

Natural Resources Conservation Service

**Windbreak/Shelterbelt Establishment and Renovation**

*Illinois Conservation Practice 380 –* ***RENOVATION*** *Implementation Requirements*

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| **Producer:** | | **Farm #:** | | **Tract #:** |
| **Field(s):** | | **Acres:** | | |
| **Soil Map Unit(s):** | **County:** | | **ESJAA Job Class:** | |
| **Designed By:**  **ESJAA Level:**  **Signature:** | | **Approved By:**  **ESJAA Level:**  **Signature:** | | |
| **Date:** | | **Date:** | | |

DEFINITION:

Establishing, enhancing, or renovating windbreaks/shelterbelts, which are single or multiple rows of trees and/or shrubs in linear or curvilinear configurations.

PURPOSE: (check all that apply)

Reduce soil erosion from wind

Enhance plant health and productivity by protecting plants from wind-related damage

Manage snow distribution to improve moisture utilization by plants

Manage snow distribution to reduce obstacles, ponding, and flooding that impacts other resources, animals, structures, and humans

Improve moisture management by reducing transpiration and evaporation losses and improving irrigation efficiency

Provide shelter from wind, snow, and excessive heat, to protect animals, structures, and humans

Improve air quality by intercepting airborne particulate matter, chemicals, and odors, and/or by reducing airflow across contaminant or dust sources

Reduce energy use in heating and cooling buildings, and in relocating snow

Increase carbon storage in biomass and soils

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| **Description of Work and/or Additional Information:** |
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| **Associated Practice(s):** (check all that apply) | |
| Tree-Shrub Site Preparation (490)  Brush Management (314)  Woody Residue Treatment (384)  Tree-Shrub Establishment (612) | Irrigation System, Microirrigation (441)  Herbaceous Weed Treatment (315)  Tree-Shrub Pruning (660)  Other: |
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SPECIFICATIONS FOR RENOVATION: Refer to 380 Practice Specification (PS)

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| **Existing Windbreak/Shelterbelt (Inventory and Evaluate)** | | | | | |
| Total Width (feet; including maintenance areas): | | | Total Length (feet): | | |
| Row # | Species Present | # of Plants | Estimated Age | Average Height | Average Spacing |
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| **Inventory and Evaluation Summary:** | | | | | |

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| **THINNING** | | | | | |
| **Additional Specifications:**   * Thin entire rows or individuals within a row to provide growing space for adjacent trees and/or shrubs or rows of trees and/or shrubs. * Clearly identify and mark plants or rows for removal to reduce competition, alter density of the planting and/or maintain or improve the growth and form of the remaining plants. * Select weak, diseased, overtopped, or damaged plants first. Next select alternating plants, do not thin adjacent plants. | | | | | |
| Row # | Species to Remove | Remove 100% | # of Plants | Desired Spacing | Treatment Date/Season |
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| Details of Thinning *(Include: thinning method and equipment to be used, herbicide name and rate, how trees/rows are marked, etc.):* | | | | | |

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| COPPICING | | | | |
| Additional Specifications: Trees   * Cut to a height of 1-6” to encourage a strongly attached sprout from the root collar. * Select to a single apically dominant, well formed, well attached sprout 3-4 years after initial coppicing activities. * Do not treat stumps of surplus sprouts with chemical.   Shrubs   * Cut back to a height of 4-8” above ground to create a denser shrub row. * Do not use rotary mowers for coppicing. | | | | |
| Row # | Species to Coppice | # of Plants | Future Sprout Selection Needed | Treatment Date/Season |
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| Details of Coppicing *(Include: application method and equipment to be used, slash disposal, how trees/rows are marked, etc.):* | | | | |

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| VEGETATION CONTROL |
| Additional Specifications: Sod Tillage   * Till between rows no deeper than 3 inches and no closer than 2 feet from the base of woody plants. * Optimum time to till is midsummer or early fall.   Chemical Weed Control   * Refer to conservation practice standard TREE/SHRUB SITE PREPARATION (Practice Code – 490). |
| Details of Vegetation Control *(Include: application method and equipment to be used, herbicide type and rate, how trees/rows are marked, etc.):* |

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| **PRUNING** | | | | | |
| **Additional Specifications:**  Branch Pruning   * Prune or shear trees or shrubs to remove diseased branches or alter the density of the windbreak or shelterbelt. * Prune in accordance with conservation practice standard TREE/SHRUB PRUNING (Practice Code – 660).   Root Pruning   * Check for buried cables, pipelines, and other utilities before beginning root pruning operations. * Prune in accordance with conservation practice standard TREE/SHRUB PRUNING (Practice Code – 660). | | | | | |
| Row # | Species to Prune | Root Prune | # of Plants | Desired Density | Treatment Month/Year |
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| Details of Pruning *(Include: pruning method and equipment to be used, how trees/rows are marked, etc.):* | | | | | |

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| REINFORCEMENT PLANTING | | | | | | | |
| **Additional Specifications:**  Underplanting/Interplanting   * Plant approximately midway between the rows of an existing windbreak or shelterbelt where the majority of trees or shrubs in two or more adjacent rows are missing, dead, or in poor condition. * Replacement species must be at least intermediately shade tolerant. Refer to Table 2, in (PS) Practice Specification 380. * Weed control and root and/or branch pruning of existing windbreak trees may be necessary to reduce competition for establishment plants. Refer to conservation practice standards TREE/SHRUB SITE PREPARATION (Practice Code – 490) and TREE/SHRUB PRUNING (Practice Code – 660). (Complete appropriate sections in addition) | | | | | | | |
| Row # | Existing Adjacent Species | Species to plant | | | Stock Type **1** | # of plants | Planting Month/Year |
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| **Additional Specifications:**  Row Removal and Supplemental Plantings   * Do not plant supplemental rows closer than 30 feet from a remaining row unless:   + The existing row is will not compete with the new planting for light or moisture due to poor condition.   + The existing row will be removed within 2 years. * Multiple interior row removals will be restored with one less row than was removed to avoid repeated decline from the remaining mature rows. | | | | | | | |
| Row # | Species to Plant | Planting Stock 1 | In row plant spacing (ft) | Between row spacing (ft) | | # of plants | Planting Month/Year |
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| **1** BAreroot, COntainer, CUtting; include size, caliper, height, and age as applicable. | | | | | | | |
| Details of Planting *(Include: planting method and equipment to be used, stock type to be planted, herbicide name and rate, how trees/rows are marked, soil type etc.):* | | | | | | | |

**MAP:**

Attach an accurate and detailed aerial photo map of the treatment area to the IR.

**OPERATION AND MAINTENANCE:**

* Inspecting the planting at least annually and after major storm events or other disturbances to identify needs for repair and maintenance.
* Maintaining protection for trees and/or shrubs during establishment, and removing protective structures (e.g., tube shelters, cages) when plants are large enough to withstand environmental stressors.
* Protecting trees and shrubs from adverse impacts including insects, diseases, competing vegetation, fire damage, spray drift, animals, etc.
* Applying maintenance practices and activities at times that minimize wildlife disturbance during the reproductive period for desired species, where wildlife habitat is a consideration.
* Monitoring tree or shrub establishment or renovation and replacing dead trees or shrubs as needed until the windbreak is functional.
* Providing supplemental water if needed during the establishment period.
* Managing competing vegetation during establishment.
* Thinning or pruning the windbreak to remove dead, injured, or diseased wood and to maintain windbreak function.
* Applying nutrients periodically to maintain plant vigor following approved fertilizer recommendations.
* Maintain a weed-free area at least 2 feet in all directions from planted or seeded trees and/or shrubs for at least the first 2 years after planting. Control competing grass species in a 2-foot radius until woody plants are at least equal in height to competing grasses. Noxious weeds will be controlled. If mulches are to be used refer to conservation practice standard MULCHING (Practice Code – 484). If herbicides are to be applied read and follow all label directions.
* Replacement of dead trees or shrubs will be continued until the windbreak/shelterbelt is functional. Replace any dead plants for the first 2 years. After 2 years at least 90% of plants will be surviving with no two adjacent plants missing.
* Renovate a windbreak that has lost its functionality due to impacts of storms, disease, insects, or other natural events, or because trees have reached their life expectancy and are deteriorating.
* Windbreak/Shelterbelt Establishment and Renovation carries a practice life of 15 years.

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| **CERTIFICATION** | |
| **Extent of Practice Applied:** | |
| **Location of Practice:** | **Date of Application:** |
| **Document actual mitigation measures used and applied:**  *(Note and certify any alterations between design specifications and installation in the appropriate section)* | |
| **I certify that implementation of this conservation practice, as installed, meets criteria for the stated purpose(s) and meets the NRCS conservation practice standard and specifications.**  NRCS/PARTNER/TSP Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **NRCS/Partner ESJAA Level:** | |