

Violation Risk Factor and Violation Severity Level Assignments

Project 2007-07 Vegetation Management

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in FAC-003-2 Vegetation Management.

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

Justification for Assignment of Violation Risk Factors

The SDT applied the following NERC criteria when developing these VRFs:

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

Lower Risk Requirement

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

The SDT also considered consistency with the FERC Violation Risk Factor Guidelines for setting VRFs:¹

Guideline (1) — Consistency with the Conclusions of the Final Blackout Report

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:²

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief.

Guideline (2) — Consistency within a Reliability Standard

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

¹ North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh'g and compliance filing, 120 FERC ¶ 61,145 (2007) (“VRF Rehearing Order”).

² Id. at footnote 15.

Guideline (3) — Consistency among Reliability Standards

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

Guideline (4) — Consistency with NERC’s Definition of the Violation Risk Factor Level

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC’s definition of that risk level.

Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC’s VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC’s Reliability Standards and implies that these requirements should be assigned a “High” VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

VRF Justification***VRF for FAC-003-2, Requirements R1:***

The SDT assigned this requirement a VRF of High.

- FERC’s Guideline 2 — Consistency within a Reliability Standard. The Requirement states transmission owners must manage vegetation for lines that represent a significant risk of cascading, instability, or separation. The VRF is only applied at the Requirement level and each Requirement Part is treated equally.
- FERC’s Guideline 3 — Consistency among Reliability Standards. The requirement mandates measurable performance with regard to vegetation management to ensure that the risk of cascading, separation, and instability is minimized. Other requirements with similar performance based outcomes that could lead to cascading, instability, or separation carry a High VRF.

- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. IROs and Major WECC Transfer Paths by definition have an increased potential for leading to cascading, separation, or instability. Therefore this requirement was assigned a High VRF.
- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. The requirement contains only one objective (to manage vegetation of lines that carry increased risk of instability, cascading, or separation) and only one VRF was assigned.

VRF for FAC-003-2, Requirements R2:

The SDT assigned this requirement a VRF of Medium.

- FERC's Guideline 2 — Consistency within a Reliability Standard. The Requirement states transmission owners must manage vegetation for lines that do not represent a significant risk of cascading, instability, or separation. The VRF is only applied at the Requirement level and each Requirement Part is treated equally.
- FERC's Guideline 3 — Consistency among Reliability Standards. The requirement mandates measurable performance with regard to vegetation management to ensure that the risk of equipment damage is minimized. Other requirements similar performance based outcomes that could lead to equipment damage carry a Medium VRF.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Lines that are not IROs and Major WECC Transfer Paths by definition have less potential for leading to cascading, separation, or instability. Therefore this requirement was assigned a Medium VRF.
- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. The requirement contains only one objective (to manage vegetation of lines that carry minimal risk instability, cascading, or separation) and only one VRF was assigned.

VRF for FAC-003-2, Requirements R3:

The SDT assigned this requirement a VRF of Lower.

- FERC's Guideline 2 — Consistency within a Reliability Standard. The Requirement mandates the Transmission Owner to have documented strategies, procedures, processes, or specifications. The VRF is only applied at the Requirement level and each Requirement Part is treated equally.
- FERC's Guideline 3 — Consistency among Reliability Standards. This requirement calls for an entity to have documented strategies, procedures, processes, or specifications. This requirement is administrative in nature, and is consistent with other standards requiring documentation.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to have a document is not likely to directly affect the electrical state or the capability of the bulk electric system, or the

ability to effectively monitor and control the bulk electric system. Development of the documents is a requirement that is administrative in nature and is in a planning time frame that, if violated, would not, under emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system.. Therefore this requirement was assigned a Lower VRF.

- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. R2 contains only one objective which is to have documents(s). Since the requirement is to have a documents, only one VRF was assigned.

VRF for FAC-003-2, Requirements R4:

The SDT assigned this requirement a VRF of Medium.

- FERC's Guideline 2 — Consistency within a Reliability Standard. The Requirement specifies that transmission owners must report vegetation conditions that are likely to cause a Fault to the control center holding switching authority for the associated line. The VRFs are only applied at the Requirement level and there are no Requirement Parts for separate consideration.
- FERC's Guideline 3 — Consistency among Reliability Standards. The requirement mandates notifications that could hinder the ability to effectively monitor and control the bulk electric system. Other requirements that address with similar outcomes are also assigned Medium VRFs.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to report vegetation conditions may affect the ability to effectively monitor and control the bulk electric system Therefore this requirement was assigned a Medium VRF.
- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. The requirement contains only one objective (to report) , and only one VRF was assigned.

VRF for FAC-003-2, Requirements R5:

The SDT assigned this requirement a VRF of Medium.

- FERC's Guideline 2 — Consistency within a Reliability Standard. The Requirement mandates that a Transmission Owner, when constrained from performing vegetation work that may lead to a vegetation encroachment into the MVCD prior to the implementation of the next annual work plan, must take corrective action to ensure continued vegetation management to prevent encroachments. The VRF is only applied at the Requirement level and there are no Requirement Parts for separate consideration.
- FERC's Guideline 3 — Consistency among Reliability Standards. The requirement mandates corrective action that, if not taken, could directly affect the electrical state or the capability of the bulk electric system. Other requirements with similar outcomes are also assigned Medium VRFs.

- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to take corrective action could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. Therefore this requirement was assigned a Medium VRF.
- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. The requirement contains only one objective (to take corrective action), and only one VRF was assigned.

VRF for FAC-003-2, Requirements R6:

The SDT assigned this requirement a VRF of Medium.

- FERC's Guideline 2 — Consistency within a Reliability Standard. The Requirement specifies that the transmission owner must perform a Vegetation Inspection of 100% of its lines at least once per calendar year. The VRFs are only applied at the Requirement level and there are no Requirement Parts for separate consideration.
- FERC's Guideline 3 — Consistency among Reliability Standards. The requirement mandates inspections that, if not performed, could affect the ability to effectively monitor and control the bulk electric system. Other requirements with similar outcomes are also assigned Medium VRFs.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to perform an inspection could affect the ability to effectively monitor and control the bulk electric system. Therefore this requirement was assigned a lower VRF.
- FERC's Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. The requirement contains only one objective (to perform a Vegetation inspection), and only one VRF was assigned.

VRF for FAC-003-2, Requirements R7:

The SDT assigned this requirement a VRF of Medium.

- FERC's Guideline 2 — Consistency within a Reliability Standard. The Requirement specifies that the Transmission Owner must complete 100% of its annual vegetation work plan. The VRFs are only applied at the Requirement level and there are no Requirement Parts for separate consideration.
- FERC's Guideline 3 — Consistency among Reliability Standards. The requirement mandates completion of work that, if not completed, could affect the electrical state or the capability of the bulk electric system. Other requirements with similar outcomes are also assigned Medium VRFs.
- FERC's Guideline 4 — Consistency with NERC's Definition of a VRF. Failure to complete the annual vegetation work plan could affect the electrical state or the capability of the bulk electric system. Therefore this requirement was assigned a lower VRF.

- FERC’s Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. The Requirement contains only one objective (to complete 100% of the annual vegetation work plan), and only one VRF was assigned.

Justification for Assignment of Violation Severity Levels

In developing the VSLs, the SDT anticipated the evidence that would be reviewed during an audit, and developed its VSLs based on the noncompliance an auditor may find during a typical audit. The SDT based its assignment of VSLs on the following NERC criteria:

Lower	Moderate	High	Severe
Missing a minor element (or a small percentage) of the required performance The performance or product measured has significant value as it almost meets the full intent of the requirement.	Missing at least one significant element (or a moderate percentage) of the required performance. The performance or product measured still has significant value in meeting the intent of the requirement.	Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component. The performance or product has limited value in meeting the intent of the requirement.	Missing most or all of the significant elements (or a significant percentage) of the required performance. The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.

FERC’s VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement meet the FERC Guidelines for assessing VSLs:

Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties

A violation of a “binary” type requirement must be a “Severe” VSL.

Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement

VSLs should not expand on what is required in the requirement.

Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations

... unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

VSLs for FAC-003-2 Requirement R1:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R1	Meets NERC's VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations..	This is a new requirement, and accordingly cannot lower the current level of compliance.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

VSLs for FAC-003-2 Requirement R2:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R2.	Meets NERC's VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	This is a new requirement, and accordingly cannot lower the current level of compliance.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

VSLs for FAC-003-3 Requirement R3

R#	Compliance with NERC's Revised VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R3.	Meets NERC's VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	The previous standard graded the VSLs based on the completeness of the TVMP. The new VSL is structured similarly, but has omitted the "Low" level, effectively raising the minimum level of compliance.	The proposed VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSLs use the same terminology as used in the associated requirement, and are, therefore, consistent with the requirement.	The VSLs are based on a single violation and not cumulative violations.

VSLs for FAC-003-3 Requirement R4:

R#	Compliance with NERC's Revised VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R4.	Meets NERC's VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	The previous standard does not require actual communication, while the new standard does. Accordingly, this should be treated as a new requirement, and therefore cannot lower the current level of compliance.	The proposed VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSLs use the same terminology as used in the associated requirement, and are, therefore, consistent with the requirement.	The VSLs are based on a single violation and not cumulative violations.

VSLs for FAC-003-3 Requirement R5:

R#	Compliance with NERC's Revised VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R5.	Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	The only VSL is Severe, and therefore, the VSL cannot result in a lower level of compliance.	The proposed VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSLs use the same terminology as used in the associated requirement, and are, therefore, consistent with the requirement.	The VSLs are based on a single violation and not cumulative violations.

VSLs for FAC-003-3 Requirement R6:

R#	Compliance with NERC's Revised VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R6.	Meets NERC's VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	The previous standard does not require actual inspections, while the new standard does. Accordingly, this should be treated as a new requirement, and therefore cannot lower the current level of compliance.	The proposed VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSLs use the same terminology as used in the associated requirement, and are, therefore, consistent with the requirement.	The VSLs are based on a single violation and not cumulative violations.

VSLs for FAC-003-3 Requirement R7:

R#	Compliance with NERC's Revised VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R7.	Meets NERC's VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	The VSLs in the previous standard were focused on completeness of the document, with the "Severe" VSL only reserved for entities that did not have or implement their plan. The proposed VSLs are graded based on the amount of the plan completed, giving a clear indication that partial completion is still a violation, establishing a level of compliance in excess of what was established previously.	The proposed VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSLs use the same terminology as used in the associated requirement, and are, therefore, consistent with the requirement.	The VSLs are based on a single violation and not cumulative violations.