remarks” section and must be a subject for discussion with the ID team in determining riparian-wetland functionality. Using the “Remarks” section to also explain items marked “Yes” is encouraged but not required.**
- 7) Based on the ID team's discussion, “functional rating” will be resolved and the checklist's summary section will be completed.**
- 8) Establish photo points where possible to document the area being assessed.**

Please get out your
PFC checklist handout

The PFC Assessment Tool

- Requires an interdisciplinary (ID) team
 - Vegetation
 - Hydrology
 - Soils
 - Biology

PFC is a Qualitative Tool

Development

- ID Team from the BLM, the FWS, and the NRCS with expertise in vegetation, hydrology, soils, and biology.
- Four year study period in the 12 Western States.
- Collected soil, hydrology, and vegetation information at field sites.

Development (continued)

- Identified common and important attributes/ processes that could be visually assessed.
- Incorporated these elements into checklists.
- Draft document TR 1737-9 & 11.
- Additional field test.
- Finalized TR 1737-9 & 11
- Developed User Guides TR 1737-15 & 16

TR 1737-16

RIPARIAN AREA MANAGEMENT

TR 1737-16 1999, Revised 2003

*A User Guide to Assessing Proper
Functioning Condition and
the Supporting Science for Lentic Areas*



U.S. Department of the Interior
Bureau of Land Management



U.S. Department of Agriculture
Forest Service



U.S. Department of Agriculture
Natural Resources Conservation Service

Lentic Systems

■ Swamps

■ Sloughs

■ Cienagas

■ Marshes

■ Wet meadows

■ Seeps

■ Ponds

■ Lakes

Procedure

- ID team needs to review existing information
 - Vegetation classifications
 - Soil surveys reports
 - Ecological site descriptions
 - Existing files, maps, photos, etc.,

The ID Team Needs to Analyze the PFC Definition

Proper Functioning Condition

Adequate vegetation, landform or woody debris present to:

- Dissipate Energy (wind, wave, and overland flow)
- Filter Sediment
- Improve Flood-water Retention
- Develop Root Masses
- Restrict Water Percolation
- Develop Diverse Ponding Characteristics
- Support Greater Biodiversity

YIELDS

- Reduced erosion
- Improved water quality
- Floodplain development
- Ground-water recharge
- Stabilized islands and shoreline features
- Fish & wildlife habitat

Functional - At Risk

Riparian-wetland areas that are in functional condition but have an existing soil, water, or vegetation attribute that makes them susceptible to degradation.

Nonfunctional

Riparian-wetland areas that *clearly* are not providing adequate vegetation, landform, or woody debris to dissipate energy associated with flows events, and thus are not reducing erosion, improving water quality, etc.

Unknown

Riparian-wetland areas for which
there is a lack of sufficient
information to make any form
of determination

Potential

The highest ecological status a riparian-wetland area can attain given no political, social, or economic constraints

Capability

The highest ecological status a riparian-wetland area can attained given political, social, or economic constraints. These constraints are often referred to as limiting factors.

The ID Team Needs to Identify
Attributes and Processes for the
System they are Assessing

Attributes Processes

Hydrology

Groundwater

Discharge

Recharge

Permafrost

Continuous

Discontinuous

Flood Modification

Inundation

Depth

Duration

Frequency

Semipermanently Flooded

Shoreline Shape

Vegetation

Community Types

Distribution

Density

Cover

Community Dynamics and

Successions

Recruitment/Reproduction

Root Characteristics

Survival

Additional Attributes and Processes

Erosion/Deposition

Shoreline Stability

Depositional Features

Soils

Soil Type

Distribution of Aerobic/

Anaerobic Soils

Annual Pattern of Soil Water States

Ponding Frequency and Duration

Restrictive Material

Water Quality

Temperature

pH

Dissolved Solids

Dissolved Oxygen

Biotic Community

Aquatic Plants

Recruitment/

Reproduction

Nutrient Enrichment

With an understanding of

- potential,
- capability,
- attributes and processes

for the area they are assessing,

an ID Team can then go through the checklist and answer whether each item is in a working order relative to the minimum conditions required for the area to function properly.