| Practice Name and Code | Description | Operation and Maintenance |
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| 309 - Agrichemical Handling Facility | A facility with an impervious surface to provide an environmentally safe area for the handling of on-farm agrichemicals. | Do not use the facility for purposes other than the storing, mixing, loading, cleaning, and maintenance of materials and equipment used for agrichemical application. Follow an operation and maintenance plan that includes:   * Brief description of the facility, including parameters used to size and design the facility such as storage tank and equipment sizes. * An inventory of agrichemicals to be stored or handled at the facility. Include Material Safety Data Sheets in the plan. * The proposed method of handling and disposing of rinsate, washwater, and spills. All material removed from the chemical-mixing pad and sump must be properly utilized or disposed of. Appropriate uses and disposal methods include: * Application to the target crop. * Use as dilution water in mixing to be applied to the target crop. or, * Disposal as waste in conformance with all local, state, and federal regulations. * A process for handling accumulated rainfall, when applicable. * A process for handling accumulated sediment. All material removed from the chemical mixing pad and sump must be properly utilized or disposed of. * A strategy for cleaning surfaces between different agrichemical mixing operations. * An inspection plan of structural components such as the condition of concrete, curbing, sump, access roads, building structure, etc. Note the timing of inspections, conditions that would cause concern, and required actions as appropriate. * Any weekly, monthly, or annual maintenance that may be necessary for the proper functioning of the system components including, but not limited to, concrete surfaces, sumps, pumps, hoses, pipelines, building materials, electrical equipment, and other materials and equipment. * A schedule of any required written inspection and maintenance reports. * Proper winterization of the facility. * Required safety signage. * An Emergency Response Plan with safety procedures in the event of an accidental spill, exposure, fire, or other hazardous incident. Provide a list of safety equipment, contact names, and phone numbers. |
| 311 – Alley Cropping | Trees or shrubs are planted in sets of single or multiple rows with agronomic, horticultural crops or forages produced in the alleys between the sets of woody plants that produce additional products. | * The trees, shrubs, crops and/or forages will be inspected periodically and protected from adverse impacts including insects, diseases or competing vegetation. Apply pesticide as needed being careful to follow all label directions. Care must be taken to utilize pesticides that are compatible with both the tree crop and the alley crop The trees or shrubs will also be protected from fire and damage from livestock or wildlife. Fence or use other means, to protect tree seedlings from grazing and/or browsing. Refer to Access Control (472) and Fence (378) for further guidance. * All other specified maintenance measures and techniques of tree/shrub establishment will continue until plant survival and establishment are assured. This includes replacement of dead and dying trees or shrubs, pruning of dead or damaged branches for safety reasons, periodic pruning of selected branches for control of product quality, and control of undesirable competing vegetation. Control weeds during initial years until trees reach adequate size. * Any removals of tree or shrub products, use of agricultural chemicals, and maintenance operations shall be consistent with the intended purpose of the practice. Avoid damaging the site and soil and comply with applicable federal, state and local regulations pertaining to on-site and off-site effects. |
| 313 – Waste Storage Facility | An agricultural waste storage impoundment or containment made by constructing an embankment, excavating a pit or dugout, or by fabricating a structure. | * Check backfill areas around the structure (concrete, steel, timber, etc.) frequently for excessive settlement. Determine if the settlement is caused by backfill consolidation, piping, or failure of the structure walls or floor. Necessary repairs must be made. * Check walls and floors often - minimum of 2 times a year when facility is empty - for cracks and/or separations. Make needed repairs immediately. * Outlets of foundations and sub-drains should be checked frequently and kept open. The outflow from these drains should be checked when the facility is being used to determine if there is leakage from the storage structure into these drains. Leakage may be detected by the color and smell of the out-flowing liquid, by lush dark-green growth of vegetation around the outlet, by the growth of algae in the surface ditch, or by the vegetation being killed by the out-flowing liquid. If leakage is detected, repairs should be planned and made to prevent the possible contamination of groundwater. To prevent erosion, a good vegetative cover should be established and maintained on berms and embankments. Plantings should be clipped 3 times a year to kill noxious weeds and encourage vigorous growth. If the vegetation is damaged, berms and embankments will need to be re-vegetated as soon as possible. * Fences should be inspected and maintained in order to exclude livestock from the berms and embankments and to exclude unauthorized entry by people. * Check the channels and berms of the clean water diversions around the barnyard, buildings and storage structure frequently. Channels must be protected from erosion and berms must be maintained at the proper height to ensure adequate capacity. These channels and berms should not be used as haul roads unless they are designed and constructed for this purpose. * Check frequently for burrowing animals around buildings, structures, and in the berms and embankments. Remove them when they are found and repair any damage. * Inspect haul roads and approaches to and from the storage facility frequently to determine the need for stone, gravel or other stabilizing material. * Do not allow runoff from loading areas and from spills to flow into streams or road ditches. * Examine and repair all warning and hazard signs as needed. * Install and maintain a marking gauge post that clearly shows the design levels of one-half and full for manure storage pits, ponds, and lagoons. * Clear blockages from roof gutters and outlets as needed. * Notify the Soil Conservation District of any major problems or repairs needed. * The roof must be maintained to operate as intended for the life of the practice (15 years). The function of the roof is critical because the manure storage facility is sized accordingly. |
| 314 – Brush Management | The management or removal of woody (non-herbaceous or succulent) plants including those that are invasive and noxious. | * Apply brush management practices using approved materials and procedures. Comply with all local, state, and federal laws and ordinances. * Inspect the area after treatment to assess the effectiveness of brush management, and then at least annually thereafter, to the extent feasible. Following initial treatment, some regrowth, resprouting, or reoccurrence of brush may be expected. As needed, use spot treatment of individual plants or areas needing re-treatment when undesirable plants are most vulnerable to treatment procedures. * When chemical treatment is used: * Read and follow label directions and maintain appropriate Material Safety Data Sheets (MSDS). MSDS and pesticide labels may be accessed on the Internet at: <http://www.greenbook.net/>. * Follow label requirements for mixing/loading setbacks from wells, intermittent streams and rivers, natural or impounded ponds and lakes, and reservoirs. * Post signs, according to label directions and/or federal, state, and local laws, around fields that have been treated. Follow restricted entry intervals. * Dispose of herbicides and herbicide containers in accordance with label directions and adhere to federal, state, and local regulations. * Calibrate application equipment according to recommendations before each seasonal use and with each major chemical and site change. * Replace worn nozzle tips, cracked hoses, and faulty gauges on spray equipment. * Maintain records of brush/shrub control for at least 2 years. Herbicide application records shall be in accordance with USDA Agricultural Marketing Service’s Pesticide Recordkeeping Program and state-specific requirements. * Develop an emergency response plan for individuals exposed to chemicals, including telephone numbers and addresses of emergency treatment centers and the telephone number for the nearest poison control center. The National Pesticide Information Center (NPIC) telephone number in Corvallis, Oregon, may also be given for non-emergency information: 1-800-858-7384, Monday to Friday, 6:30 a.m. to 4:30 p.m. Pacific Time. The national Chemical Transportation Emergency Center (CHEMTRAC) telephone number is: 1-800-424-9300. |
| 315 – Herbaceous Weed Treatment | The removal or control of herbaceous weeds including invasive, noxious and prohibited plants. | * Apply herbaceous weed treatment practices using approved materials and procedures. Comply with all local, state, and federal laws and ordinances. * Inspect the area after treatment to assess the effectiveness of weed treatment, and then at least annually thereafter, to the extent feasible. Following initial treatment, some regrowth, resprouting, or reoccurrence of weeds may be expected. As needed, use spot treatment of individual plants or areas needing re-treatment when undesirable plants are most vulnerable to treatment procedures. * When chemical treatment is used: * Read and follow label directions and maintain appropriate Material Safety Data Sheets (MSDS). MSDS and pesticide labels may be accessed on the Internet at: <http://www.greenbook.net/>. * Follow label requirements for mixing/loading setbacks from wells, intermittent streams and rivers, natural or impounded ponds and lakes, and reservoirs. * Post signs, according to label directions and/or Federal, State, Tribal, and local laws, around fields that have been treated. Follow restricted entry intervals. * Dispose of herbicides and herbicide containers in accordance with label directions and adhere to federal, state, and local regulations. * Calibrate application equipment according to recommendations before each seasonal use and with each major chemical and site change. * Replace worn nozzle tips, cracked hoses, and faulty gauges on spray equipment. * Maintain records of weed treatment for at least 2 years. Herbicide application records shall be in accordance with USDA Agricultural Marketing Service’s Pesticide Recordkeeping Program and state-specific requirements. * Develop an emergency response plan for individuals exposed to chemicals, including telephone numbers and addresses of emergency treatment centers and the telephone number for the nearest poison control center. The National Pesticide Information Center (NPIC) telephone number in Corvallis, Oregon, may also be given for non-emergency information: 1-800-858-7384, Monday to Friday, 6:30 a.m. to 4:30 p.m. Pacific Time. The national Chemical Transportation Emergency Center (CHEMTRAC) telephone number is: 1-800-424-9300. |
| 316 – Animal Mortality Facility | An on-farm facility for the treatment or disposal of livestock and poultry carcasses. | * Facilities for normal mortality will be operated or used on a regular basis. At each operation or use, inspect the facility to note any maintenance needs or indicators of operation problems, and promptly make repairs or adjustments to operation of the facility. * Follow the management plan requirements for: * The mix proportions, moisture requirements, and materials used. * The sizing requirements. * The timing of the disposal/utilization process including loading, unloading, and turning or aeration of the material. * Temperature monitoring requirements, including a temperature log. * What must be done to prevent scavenging animals and leachate problems. * Bio-security requirements. * If catastrophic mortality occurs, contact NRCS or the Soil Conservation District for assistance concerning proper disposal of the mortality. |
| 317 – Composting Facility | A facility to process raw manure or other raw organic by-products into biologically stable organic material. | * Follow an operation and maintenance plan that includes: * Recipe ingredients. * Layering and mixing sequences. * Safety requirements for operation of the composting facility. * Manage the compost piles for temperature, odors, moisture, and oxygen, as appropriate. Make adjustments throughout the composting period to insure proper composting processes. * Closely monitor temperatures above 165oF. Take action immediately to cool piles that have reached temperatures above 185oF. |
| 325 – High Tunnel System | An enclosed polyethylene, polycarbonate, plastic, or fabric-covered structure that is used to cover and protect crops from sun, wind, excessive rainfall, or cold, to extend the growing season in an environmentally safe manner. | * Periodically inspect the high tunnel structure and cover. Promptly repair, reinstall, or replace components as needed. * Follow the manufacturer’s instructions for proper operation and maintenance of each component of the high tunnel. * Shade cloth may be used in place of, or in addition to, the impervious plastic cover to provide protection from the sun and lengthen the growing season for cool-season crops. * Apply soil amendments periodically, based on soil test results, to meet desired yield goals and promote plant growth. The use of commercial fertilizer and other forms of plant nutrients must be in compliance with Maryland nutrient management regulations. * Outside of the high tunnel, maintain permanent vegetation or other soil cover as needed to control erosion. Inspect runoff control measures after every significant rainfall event. Repair promptly, as needed. * Avoid damage to the structure from equipment operated in and around the high tunnel. * Remove and store the plastic cover after the growing season and before heavy snow/ice to avoid damage to the structure. Re-install the cover prior to use in the spring. * If the high tunnel will be used year-round, manage the structure in a manner that limits wind, snow, and/or ice damage. Promptly remove heavy snow and ice from the high tunnel to prevent structural failure. * Producers are responsible for repairing any damage to the high tunnel, such as that caused by operating equipment, wind, ice and/or snow for the 5-year lifespan of the practice. * The high tunnel cannot be used to provide shelter or housing for any livestock or to store supplies or equipment. |
| 327 – Conservation Cover | Establishing and maintaining permanent vegetative cover. | * Follow management requirements as specified to maintain vegetation in the desired species composition. * Inspect the planting at least annually. Shape and reseed areas damaged by heavy rainfall, animals, chemicals, tillage, or equipment traffic, and any other areas where the stand is not adequate. * Check for insects and diseases, and if an incidence threatens stand survival, take corrective action to keep the pest under control. * Control undesirable plants by pulling, mowing, or spraying with a selective herbicide. Control noxious weeds as required by state law. * Protect the planting from wildfire and damage from livestock, wildlife, and equipment, to the extent feasible. * When wildlife habitat is the primary purpose, do not mow during the primary nesting season (April 15 to August 15). During the establishment period, mowing may be needed during the nesting season to reduce heavy competition from annual weeds. Noxious weeds may be spot treated during the primary nesting season. * Apply soil amendments periodically, if needed to maintain plant vigor. If nutrients are applied, refer to the conservation practice standard for Nutrient Management (590). * Do not use the planted area for hay storage or machinery parking for an extended period of time, especially if doing so will damage or impair the function of the practice. * Comply with acceptable uses (e.g., flash grazing, haying, etc.) and time of year or frequency of use restrictions, if any. Pay particular attention to program requirements as they relate to acceptable vs. restricted uses and other management restrictions. * If native cover (other than what was planted) becomes established, and this cover meets the intended purpose of the practice and the client’s objectives, the cover should be considered adequate. |
| 328 – Conservation Crop Rotation | A planned sequence of crops grown on the same ground over a period of time (i.e., the rotation cycle). | * Follow the specified crop rotation. Rotations shall provide for acceptable substitute crops in case of crop failure or shift in planting intentions for weather related or economic reasons. Acceptable substitutes are crops having similar properties that will accomplish the purpose of the original crop. * Evaluate the rotation and the crop sequence to determine if the planned system is meeting the planned purpose(s). |
| 329 - Residue and Tillage Management, No-Till | Limiting soil disturbance to manage the amount, orientation and distribution of crop and plant residue on the soil surface year around. | * Follow the specified crop rotation and implements to be used for each field. Contact NRCS before changing the cropping sequence and/or tillage methods, especially on HEL fields or when receiving financial assistance for this practice. * Evaluate/measure crop residue cover and orientation after each crop to ensure the planned amounts and orientation are being achieved. Adjust management as needed to either plan a new residue amount and orientation or adjust the planting and/or harvesting equipment. * Limited tillage is allowed for spot treatment of weeds, leveling ruts, or similar purposes. No more than 10% of the field may be tilled for these purposes. * If there are areas of heavy residue accumulation in the field because of movement by water or wind, spread the residue prior to planting so that it does not interfere with planter operation. |
| 330 – Contour Farming | Aligning ridges, furrows, and roughness formed by tillage, planting and other operations at a grade near the contour to alter the velocity or the direction of water flow. | * Perform all tillage and planting operations parallel to contour baselines or terraces, diversions, or contour buffer strip boundaries where these practices are used, provided the applicable row grade criteria are met. * Where terraces, diversions, or contour buffer strips are not present, maintain contour markers on grades that, when followed during establishment of each crop, will maintain crop rows at designed grades. Contour markers may be field boundaries, a crop row left untilled near or on an original contour baseline or other readily identifiable, continuous, lasting marker. All tillage and planting operations must be parallel to the established marker. If a marker is lost, reestablish a contour baseline within the applicable criteria set forth by this standard prior to seedbed preparation for the next crop. * Begin farming operations on the contour baselines and proceed both up and down the slope in a parallel pattern until patterns meet. Where field operations begin to converge between two non-parallel contour baselines, establish a correction area that is either permanently in grass, established to an annual close-grown crop, or has 75 to 95 percent ground cover. * Renovate field borders and other permanently vegetated turn-row areas as needed to maintain at least 65 percent ground cover. Maintain adequate grass widths to allow farm implements room to turn. |
| 331 – Contour Orchard and Other Perennial Crops | Planting orchards, vineyards, or other perennial crops so that all cultural operations are done on or near the contour. | * Perform all cultural operations between tree or vine rows on or near the contour. * Periodically inspect and make repairs to runoff water outlets * Protect uphill and downhill farm roads from erosion, and * Maintain adequate vegetative cover to control erosion. |
| 332 – Contour Buffer Strips | Narrow strips of permanent, herbaceous vegetative cover established around the hill slope, and alternated down the slope with wider cropped strips that are farmed on the contour. | * Conduct all farming operations parallel to the strip boundaries, except on headlands or end rows with gradients less than the criteria set forth in this standard. * Time mowing or harvest of buffer strips to maintain appropriate vegetative density and height for optimum trapping of sediment from the upslope cropped strip during the critical erosion period(s). Mow or harvest sod turn strips and waterways at least once a year. * Inspect the buffer strips at least once per year. Spot seed or totally renovate buffer strip systems damaged by herbicide application after residual action of the herbicide is complete. * Fertilize buffer strips as needed, based on soil test results, to maintain stand density. * Redistribute sediment that accumulates along the upslope edge of the buffer strip/crop strip interface as needed. Spread the sediment evenly upslope over the cultivated strip when needed to maintain uniform sheet flow along the buffer/cropped strip boundary. * If sediment accumulates just below the upslope edge of the buffer strip to a depth of 6 inches or more, or stem density falls below specified amounts in the buffer strip, relocate the buffer/cropped strip interface location. * Rotate cultivated strips and buffer strips so that a mature stand of protective cover is achieved in a newly established buffer strip immediately below or above the old buffer strip before removing the old buffer to plant an erosion-prone crop. Alternate repositioning of buffer strips to maintain their relative position on the hill slope. If an established buffer is removed, an equipment width will be added to one crop strip and subtracted from another. * Renovate vegetated headlands or end row areas as needed to keep ground cover above 65 percent. |
| 333 – Amending Soil Properties with Gypsum Products | Using gypsum- (calcium sulfate dihydrate) derived products to change the physical and/or chemical properties of soil. | * Monitor the soil test levels of all nutrients, cation exchange capacity, and base saturations. Do not apply gypsum after the soil test calcium level exceeds the maximum level established by University of Maryland Extension. * Do not allow livestock access to stacked gypsum, and do not allow livestock into fields treated with gypsum until the gypsum is washed off the vegetation and residue. |
| 338 – Prescribed Burning | Controlled fire applied to a predetermined area. | * Monitor the kinds and expected variability of site factors (e.g., fuel condition and moisture content, weather conditions, human and vehicular traffic that may be impeded by heat or smoke, liability, and safety and health precautions) during the operation of this practice. * Sufficient fire suppression equipment and personnel shall be available commensurate with the expected behavior of these factors during the time of burning to prevent a wildfire or other safety, health or liability incident. * Complete a test burn on the downwind side of the burn area to ensure that the fire will achieve the planned objectives before the main fire is started. * Ensure current and expected weather conditions, including wind direction and velocity, air temperature, and relative humidity, meet requirements for burn initiation and make a record of the conditions prior to ignition of the test burn. * Establish primary firebreaks on all sides of the area to be burned. * Install firebreaks around timber harvest landings containing logs or slash piles that occur within 60 feet of the primary firebreak or burn unit edge. * Do not set head fires until all firebreaks (backing fires, etc.) are in place and sufficient to control the head fire. * Patrol fire lines to watch for and extinguish any spot fires resulting from flying embers. * Make sure all fire is out before leaving the area. At a minimum, conduct sweeps of the burn area occurring within 25 feet of the edge of the burn unit, and within 60 feet of adjacent properties and structures. Stumps, logs, dead trees, cow chips, grass clumps, etc., can smolder for hours or even days before they are completely consumed. Smoke produced by these types of fuels tends to gather in low areas when wind conditions calm at dusk. This residual smoke, combined with fog and darkness, can lead to poor visibility on roads near the fire location. Periodic checks of these areas may be necessary for several days. If possible, remove these obstacles prior to ignition to avoid safety concerns and extensive mop up. * Maintenance shall include monitoring of the burned site and adjacent areas until ash, debris and other consumed material is at pre-burn temperatures. At a minimum, 1 day of post-burn monitoring shall be conducted. Additional site monitoring may be required on prescribed burns in woodland, forests, and cut-over areas, or on any site with potential for flare-ups. |
| 340 – Cover Crop | Grasses, legumes and forbs planted for seasonal vegetative cover. | * Follow management requirements as specified to manage the cover crop for the desired period of time. Management may consist of mowing, mechanical harvesting, prescribed grazing, nutrient management, pest management, or other actions, as appropriate. * Control weeds as needed by mowing or by spraying with an appropriate herbicide. To the extent feasible, "spot" spray or mow to control weeds so that desirable cover is not destroyed unnecessarily. Noxious weeds must be controlled as required by state law. Weed control must be part of a pest management plan. * If forage use is desired, green-chop or graze the cover crop in the late boot to early head stages when optimal nutritional content and yield is available. * For all purposes other than supplemental forage, terminate a grass cover crop no later than the late joint to early boot stage, or no later than 2 to 4 weeks prior to planting the next crop. Termination should be early enough that the crop does reach the flowering stage. The timing of the termination date permits maximum growth of the cover and maximum uptake of residual nutrients while allowing sufficient time for the decomposition of the vegetation, release of nutrients, and recharge of soil moisture. * Legumes killed while succulent decompose more rapidly than grasses, so killing a legume cover crop 1 to 2 weeks before planting the next crop is usually sufficient. * When optimum wildlife habitat is desired, do not mow or mechanically harvest fields during the nesting season of the desired wildlife species. For Maryland, the primary nesting season is generally from April 15 through August 15. * Comply with acceptable uses (e.g., grazing, haying) and time of year/frequency of use restrictions, if any. |
| 342 – Critical Area Planting | Establishing permanent vegetation on sites that have, or are expected to have, high erosion rates, and on sites that have physical, chemical, or biological conditions that prevent the establishment of vegetation with normal seeding/planting methods. | * For seeded areas, evaluate the site within several months of seeding. If the stand is uniform but too thin (50 to 80% ground cover), plant additional seed during the next optimum seeding period. Apply seed at one-half the original rate with a no-till drill, grain drill, or hydro-seeder as site conditions dictate. Sites with an establishment rate of less than fifty percent (50%) should be reseeded in accordance with the original planting plan. Determine the reasons for planting failure and incorporate corrective measures into the remedial planting. * If soil moisture becomes critically deficient, irrigate the site if feasible. * For sodded areas, water sod as needed for the first 30 days after placement. * Inspect the planting at least twice during the establishment year, then at least annually thereafter. Shape and replant areas damaged by heavy rainfall, livestock, chemicals, tillage, or equipment traffic, and any other areas where the vegetation is not adequate. * Check for insects and diseases, and if an incidence threatens stand survival, take corrective action to keep the pest under control. * Control undesirable plants by pulling, mowing, or spraying with a selective herbicide. Control noxious weeds as required by state law. * Protect the planting from wildfire and damage from livestock, wildlife, and equipment, to the extent feasible. * Where wildlife habitat is a concern, do not mow during the primary nesting season (April 15 to August 15). * Remove temporary diversions, silt fences, etc. after the area is stabilized. * Apply soil amendments periodically, based on soil test results, if needed to maintain ground cover density at the desired level (usually 90% or greater). At a minimum, test the soil at least once every five years, or more often if indicated by periodic inspections of the site. If woody plants are included in the planting, do not fertilize in the first year because the plants will develop too much top growth compared to the roots. If fertilizer is used, it must be applied in compliance with Maryland nutrient management regulations, as applicable. * Comply with acceptable uses (e.g., flash grazing, haying, etc.) and time of year or frequency of use restrictions, if any. Pay particular attention to program requirements as they relate to acceptable vs. restricted uses and other management restrictions. |
| 345 – Residue Management, Reduced-Till | Managing the amount, orientation, and distribution of crop and other plant residue on the soil surface year-round, while limiting soil-disturbing activities used to grow and harvest crops in systems where the field surface is tilled prior to planting. | * Follow the specified crop rotation and implements to be used for each field. Contact NRCS before changing the cropping sequence and/or tillage methods, especially on HEL fields or when receiving financial assistance for this practice. * Evaluate/measure crop residue cover and orientation after each crop to ensure the planned amounts and orientation are being achieved. Adjust management as needed to either plan a new residue amount and orientation or adjust the planting and/or harvesting equipment. * A Soil Tillage Intensity Rating (STIR) value of 80 or less must be maintained in order to be considered reduced-till. * If there are areas of heavy residue accumulation in the field because of movement of water or wind, spread the residue prior to planting so that it does not interfere with planter operation. |
| 350 – Sediment Basin | A basin constructed to collect and store debris or sediment. | * Inspect the embankment and outlet system (paying special attention to debris removal) and promptly repair any damages after each runoff event and minimally 2 times per year. * Follow the specified timetable for sediment removal. * Mow as needed and at times to minimally impact wildlife. * Lime, fertilizer, and seed as needed to maintain healthy vegetation. * Address any safety issues concerning the location of the structure. |
| 351 – Well Water Decommissioning | The sealing and permanent closure of an inactive, abandoned, or unusable water well. | * Inspect the well site periodically to ensure that the decommissioned well and the adjacent area have not settled or eroded, or are otherwise adversely disturbed. The well site and adjacent ground surfaces shall be maintained in a manner that prevents ponding of surface runoff on the site. |
| 355 – Well Water Testing | Testing for physical, biological, and chemical characteristics of groundwater in wells or spring developments. | Water testing records that shall be maintained include:   * Sample site, location, and depth. * Remotely-sensed or in-situ records of water quality conditions within the well (pH, conductivity, turbidity, etc.). * Date and time water sample taken. * Name and title of person who collected sample. * Type of sampler and sample taken. * Standard collection procedure followed. * Water test analysis date. * Laboratory performing the analysis. * Tested contaminants. * Schedule of additional testing at required frequency according to applicable standard. * Records to evaluate trends and the effects of any remedial actions to produce water of sufficient quality for the intended purpose. * Rainfall data. * Observations on well condition. |
| 356 – Dike | A barrier constructed of earth or manufactured materials. | * As a minimum, inspect the dike annually and after major storm events. * Avoid excessive travel on any portion of the system that will harm or destroy the vegetative cover. * Periodically check the elevation of the earthfills and restore to grade, if necessary. * Maintain vigorous growth of desirable vegetative coverings. This includes reseeding, fertilization and controlled application of herbicides when necessary. Periodic mowing may also be needed to control height of vegetation. * Remove all debris that hinders system operation. * Inspect and maintain structures. Check for settlement, piping, or sloughing. Remove debris from trash racks and inlets. Repair structural components as needed. * Determine and eliminate causes of settlement or cracks in the earthen sections and repair damage. Obtain engineering assistance from NRCS or a qualified consultant, if needed. * Inspect embankment slopes for signs of wave action or sloughing. To evaluate damage, obtain engineering assistance from NRCS or a qualified consultant. * Eradicate or otherwise remove all rodents or burrowing animals and repair any damage caused by their activity. * Immediately repair any vandalism, vehicular, or livestock damage to any earthfills, spillways, outlets, or other appurtenances. * Remove woody vegetation from embankments. |
| 359 – Waste Treatment Lagoon | A waste treatment impoundment made by constructing an embankment and/or excavating a pit or dugout. | Lagoons must be managed properly if they are to function as designed. Specific instructions about lagoon operation and maintenance must be included in the overall comprehensive nutrient management plan. There are several factors that are involved in the operation that have a direct effect on the success of the lagoon, as follows:   * ***Initial Loading*** - Following construction, a lagoon must be pre-charged with fresh water before any waste can be placed in it. To enhance the operation of a new lagoon, it is best to start loading waste in the spring in order to maximize the number of warm months for bacterial action. * ***Monitoring pH*** - The pH should be measured frequently. Many problems associated with lagoons are related to pH in some manner. For this reason, it is mandatory that the waste is sampled and an analysis is obtained so that the waste can be better utilized and that potential environmental problems are avoided. * ***Operating Levels*** - Lagoons are designed based on a given loading rate. If an increase in the number of animals is anticipated, sufficient capacity to handle the entire expected waste load should be available. The most common problem in using lagoons is overloading, which can lead to odors, malfunctioning and sludge accumulation. Periodically, sludge accumulation levels should be checked to assure the lagoon is functioning as designed. The maximum operating level should be marked with a staff gage set in the lagoon or by other means to indicate when drawdown is needed.   The minimum operating level should be that level needed for the design loading except when the lagoon is drawn down to permit sludge removal or addition of dilution water. Normally an anaerobic lagoon is managed so that the liquid level is maintained at or below the maximum operating level. The liquid level is lowered to the minimum treatment level at the end of the treatment period. |
| 360 – Waste Facility Closure | The decommissioning of facilities, and/or the rehabilitation of contaminated soil, in an environmentally safe manner, where agricultural waste has been handled, treated, and/or stored and is no longer used for the intended purpose. | The proper decommissioning and rehabilitation of a waste facility should require little or no operation and maintenance. However, if it is converted to another use, such as a freshwater facility, operation and maintenance shall be in accordance with the needs as set forth in the appropriate NRCS conservation practice standard for the intended purpose. |
| 362 – Diversion | A channel generally constructed across the slope with a supporting ridge on the lower side. | * Conduct periodic inspections, especially immediately following significant storms. * Promptly repair or replace damaged components of the diversion as necessary. * Maintain diversion capacity, ridge height, and outlet elevations especially if high sediment yielding areas are in the drainage area above the diversion. Establish necessary clean-out requirements. * Each inlet for underground outlets must be kept clean and sediment buildup redistributed so that the inlet is at the lowest point. Inlets damaged by farm machinery must be replaced or repaired immediately. * Redistribute sediment as necessary to maintain the capacity of the diversion. * Maintain herbaceous vegetation and control trees and brush by hand, chemical and/or mechanical means. * Keep machinery away from steep sloped ridges. Keep equipment operators informed of all potential hazards. |
| 366 - Anaerobic Digester | A component of a waste management system in which biological treatment breaks down animal manure and other organic materials in the absence of oxygen. | Follow an operation and maintenance plan that includes:   * Proper loading rates of the digester and total solids content of the influent. * Accounting for the nutrient impact of all feedstock in the farm’s nutrient management plan. * Proper operating procedures for the digester. * Estimates of biogas production, methane content, and potential energy recovery. * Description of the planned startup procedures, normal operation, safety issues, and normal maintenance items. * Alternative operation procedures in the event of equipment failure. * Instructions for safe use and flaring of biogas. * Digester and other component maintenance. * Troubleshooting guide. * Monitoring plan with frequency of measuring and recording digester inflow, operating temperatures, biogas yield, and/or other information as appropriate. * Maintain the internal temperatures for controlled temperature digesters as appropriate to the digester type and design. For mesophilic digesters maintain the temperature between 95 oF and 104 oF with an optimum of 100 oF and daily fluctuation of digester temperature limited to less than 1 oF. * Establish and maintain emergency contact information for consultation with qualified experts. |
| 367 – Roofs and Covers | A rigid, semi-rigid, or flexible manufactured membrane, composite material, or roof structure placed over a waste management facility. | * Develop an emergency action plan for covered systems associated with biogas production. The plan shall contain instructions as to limits of cover performance and emergency procedures if control equipment fails. * For enclosed waste facilities, exercise caution and care during cover removal or access. If opening of the cover is required for facility management, include provisions to prevent exposure of workers to hazardous gases. * If personnel are or may be required to enter an enclosed waste facility, include safety provisions recommended by NIOSH (National Institute for Occupational Safety and Health) for working in confined spaces including but not limited to using a positive-pressure self-contained breathing apparatus, safety line, and standby personnel. |
| 368 – Emergency Animal Mortality Management | A means or method for the management of animal carcasses from catastrophic mortality events. | Follow an operation and maintenance plan that includes:   * Specific instructions for proper operation and maintenance of each component of this practice. Detail the level of inspection and repairs needed to maintain the effectiveness and useful life of the practice. * Safety considerations. * Address biosecurity concerns in all aspects of installation, operation and, maintenance. * Identify onsite locations for emergency animal mortality management activities and disposal sites as appropriate. * Contact(s) and phone numbers of person(s) to contact for catastrophic losses. * Maintain recordkeeping of number, average weight, cause, and date of animal deaths. * Method and procedures of catastrophic mortality disposal. * Periodic inspections of disposal sites, as appropriate. * Prompt repair or replacement of damaged components, as appropriate. * Site references and/or manufacturer or installer for trouble-shooting mechanical equipment, as appropriate.  Additional O&M for Incinerators and Gasifiers  * Operate units properly to maximize efficiency of disposal and minimize emission problems. * Load the units according to the manufacturer’s recommendations. * Remove ashes frequently to maximize combustion and prevent damage to equipment. Include methods for collecting and disposing of the ash material remaining after incineration.  Additional O&M for Refrigeration Units  * Load the refrigeration unit according to the manufacturer’s recommendations and do not exceed the design capacity. * Inspect the refrigeration unit periodically for leaks, structural integrity, and temperature.  Additional O&M for Composters  * Identify operational information and equipment that will need to be readily available. * Locate, as soon as practical, a source for carbonaceous material sufficient to provide for the catastrophic event. * Include a recipe of ingredients that gives the layering/mixing sequence. * Provide maximum and minimum temperatures for operation, land application rates, moisture level, management of odors, testing, etc. * Become familiar with composting methods and procedures as soon as practical. |
| 372 – Combustion System Improvement | Installing, replacing, or retrofitting agricultural combustion systems and/or related components or devices for air quality and energy efficiency improvement. | * The new, replacement, or retrofit combustion system and related components or devices shall be operated and maintained in accordance with the manufacturer’s recommendations. * NRCS recommends that records be retained and updated for a minimum of five years from the beginning of operation of a new, replacement, or retrofitted combustion system. The recommended records to be retained include: * Total actual hours operated. * Types and amounts of fuel used in the combustion system(s), or electricity used for electric motors that have replaced an existing combustion system. * Documentation of maintenance conducted on the new, replacement, or retrofitted combustion system and related components or devices. |
| 374 – Farmstead Energy Improvement | Development and implementation of improvements to reduce on-farm energy use or improve energy efficiency. | * Replacement or retrofit systems and related components or devices shall be operated and maintained in accordance with the manufacturer’s recommendations. * Maintain records to document the implementation of energy improvements. Retain and update records for a minimum of five years from the beginning of operation of measure implementation. Recommended records to be retained include: * Monthly utility bills, fuel purchases, and yield of agricultural commodities. * Documentation of maintenance conducted on the replacement, or retrofitted system and related components or devices. |
| 378 – Pond | A water impoundment made by constructing a dam or an embankment or by excavating a pit or dugout. | * An operation and maintenance plan in accordance with Local or State Regulations will be prepared for all ponds. * As a minimum, a dam inspection checklist shall be included as part of the operation and maintenance plan and performed at least annually. * Written records of maintenance and major repairs need to be retained in a file. * The issuance of a Maintenance and Repair Permit for any repairs or maintenance that involves the modification of the dam or spillway from its original design and specifications is required. * A permit is also required for any repairs or reconstruction that involve a substantial portion of the structure. * All indicated repairs are to be made as soon as practical. |
| 380 – Windbreak/ Shelterbelt | Single or multiple rows of trees or shrubs in linear configurations. | * Inspect the windbreak at least annually. Shape and replant areas damaged by heavy rainfall, animals, chemicals, tillage, or equipment traffic, and any other areas where the vegetation is not adequate. * If survival is less than expected during the first two years, replant as needed to achieve the intended purpose of the practice. If native trees and/or shrubs (other than what was planted) become established, and this cover meets the intended purpose of the practice, the cover should be considered adequate. Follow the maintenance recommendations in the appropriate fact sheet for additional information. * Nutrients may be applied after the first year, but only if needed based on soil test results. * If tree shelters are used, remove them before they impede the growth of the trunk. Removal should not occur until the seedling has adequate girth to support itself (usually 3 to 5 years after planting), or until the seedling has attained sufficient height to survive deer browse. Remove bird netting from shelters when tree growth reaches the top of the shelter. * Check for insects and diseases, and if an incidence threatens stand survival, take corrective action to keep the pest under control. * Control undesirable plants by pulling, mowing, or spraying with a selective herbicide. Control noxious weeds as required by state law. * Protect the planting from wildfire and damage from livestock, wildlife, and equipment, to the extent feasible. * Comply with acceptable uses (e.g., occasional removal of some tree and shrub products, etc.) and time of year or frequency of use restrictions, if any. Pay particular attention to program requirements as they relate to acceptable vs. restricted uses and other management restrictions. |
| 381 – Silvopasture | Establishment and/or management of desired trees and forages on the same land unit. | * Manage trees, forages, and shrubs as needed to provide appropriate light conditions for forages, and shade/shelter conditions for livestock. * Inspect the site at an appropriate time following planting to determine whether the tree and shrub survival rate meets practice and client objectives. Replant or provide supplemental planting when survival is inadequate. * Control competing vegetation and livestock impacts until plantings are established. * Apply nutrients as needed, based on soil test results, for establishment and to maintain plant vigor. * Inspect trees and/or shrubs periodically following establishment, and protect them from adverse impacts including insects, diseases, competing vegetation, wildfire, livestock, wildlife, etc. * Where wildlife habitat enhancement is an objective, do not conduct maintenance practices (such as mowing) that disturb vegetative cover during the primary reproductive period (e.g., nesting season) of wildlife. For Maryland, the primary nesting season is generally from April 15 through August 15. Exceptions can be considered for periodic burning or mowing when necessary to maintain the health of the plant community. |
| 382 – Fence | A constructed barrier to animals or people. | * Inspect fences at least annually for structural integrity. Fences located near trees should be inspected after severe weather. In areas that flood, inspect fences after each storm event. Perform maintenance in a timely manner and promptly repair worn or otherwise damaged sections. * Control the encroachment of weeds, brush, and trees along fences by mechanical or chemical methods to prevent them from damaging or otherwise impacting the life and function of the fence. * For electric fences: * Inspect insulators, energizers (chargers), and other components frequently (and especially after lightning storms) for proper function. Replace worn, damaged, or otherwise nonfunctional components. * Keep all metallic implements away from electric fence lines. Do not tether animals with chains near any electric fences. * Warn children that electric fencing is being used and let neighbors know where and how to shut off the current. Post warning signs every 150 – 200 feet in areas with public access. |
| 383 – Fuel Break | A strip or block of land on which the vegetation, debris and detritus have been reduced and/or modified to control or diminish the risk of the spread of fire crossing the strip or block of land. | * Treat or graze vegetative fuel breaks to avoid a build-up of excess litter and to control noxious and invasive plants. * Inspect all fuel breaks for woody materials such as dead limbs or blown down trees and remove or treat as necessary to maintain the desired level of fire spread risk. * Inspect fuel breaks at frequencies to assure that the desired level of fire spread risk is maintained. * Maintain the functionality of the original design throughout the life of the practice. |
| 384 – Woody Residue Treatment | The treatment of residual woody material that is created due to management activities or natural disturbances. | * Inspect and maintain erosion and sediment control measures, as necessary. * For safety purposes during treatment, control access to the site by vehicles or people, to the extent feasible. * Monitor populations of harmful pests and the potential of damage to site resources, and take controlling actions if necessary. * Monitor vegetation growth. Unwanted vegetation or excessive re-growth may occur, requiring treatment. |
| 386 – Field Border | A strip of permanent vegetation established at the edge or around the perimeter of a field. | * Follow management requirements as specified to maintain vegetation in the desired species composition. * Inspect the field border at least annually. Shape and replant areas damaged by heavy rainfall, animals, chemicals, tillage, or equipment traffic, and any other areas where the stand is not adequate. * Control undesirable plants by pulling, mowing, or spraying with a selective herbicide. Control noxious weeds as required by state law. * When managing for wildlife, pollinator, and beneficial insect habitat, conduct any pesticide spray operations in adjacent fields in a manner that reduces exposure of the field border to pesticides, taking into account toxicity of the materials to non-pest organisms. * When wildlife habitat is a concern, do not mow during the primary nesting season (April 15 to August 15). * To minimize wildlife mortality and habitat degradation, turn or drive machinery on field borders only when necessary, at low speed, and with implements fully raised. If extensive turning/traffic will be necessary on the field border during the nesting season, mortality may be reduced by early and frequent mowing to reduce the field border’s attractiveness as a nesting site. * Apply soil amendments periodically, if needed to maintain plant vigor. If nutrients are applied, refer to the conservation practice standard for Nutrient Management (590). If shrubs are included in the planting, do not fertilize in the first year because the plants will develop too much top growth compared to the roots. * Protect the field border from wildfire and damage from livestock, wildlife, and equipment, to the extent feasible. * Do not use the field border for hay storage or machinery parking for an extended period of time, especially if doing so will damage or impair the function of the practice. * Comply with acceptable uses (e.g., flash grazing, haying, harvesting of fruits or nuts, etc.) and time of year or frequency of use restrictions, if any. Pay particular attention to program requirements as they relate to acceptable vs. restricted uses, and other management restrictions. |
| 390 – Riparian Herbaceous Cover | Grasses, sedges, rushes, ferns, legumes, and forbs tolerant of intermittent flooding or saturated soils, established or managed as the dominant vegetation in the transitional zone between upland and aquatic habitats. | * Follow management requirements as specified to maintain vegetation in the desired species composition. * Inspect the herbaceous buffer at least annually. Shape and reseed areas damaged by heavy rainfall, animals, chemicals, tillage, or equipment traffic, and any other areas where the stand is not adequate. * Check for insects and diseases, and if an incidence threatens stand survival, take corrective action to keep the pest under control. * Control undesirable plants by pulling, mowing, or spraying with a selective herbicide. Control noxious weeds as required by state law. * Protect the buffer from wildfire and damage from livestock, wildlife, and equipment, to the extent feasible. * Where wildlife habitat is a concern, do not mow during the primary nesting season (April 15 to August 15). * Apply soil amendments periodically, if needed to maintain plant vigor. If nutrients are applied, refer to the conservation practice standard for Nutrient Management (590). * Do not use the herbaceous buffer for hay storage or machinery parking for an extended period of time, especially if doing so will damage or impair the function of the practice. * Comply with acceptable uses (e.g., flash grazing, haying, etc.) and time of year or frequency of use restrictions, if any. Pay particular attention to regulatory and program requirements as they relate to acceptable vs. restricted uses, and other management restrictions. |
| 391 – Riparian Forest Buffer | An area of predominantly trees and/or shrubs located adjacent to and up-gradient from water courses or water bodies. | * Inspect the trees and shrubs at least annually during the first and second years. If survival is less than expected, replant as needed to achieve the intended purpose of the practice. If native trees and/or shrubs (other than what was planted) become established, and this cover meets the intended purpose of the practice and the client’s objectives, the cover should be considered adequate. * If tree shelters are used, remove them before they impede the growth of the trunk. Removal should not occur until the seedling has adequate girth to support itself (usually 3 to 5 years after planting), or until the seedling has attained sufficient height to survive deer browse. Remove bird netting from shelters when tree growth reaches the top of the shelter. * Check for insects and diseases and if an incidence threatens stand survival, take corrective action to keep the pest under control. * Control undesirable plants by pulling, mowing, or spraying with a selective herbicide. Control noxious weeds as required by state law. * Protect trees and shrubs from wildfire and damage from livestock and wildlife to the extent feasible. * Trees and shrubs should not be fertilized in the first year, because the plants will develop too much top growth compared to the roots. If nutrients will be applied later, refer to the conservation practice standard for Nutrient Management (590). * Comply with acceptable uses (e.g., occasional removal of some tree and shrub products, etc.) and time of year or frequency of use restrictions, if any. Pay particular attention to regulatory and program requirements as they relate to acceptable vs. restricted uses and other management restrictions. An approved sediment and erosion control plan is required when timber harvesting disturbs over 5,000 sq. ft. In the Chesapeake Bay Critical Area, a Timber Harvest Plan is also required. |
| 393 – Filter Strip | A strip or area of herbaceous vegetation that removes contaminants from overland flow. | * Follow management requirements to maintain vegetation in a vigorous condition. For optimum sediment retention and other water quality benefits, mow two to three times annually to a height of 3 to 5 inches and remove top growth if possible. Removal of top growth from the site can significantly reduce the amount of nitrate-nitrogen in the soil and can reduce the movement of nitrate-nitrogen below the root zone. If phosphorus is a concern, periodically test the soil to monitor phosphorus build-up. * Inspect the filter strip at least annually. Shape and reseed areas damaged by heavy rainfall, animals, chemicals, tillage, or equipment traffic, and any other areas where the stand is not adequate. * Remove sediment that accumulates along the upper part and within the filter strip before it accumulates to a height of 6 inches and begins to divert runoff water around the filter strip as concentrated flow. * Control undesirable plants by pulling, mowing, or spraying with a selective herbicide. Control noxious weeds as required by state law. * When managing for wildlife, pollinator, and beneficial insect habitat, conduct any pesticide spray operations in adjacent fields in a manner that reduces exposure of the filter strip to pesticides, taking into account toxicity of the materials to non-pest organisms. * Where wildlife habitat is a concern, mow only the minimum area necessary to filter sediment, and do not mow during the primary nesting season (April 15 to August 15). * Apply soil amendments periodically, if needed to maintain plant vigor. If nutrients are applied, refer to the conservation practice standard for Nutrient Management (590). * Protect the filter strip from wildfire and damage from livestock, wildlife, and equipment, to the extent feasible. * Do not use the filter strip for hay storage or machinery parking for an extended period of time, especially if doing so will damage or impair the function of the practice. * Comply with acceptable uses (e.g., flash grazing, haying, etc.) and time of year or frequency of use restrictions, if any. Pay particular attention to program requirements as they relate to acceptable vs. restricted uses and other management restrictions. |
| 394 - Firebreak | A permanent or temporary strip of bare or vegetated land planned to retard fire. | * Inspect firebreaks at least annually, and rework bare ground firebreaks as necessary to keep them clear of flammable vegetation. * Mow, disk, or graze vegetative firebreaks to avoid a build-up of excess litter and to control weeds. When possible, do not conduct vegetation management and maintenance activities during the nesting season (April 15 – August 15). * Inspect all firebreaks for woody materials such as dead limbs or downed trees, and remove them from the firebreak. * Repair erosion control measures as necessary to ensure proper function. * Control access by vehicles or people to prevent damage. Stabilize bare ground firebreaks that are no longer needed. |
| 395 - Stream Habitat Improvement and Management | Improve, restore, or maintain the ecological functions of a stream and its adjacent floodplain and riparian area. | * Follow monitoring guidelines for evaluating the effectiveness of the conservation actions in the short- and long-term. * Coordinate any needed repair actions in order to comply with State and Federal guidelines for protecting aquatic and terrestrial species. * Conduct post-project evaluation of stream and riparian habitat conditions using the same pre-project evaluation tool (e.g., SVAP2, or other) to determine if the implemented actions have resulted in improved habitat or have fully addressed resource concerns. |
| 396 – Aquatic Organism Passage | Modification or removal of barriers that restrict or impede movement of aquatic organisms. | * Follow specified annual, seasonal, and/or daily operating activities necessary to ensure proper function of the structure. * Check passage structure at regular intervals to ensure it is operating within design criteria. * Clean trash racks and debris collectors or remove debris accumulations regularly. * Adjust gates, orifices, valves, or other control devices as needed to regulate flow and maintain a passage structure within operating criteria. * Periodically check staff gages or other flow metering devices for accuracy. * Annually inspect passage structures for structural integrity and disrepair. * Inspect gate and valve seals for damage. * Replace worn or broken stoplogs, baffles, fins, or other structural components. * Remove sediment accumulations from within passage structure where applicable. |
| 410 – Grade Stabilization Structure | A structure used to control the grade and head cutting in natural or artificial channels. | * Remove any blockage of trash and debris that could affect flows through the structure. * Check materials used in the structure for deterioration or failure, includes rock used for outlet protection. * Mow periodically before vegetative growth becomes excessive. * Repair and seed bare or eroded areas promptly. * Apply lime and fertilizer, if needed, according to soil test. |
| 412 – Grassed Waterway | A natural or constructed channel that is shaped or graded to required dimensions and established with suitable vegetation. | * Vegetation damaged by machinery, herbicides, or erosion must be repaired promptly. * Inspect for damage at least once a year and after each major storm. Fill in and seed any bare or washed areas following original seeding specifications. * If waterways are not fertilized at the same time that the surrounding cropland is fertilized, a maintenance application should be made. Apply one-half the amount of fertilizer used during vegetation establishment as needed to maintain a vigorous sod. * Minimize damage to vegetation by excluding livestock or by only allowing controlled grazing. * Remove sediment deposits to maintain capacity of grassed waterway. * Mow or control graze vegetation periodically to encourage dense vigorous growth and to maintain capacity. * Control noxious weeds as required by state law. * Do not use the waterway as a field road. Avoid crossing with heavy equipment when wet. * Avoid turn rows or plowing parallel to waterway to prevent flow from entering channel. * Avoid spraying the waterway with herbicides during crop applications and herbicide runoff into the waterway. * To enhance wildlife values, avoid mowing the waterway during the peak nesting season (April 15 to August 15). |
| 420 – Wildlife Habitat Planting | Establishing wildlife habitat by planting herbaceous vegetation or shrubs. | **General O&M for Herbaceous Plantings**   * At a minimum, inspect the planting annually for plant health and survival, and invasive and undesirable species. * Control noxious weeds and other invasive plants by spot treatment using mechanical methods or approved herbicides. If it becomes necessary to control noxious weeds during the nesting season, contact your local weed control specialist for recommendations. * If undesirable woody vegetation starts to encroach on the planting, targeted herbicide applications or prescribed burning may be necessary for control. Refer to applicable Brush Management (314) or Prescribed Burning (338) Implementation Requirements or contact your local University of Maryland Extension or Soil Conservation District office for more specific information. * Do not mow for cosmetic purposes.   **Shrub Plantings**  Once the planting has become established, follow these maintenance prescriptions. Most maintenance requirements should NOT occur during the primary nesting season of April 15 – August 15, unless otherwise specified.   * At a minimum, inspect the planting annually for plant health and survival, and invasive and undesirable species. * Avoid disturbing the planting during the primary nesting season of April 15 – August 15, unless otherwise prescribed, or if recommended for control of noxious and invasive plants. * Control noxious weeds and other invasive plants by spot treatment using mechanical methods or approved herbicides. If it becomes necessary to control noxious weeds during the nesting season, contact your local weed control specialist for recommendations for spot-treating the weed problem. * If undesirable woody vegetation starts to encroach on the planting, targeted herbicide applications may be necessary for control. Refer to applicable Brush Management (Code 314) Implementation Requirements or contact your local University of Maryland Extension or Soil Conservation District office for more specific information. * If shelters were used to protect the planting, remove the shelters when seedlings emerge from the top of the shelters. The shrubs may not support themselves well at this point, but will have developed sufficient root systems to resprout if necessary. * If a fence was used to protect the planting, inspect the fence weekly to ensure proper functioning. |
| 422 – Hedgerow Planting | Establishment of dense vegetation in a linear design to achieve a natural resource conservation purpose. | * Inspect the hedgerow at least annually. Shape and replant areas damaged by heavy rainfall, animals, chemicals, tillage, or equipment traffic, and any other areas where the vegetation is not adequate. * For areas planted to grasses: * Maintain vegetation in a vigorous condition. Apply soil amendments periodically, if needed based on soil test results. Follow the maintenance recommendations in appropriate fact sheet(s) for further instructions. * Where wildlife habitat is a concern, do not mow during the primary nesting season (April 15 to August 15). * For areas planted to trees and/or shrubs: * If survival is less than expected during the first two years, replant as needed to achieve the intended purpose of the practice. If native trees and/or shrubs (other than what was planted) become established, and this cover meets the intended purpose of the practice, the cover should be considered adequate. Follow the maintenance recommendations in the appropriate fact sheet for additional information. * Nutrients may be applied after the first year, but only if needed based on soil test results. * If tree shelters are used, remove them before they impede the growth of the trunk. Removal should not occur until the seedling has adequate girth to support itself (usually 3 to 5 years after planting). * Check for insects and diseases, and if an incidence threatens stand survival, take corrective action to keep the pest under control. * Control undesirable plants by pulling, mowing, or spraying with a selective herbicide. Control noxious weeds as required by state law. * Protect the planting from wildfire and damage from livestock, wildlife, and equipment, to the extent feasible. * Describe the acceptable uses (e.g., occasional removal of some tree and shrub products, haying, etc.) and time of year or frequency of use restrictions, if any. Pay particular attention to program requirements as they relate to acceptable vs. restricted uses and other management restrictions. |
| 430 – Irrigation Pipeline | A pipeline and appurtenances installed to convey water for storage or application, as part of an irrigation water system. | Perform the following periodic maintenance activities:   * Inspect for leaks. * Inspect and test valves, pressure regulators, pumps, switches and other appurtenances. * Check for debris, minerals, algae and other materials which may restrict system flow. and * Drain and/or provide for cold weather operation of the system. |
| 432 – Dry Hydrant | A permanent pipe assembly system installed into a water source that permits the withdrawal of water by drafting (suction). | The operation and maintenance for the system is the responsibility of the landowner and fire department. NFPA 1142 Section B-5-3, Maintenance of Dry Hydrants, suggests in detail how to operate and maintain such a water supply system. In the Operation and Maintenance Plan, include a letter of approval from the landowner to the local fire department for 365-day use and access at any hour of the day.  The following items are included here to emphasize their importance:   * Keep the hydrant and all-weather road clear of snow and/or debris and in good repair. * Keep trees and underbrush trimmed away from the hydrant and all-weather road. * Hydrants need to be flushed and tested as per NFPA-1142 recommendations under B-5.4 Maintenance of Dry Hydrants. |
| 436 – Irrigation Reservoir | An irrigation water storage structure made by constructing a dam, embankment, pit, or tank. | Perform the following periodic maintenance activities:   * Clean and regrade water storage facilities to maintain functionality. * Inspect, remove debris, and repair if needed of trash racks and inlet and outlet structures to assure proper operation. * Maintain mechanical components in accordance with manufacturer’s recommendations. * Inspect and maintain embankments and earth spillways to repair damage or control erosion and undesirable vegetation. * Remove sediment from traps or storage facilities to maintain design capacity and efficiency. * Inspect or test all pipelines and pumping plant components and appurtenances, as applicable. |
| 441 – Irrigation System, Microirrigation | An irrigation system for frequent application of small quantities of water on or below the soil surface as drops, tiny streams or miniature spray through emitters or applicators placed along a water delivery line. | * Install flow meter and monitor water application. * Clean or backflush filters when needed. * Flush lateral lines at least annually. * Check applicator discharge often. Replace applicators as necessary. * Check operating pressures often. A pressure drop (or rise) may indicate problems. * Check pressure gauges to ensure proper operation. Repair/replace damaged gauges. * Inject chemicals as required to prevent precipitate buildup and algae growth. * Check chemical injection equipment regularly to ensure it is operating properly. * Check and assure proper operation of backflow protection devices. |
| 442 – Sprinkler System | An irrigation system in which all necessary equipment and facilities are installed for efficiently applying water by means of nozzles operated under pressure. | Perform the following periodic maintenance activities:   * Check and remove of debris and sediment as necessary from nozzles to assure proper operation. * Inspect or test of all pipeline and pumping plant components and appurtenances, as applicable. * Regularly test pressures and flow rates to assure proper operation. * Check of all nozzles and spray heads for proper operation and wear. * Perform routine maintenance of all mechanical components in accordance with the manufacturer’s recommendations. * Prior to retrofitting any electrically powered irrigation equipment, electrical service must be disconnected and the absence of stray electrical current verified. |
| 447 – Irrigation System, Tailwater Recovery | A planned irrigation system in which all facilities utilized for the collection, storage, and transportation of irrigation tailwater for reuse have been installed. | Perform the following periodic maintenance activities:   * Clean and re-grade collection facilities as needed to maintain proper flow lines and functionality. * Check and remove debris as necessary from trash racks and structures to assure proper operation. * Remove sediment from traps and/or storage facilities to maintain design capacity and efficiency. * Inspect or test all pipeline and pumping plant components and appurtenances, as applicable. * Perform routine maintenance of all mechanical components in accordance with the manufacturer’s recommendations. |
| 449 – Irrigation Water Management | The process of determining and controlling the volume, frequency, and application rate of irrigation water in a planned, efficient manner. | * The operation and maintenance (O&M) aspects applicable to this practice consist of evaluating available field soil moisture, changes in crop evapotranspiration rates and changes in soil intake rates and adjusting the volume, application rate, or frequency of water application to achieve the intended purpose(s). Follow the Irrigation Water Management plan that was developed for this farming operation. * Other necessary O&M items are addressed in the physical component practices considered companions to this practice. |
| 468 – Lined Waterway or Outlet | A waterway or protected outlet section having an erosion-resistant lining of concrete, stone, synthetic turf reinforcement fabrics, or other permanent material. | * Regularly inspect lined waterways, especially following heavy rains. Promptly repair damaged areas and remove sediment deposits to maintain capacity of lined waterways. * Control noxious weeds. Avoid areas where forbs have been established when applying herbicides. * Avoid using the lined waterways as turn-rows during tillage and cultivation operations. * Prescribed burning and mowing may be appropriate to enhance wildlife values, but must be conducted to avoid peak nesting seasons and reduced winter cover. * Do not use the lined waterway as a field road. * Maintain pavement and lining as built to prevent undermining and deterioration. Remove trees next to pavements as roots will cause uplift. Repair lining damage from equipment promptly. * Maintain vegetation next to the lining in good condition to prevent scouring if structure is overtopped. * Avoid areas where forbs have been established when applying broadleaf herbicides. * Avoid crossing the lined waterway or outlet with heavy equipment. |
| 472 – Access Control | The temporary or permanent exclusion of animals, people, vehicles and/or equipment from an area. | * Inspect access control measures at least annually, and more often in frequently used areas. * Take corrective actions as needed to replace damaged barriers. * Where control efforts have failed, reassess the need for additional measures to manage or exclude use. |
| 484 - Mulching | Applying plant residues or other suitable materials to the land surface. | * Inspect mulched areas periodically (at least annually), and reinstall mulch or repair as needed to meet the objectives of the project. * Evaluate the effectiveness of the mulch (application, amount of cover provided, durability, etc.) and adjust the management or type of mulch to better meet the intended purpose(s). * Collect and properly dispose of artificial mulch material (e.g., plastic film) after use. * Monitor and control undesirable weeds in mulched areas. Control noxious weeds and other invasive plants by spot treatment, using mechanical methods or approved herbicides. Control noxious weeds as required by state law. * Protect the mulched area from wildfire and damage from livestock and equipment traffic, to the extent feasible. * Comply with acceptable uses (e.g., recreation areas, trails and walkways, etc.) and time of year or frequency of use restrictions, if any. Pay particular attention to program requirements as they relate to acceptable vs. restricted uses and other management restrictions. |
| 490 – Tree/Shrub Site Preparation | Treatment of areas to improve site conditions for establishing trees and/or shrubs. | * Maintain erosion control measures as necessary. * Control locally invasive and noxious plants as necessary. If pesticides will be used, contact your local weed control specialist for recommendations. * Access by vehicles or equipment during or after site preparation shall be controlled to minimize erosion, compaction and other site impacts. |
| 500 – Obstruction Removal | Removal and disposal of buildings, structures, other works of improvement, vegetation, debris or other materials. | Operation and Maintenance (O&M) for this practice may be addressed in the O&M plans for the practice it supports. The minimum requirements to be addressed are:   * Periodic checking to ensure the site remains stable after the obstruction removal. * When disposal of debris occurs on site, periodic checking to ensure that the disposal site remains stable. * Repair any problems as soon as possible. |
| 511 – Forage Harvest Management | The timely cutting and removal of forages from the field as hay, green-chop, or ensilage. | **Stand Management and Storage**   * To ensure adequate root reserves, allow plants to reach an appropriate height before the first killing frost. * Manage grazing to limit damage to the forage crop. This is especially critical during periods when fields are wet and compaction can occur. * Monitor weather conditions before and after cutting to optimize forage wilting or curing time, maintain forage quality, and prevent forage swaths or windrows from smothering underlying plants. * Minimize the time cured forage is allowed to remain drying in the field. This will prevent smothering of underlying plants and subsequent weed invasion of the damaged areas. * When storing silage, ensure good compaction and an airtight seal to exclude oxygen and mold formation. * Monitor for disease, insect damage, and weed infestations. If an incidence threatens stand survival, take corrective action to keep the pest under control. To the extent feasible, “spot” spray or mow to control weeds, so that desirable plants are not destroyed unnecessarily. Control noxious weeds as required by state law. * When the quantity and quality of the forage decreases to unacceptable levels, stand renovation may be necessary.   **Equipment and Safety**   * Select equipment sizes and capabilities that will handle the acreage normally harvested in a timely and economically feasible manner. * Inspect and repair harvest equipment following the manufacturer's preventive maintenance schedule. * Before forage harvest, clear fields of debris that could damage equipment or, if ingested by livestock, lead to sickness or death. * Operate all forage harvesting equipment at optimum settings and speeds to minimize loss of leaves. * Set the shear plate in a forage chopper to the proper cut for the crop being harvested. Keep knives well sharpened. Do not use re-cutters or screens unless forage moisture levels fall below recommended levels for optimum chopping action. * Keep all shields in place during machine operation to prevent injury or loss of life. Shut off machinery before working on or detaching moving parts. * To control the spread of forage plant diseases and weeds, clean harvesting equipment after harvest and before storing. * Avoid operating harvesting and hauling equipment on slopes over 25 percent, particularly on cross-slope traffic patterns.   **Wildlife Habitat**  Where wildlife habitat is desired, use the following harvesting techniques:   * Defer mowing and harvest operations on at least a portion of the management unit during the primary nesting season (April 15 to August 15). If it is not feasible to leave an entire field unharvested, then leave field edges unharvested during this period. Unharvested strips that are at least 50 feet wide and adjacent to woody vegetation will provide optimum results. * Use harvesting patterns that provide escape routes for wildlife. Begin on one side of the field and work back and forth across the field toward the other side (edge to edge), or begin in the center of the field and work outward (inside to outside). * As an alternative to mechanical harvesting, prescribed grazing may be used during the primary nesting season. Graze to a height of 6 to 8 inches for cool-season grasses and 12 to 14 inches for native warm-season grasses to maintain habitat. |
| 512 – Pasture and Hay Planting | Establishing adapted and/or compatible species, varieties, or cultivars of herbaceous species suitable for pasture, hay, or biomass production. | * Evaluate forage and biomass stands at least once each season, or more frequently as needed to determine appropriate management to achieve the desired purpose(s) of the planting. * Apply soil amendments periodically, based on soil test results, to meet desired yield goals, promote plant regrowth, and help maintain the life of the stand. The use of commercial fertilizer and other forms of plant nutrients must be in compliance with Maryland nutrient management regulations. * Control undesirable plants by mowing or spraying with a selective herbicide. To the extent feasible, “spot” spray or mow to control weeds, so that desirable plants are not destroyed unnecessarily. Noxious weeds must be controlled as required by state law. * Control insects and/or diseases when an infestation threatens stand survival. Follow a pest management plan concerning the timing and methods of treatment. * When optimum wildlife habitat is desired, do not mow, burn, or mechanically harvest fields during the nesting season. For Maryland, the primary nesting season is April 15 through August 15. Infrequent grazing may be allowed during the primary nesting season, provided the area is not grazed below 6 to 8 inches. During the establishment period, mowing may be needed during the nesting season to reduce heavy competition from annual weeds. * Comply with time of year or frequency of use restrictions, if any. Pay particular attention to program requirements as they relate to acceptable vs. restricted uses and other management restrictions. |
| 516 – Livestock Pipeline | A pipeline and appurtenances installed to convey water for livestock or wildlife. | * Inspect collection and storage devices, valves, outlets and pipelines at least twice per year. Make repairs as needed. * Check for debris, algae, sludge or other materials in the system, which may restrict the inflow or outflow system, and remove. * Prepare guidance for winter weather operation, such as cleaning and discontinuing use, or providing for frost-free use. * Protect from damage due to livestock and farm equipment. Maintain fences and other devices used for this purpose. * Check for leaks and repair immediately. * Check valves, automatic water level devices, and overflow pipes for proper operation. * Chemical may be added to the system for algae and other water quality issues when in accordance with local rules and regulations. * Maintain vegetative cover around the system. Mow at least yearly. Provide weed control as needed. Reseed, lime, and fertilize area as needed. |
| 521 – Pond Sealing or Lining -- Geomembrane or Geosynthetic Clay Liner | A liner for an impoundment constructed using a geomembrane or a geosynthetic clay material. | * Exclude animals and equipment from the treated area. * Repair damage to the liner and restoring the liner and cover to its original thickness and condition. * Remove roots from trees and large shrubs at first appearance. * Monitor leak-detection system. * Protect the liner during filling and agitation procedures. * Periodically inspect: * Visible portions of the liner for tears, punctures, or other damage. * Liner interface with inlets, outlets, ramps, or other appurtenances for damage. * Liquid level in the structure. * Ballooning of the liner indicating presence of gas beneath the liner. |
| 522 – Pond Sealing or Lining -- Concrete | A liner for an impoundment constructed using reinforced or nonreinforced concrete | * Visually inspecting the liner annually. * Exclude animals. * Repair damage to the concrete liner, as necessary, repairing the liner to its original condition. * Prevent damage from roots of tree and large shrubs by removing such vegetation at first appearance. * Prevent and/or repair rodent damage to concrete subgrade. |
| 527 – Karst Sinkhole Treatment | The treatment of sinkholes in karst areas to reduce contamination of groundwater resources, and to  improve farm safety. | * Inspect practices at least once a year and after major storms. Fill in and reseed any damaged areas. Promptly repair and/or replace damaged components. * Mow herbaceous plantings as necessary to promote vigorous growth. |
| 528 – Prescribed Grazing | Managing the harvest of vegetation with grazing and/or browsing animals, with the intent to achieve specific ecological, economic, and management objectives. | * Use prescribed grazing on a continuing basis throughout the occupation period of all planned grazing units. * Inspect the entire management area at least annually to determine whether the desired vegetation is present in suitable quantity, quality, and distribution to meet prescribed grazing objectives. Based on the evaluation, adjust grazing periods or livestock numbers if stocking rates endanger the productivity of the forage species. * Manage grazing to limit damage to the forage crop. This is especially critical during periods when fields are wet and compaction can occur, such as during late winter. Move livestock to a feedlot or designated sacrifice area in times of very wet soil, drought conditions, or when plants are not actively growing to protect the integrity of the pasture plants. * Soil test all pastures and hay fields at least every 2 to 3 years. Apply soil amendments periodically, based on soil test results, to meet desired yield goals, promote plant regrowth, and help maintain the life of the stand. The use of commercial fertilizer and other forms of plant nutrients must be in compliance with Maryland nutrient management regulations. * Clip and drag pastures as needed to initiate vegetative regrowth and/or control undesirable plant species and better distribute nutrients. * To the extent feasible, “spot” spray or mow to control weeds, so that desirable plants are not destroyed unnecessarily. Noxious weeds must be controlled as required by state law. * Renovate and/or re-seed pastures if the stand is undesirable or unable to meet system needs. * Where wildlife habitat is a concern, reduce grazing during critical nesting periods. Use only light grazing pressure during the nesting season (April 15 to August 15), and do not graze below 8 inches for cool-season grasses and 14 inches for native warm-season grasses to maintain habitat for ground-nesting birds. Where feasible, graze only one-third of the stand each year, or leave ungrazed strips at least 35 feet wide along field edges to provide undisturbed nesting habitat. * For optimum results, ungrazed strips should be at least 50 feet wide, preferably adjacent to woody cover, or leave the entire field ungrazed during the primary nesting season. To provide winter cover, allow sufficient recovery time in the fall so that the stand is at least 8 inches in height for cool-season grasses and 18 inches in height for native warm-season grasses before dormancy. * Eliminate hazards from pastures that may injure livestock, such as loose wires, other hardware, old post holes or animal burrows, and downed trees or heavy limbs. * Maintain all facilitating practices (e.g., fences, watering facilities, etc.) in good working order. * Comply with time of year or frequency of use restrictions, if any. Pay particular attention to program requirements as they relate to acceptable vs. restricted uses and other management restrictions. |
| 533 – Pumping Plant | A facility that delivers water at a designed pressure and flow rate. Includes the required pump(s), associated power unit(s), plumbing, appurtenances, and may include on-site fuel or energy source(s), and protective structures. | * Inspect or test all pumping plant components and appurtenances. * Use proper start-up and shut-down procedures for the operation of the pumping plant. * Conduct routine maintenance of all mechanical components (power unit, pump, drive train, etc.) in accordance with the manufacturer's recommendations. * Protect the system from damage due to freezing temperatures. * When applicable, frequently check the power unit, fuel storage facilities, and fuel lines, for leaks and repair as needed. * Periodically check and removal of debris as necessary from trash racks and structures, to assure adequate flow capacity reaching the pumping plant intake. * Periodically remove sediment in suction bays, to maintain design capacity and efficiency. * Inspect and maintain anti-siphon devices, if applicable. * Routinely test and inspect all automated components of the pumping plant, to assure the proper functioning as designed. * Inspect and maintain secondary containment facilities, if applicable. * Periodically inspect all safety features to ensure proper placement and function. * Prior to retrofitting any electrically powered equipment, electrical service must be disconnected and the absence of stray electrical current verified. |
| 554 – Drainage Water Management | The process of managing water discharges from surface and/or subsurface agricultural drainage systems. | Follow an operation and maintenance plan that specifies:   * The intended purpose of the practice, practice life safety requirements, and water table elevations and periods of operation necessary to meet the intended purpose. If in-field water table observation points are not used, the relationship of the control elevation settings relative to critical field water table depths shall be provided in the operation plan. * Instructions for operation and maintenance of critical components of the drainage management system, including instructions necessary to maintain flow velocities within allowable limits when lowering water tables. * To prevent leakage of liquid manure applications into drainpipes, specify the elevation of the raised drainage outlet and the number of days prior to and after the application that a raised outlet elevation is to be maintained. * Replace warped flashboards that cause structure leakage. |
| 557 – Row Arrangement | A system of crop rows on planned directions, grades and lengths. | Follow an operation and maintenance plan specific to the intended purpose of the row arrangement system. |
| 558 – Roof Runoff Structure | Structures that collect, control, and transport precipitation from roofs**.** | * Keep roof runoff structures clean and free of obstructions that reduce flow. * Make regular inspections and perform repair maintenance as needed to ensure proper functioning of the roof runoff structures. |
| 560 – Access Road | A travel-way for equipment and vehicles constructed as part of a conservation plan. | * Inspect culverts, roadside ditches, water bars and outlets after each major runoff event and restore flow capacity as needed. * Maintain grass areas in adequate cover. Reseed and mow as needed. * Fill low areas in travel treads and regrade, as needed, to maintain road cross section. * Inspect roads with water bars periodically to insure proper cross section is available and outlets are stable. |
| 561 – Heavy Use Area Protection | The stabilization of areas frequently and intensively used by people, animals or vehicles by establishing vegetative cover, by surfacing with suitable materials, and/or by installing needed structures. | * Inspect the Heavy Use Area at least twice a year and after severe storm events. * Scrape the surface as needed to remove excess manure and/or sediment. * Repair paved areas by repairing holes and replacement of paving materials. * Replace loose surfacing material such as gravel, cinders, sawdust, tanbark, etc. as needed when removed by livestock, equipment traffic, or scraping. * Repair any deteriorating areas. * Maintain all vegetation that is part of the plan by fertilizing and liming according to soil test recommendations and reseeding or replanting as necessary. * Inspect inlets and outlets of pipes and culverts and remove any obstructions present. * Maintain flow into filter areas by removing accumulated solids, reconstructing waterbars, etc. |
| 570 – Stormwater Runoff Control | Controlling the quantity and quality of stormwater runoff. | * Conduct periodic inspections, especially immediately following significant rainfall events. * Promptly repair or replace damaged components especially surfaces that are subjected to wear or erosion. * Regularly inspect settling basins, trash guards and other practices to collect and remove accumulated sediment and debris. * Where vegetation is specified, periodically mow and control vegetation. * If fences are installed, they shall be maintained to prevent unauthorized public or livestock entry. * Immediately repair any damage caused by erosion, vandalism, vehicles, or livestock to earth fills, spillways, or outlets. * Make sure all structure drains are functional and soil is not being transported through the drainage system. The screens and/or rodent guards shall also be kept in place. * Eradicate or otherwise remove all rodents or burrowing animals and repair any damage caused by their activity. (If threatened species are involved, follow policy on endangered or threatened species.) * Determine and eliminate causes of settlement or cracks in the earthen sections and repair damage. * Replace weathered or displaced rock riprap to constructed grade. |
| 572 – Spoil Spreading | Disposal of surplus excavated materials. | * Inspect the spoil areas within six months after spreading and periodically thereafter. * Fill or repair any excessive rills or gullies in the spoil. * Reestablish vegetation as necessary on the repaired areas. * Mow the vegetation as necessary to maintain a dense, vigorous stand. * Control undesirable species and/or noxious weeds as necessary. |
| 574 – Spring Development | Collection of water from springs or seeps to provide water for a conservation need. | * Inspect collection and storage devices, valves, outlets and pipelines at least biannually. Make repairs as needed. * Check for debris, algae, sludge or other materials in the system, which may restrict the inflow or outflow system and remove. * Prepare guidance for winter weather operation, such as cleaning and discontinuing use, or providing for frost-free use. * Protect from damage due to livestock and farm equipment. Maintain fences and other devices used for this purpose. * Check for leaks and repair immediately. * Check valves, automatic water level devices, and overflow pipes for proper operation. * Chemical may be added to the system for algae and other water quality issues when in accordance with local rules and regulations * Maintain vegetative cover around the system. Mow at least yearly. Provide weed control as needed. Reseed, lime, and fertilize area as needed. |
| 575 – Trails and Walkways | A trail is a constructed path with a vegetated or earthen surface. A walkway is a constructed path with an artificial surface. A trail/walkway is used to facilitate the movement of animals, people, or off-road vehicles. | * Inspect at least annually and after significant runoff events. The inspections must include drainage structures, trail/walkway surfaces, vegetation, fencing, bridges and elevated walkways, and safety features, as appropriate. For bridges and elevated walkways that are open or accessible to the public, conduct inspections in accordance with AASHTO Guide Manual for Bridge Element Inspection. * Perform the following maintenance activities: * Remove sediment from water control features. * Repair eroded areas or damaged surface materials. * Grade and shape the trail/walkway to maintain design grades and dimensions. * Apply dust control measures, as needed. * Repair safety or control features, as required. * Re-seed areas where vegetation has been damaged or destroyed. * Periodically remove and manage of manure accumulations, as needed. * For multiple adjacent vegetated animal trails, implement a rotation plan to allow for recovery of vegetation and for improvement of traffic-supporting conditions. |
| 578 – Stream Crossing | A stabilized area or structure constructed across a stream to provide a travel way for people, livestock, equipment, or vehicles. | * Inspect the stream crossing and channel at least twice annually and after each major storm event. Provide maintenance or repairs as needed. * Inspect stone approaches to the crossing. Add stone as needed to maintain access areas and protect soil from erosion. * Inspect fencing, gates, and other practices as associated with the crossing. Maintain and repair fencing on the crossing and surrounding areas as needed to protect the user and prevent livestock from entering excluded areas. |
| 580 – Streambank and Shoreline Protection | Treatment(s) used to stabilize and protect the banks of streams or constructed channels, and the shorelines of lakes, reservoirs, or estuaries. | * Inspect the site annually and following each major storm event. * Take corrective actions as needed to replace destroyed plant materials or dislodged mulching materials. Reshape the soil surface and replant areas damaged by high flows. Where vegetative efforts have failed, reassess the suitability of the chosen species for the site, and the need for structural measures to complement vegetative measures. * Remove sediment bars, undesirable vegetation, or other stream obstructions that may be causing unplanned diversion of flow into the protective measures or other streambank areas. Depending on the location and extent of work, federal and state permits may be needed before repairs are made. |
| 584 – Channel Bed Stabilization | Measure(s) used to stabilize the bed or bottom of a channel. | * Periodically inspection the site to ensure that it functions properly. * Promptly repair or replace damaged components. |
| 585 – Stripcropping | Growing planned rotations of erosion-resistant and erosion-susceptible crops or fallow in a systematic arrangement of strips across a field. | * Sediment accumulations along strip edges must be smoothed or removed and distributed over the field as necessary to maintain practice effectiveness. * Mow sod turn-strips at least once a year. Harvesting is optional. * Erosion-resistant strips in rotation must be managed to maintain the planned vegetative cover and surface roughness. * If the strip alignment is lost due to adjacent strips being in hay or permanent cover, reestablish the original strip alignment and width as needed. |
| 587 – Structure for Water Control | A structure in a water management system that conveys water, controls the direction or rate of flow, maintains a desired water surface elevation or measures water. | * Check the structure at least semiannually and after major storms. Perform any necessary maintenance, including removal of debris. * Where applicable, manage water levels as specified for water depth and timing. |
| 590 – Nutrient Management | Manage the rate, source, placement, and timing of plant nutrients and soil amendments while reducing environmental impacts. | * Review or revise plans periodically to determine if adjustments or modifications are needed. At a minimum, review and revise plans as needed with each soil test cycle, changes in manure management, volume or analysis, plants and crops, or plant and crop management. * Monitor fields receiving animal manures and biosolids for the accumulation of heavy metals and P in accordance with University of Maryland guidance and state law. * For animal feeding operation, significant changes in animal numbers, management, and feed management will necessitate additional manure analyses to establish a revised average nutrient content. * Calibrate application equipment to ensure accurate distribution of material at planned rates. For products too dangerous to calibrate, follow University of Maryland or equipment manufacturer guidance on proper equipment design, plumbing, and maintenance. * Document the nutrient application rate. When the applied rate differs from the planned rate, provide appropriate documentation to explain the difference. * Protect workers from and avoid unnecessary contact with nutrient sources. Take extra caution when handling anhydrous ammonia or when managing organic wastes stored in unventilated tanks, impoundments, or other enclosures. * Use material generated from cleaning nutrient application equipment in an environmentally safe manner. Collect, store, or field apply excess material in an appropriate manner. * Recycle or dispose of nutrient containers in compliance with State and local guidelines or regulations. * Organic waste and commercial fertilizer application will be based on the nutrient rates shown Nutrient Management Section of this CNMP. |
| 591 – Amendments for Treatment of Agricultural Waste | Treatment of manure, process wastewater, storm water runoff from lots or other high intensity areas, and other wastes with chemical or biological additives. | * The use of amendments must be consistent with the purposes of the practice, safety considerations, label directions, and other instructions provided by the vendor. * Follow required safety precautions when handling the specific chemicals or biological amendments. * Use record keeping worksheets to document the product applied, the date, location, rate, and method of application. |
| 592 – Feed Management | Manipulating and controlling the quantity and quality of available nutrients, feedstuffs, or additives fed to livestock and poultry. | * The professional feed management specialist must conduct a periodic plan review to determine if adjustments or modifications are needed. * Conduct routine feed analysis to document the rates at which nitrogen and phosphorus were actually fed. When actual rates fed differ from or exceed planned rates, records will indicate reasons for the differences.   Producers must maintain records to document plan implementation. As applicable, records will include:   * Feed analysis and ration formulation, including the record of ration formulation used prior to implementing the feeding strategy. * Records estimating the impact the feeding strategy is having on reducing manure nutrient content and nutrient efficiency. * Manure analysis that was done after the feeding strategy was implemented to determine manure nutrient content. * Dates and name of the professional feed management specialist performing the review, and any recommendations that resulted from the review. |
| 595 – Pest Management Conservation System | A system that combines an integrated pest management (IPM) decision-making process with natural resource conservation to address pest and environmental impacts. | * Producers and applicators are responsible for following all pesticide label restrictions and instructions and complying with all applicable Federal, State, and local regulations. * At a minimum, plans must be reviewed and revised as needed when crops, pest pressure, or management options change. * Maintain records for at least the year in which the practice was implemented and 1 year after for conservation planning purposes. Records of the use of federally restricted use pesticides (RUPs) are required for at least 2 years. Pesticide application records shall be in accordance with USDA Agricultural Marketing Service’s Pesticide Recording Keeping Program (see [https://www.ams.usda.gov/rules-regulations/pesticide-record](https://www.ams.usda.gov/rules-regulations-terms/pesticide-record-keeping)s), and any state and local requirements. Refer to Maryland Department of Agriculture, Pesticide Information for Professionals Section, *Record-Keeping for Commercial Applicators, Public Agency Applicators, and Consultants*, <https://mda.maryland.gov/plants-pests/documents/records.pdf> for additional information. |
| 600 – Terrace | An earth embankment, channel, or a combination ridge and channel constructed across the field slope. | * Conduct periodic inspections, especially immediately following runoff events. * Promptly repair or replace damaged components as necessary. * Maintain terrace ridge height and outlet elevations. * Remove sediment that has accumulated in the terrace to maintain capacity, a positive channel grade, and to maintain capacity where soil infiltration serves as the outlet. * Each inlet for underground outlets must be kept clean and sediment buildup redistributed so that the inlet is in the lowest place. Inlets damaged or cut off by farm machinery must be replaced or repaired immediately. * Vegetation, where specified, shall be maintained and trees and brush controlled by chemical or mechanical means. * Vegetated outlets should be established before construction when feasible. * Keep machinery away from steep back sloped terraces. Keep equipment operators informed of all potential hazards. |
| 605 – Saturated Buffer | A subsurface, perforated distribution pipe is used to divert and spread drainage system discharge to a vegetated area to increase soil saturation. | Follow applicable management requirements for the associated practice standard of Drainage Water Management (554). Specified actions include normal repetitive activities in the application and use of the practice (operation), and repair and upkeep of the practice (maintenance). At a minimum, follow specified requirements for the following:   * Planned water level management and timing. * Inspection and maintenance of the water control structure(s), distribution pipe(s), and contributing drainage system, especially upstream surface inlets. * Periodic removal of woody vegetation as needed to reduce distribution line plugging. * If the site is to be monitored, the monitoring and reporting designed to demonstrate system performance and provide information to improve the design and management of this practice. At a minimum, record water levels (elevations) at the control structure, observation ports, and if used, observation wells. Record water levels biweekly when a water table is present and following precipitation events that result in high flows. |
| 605 – Denitrifying Bioreactor | A structure that uses a carbon source to reduce the concentration of nitrate-nitrogen in subsurface agricultural drainage flow via enhanced denitrification. | Follow applicable management requirements including normal repetitive activities in the application and use of the practice, along with repair and upkeep of the practice. At a minimum, follow specified requirements for these activities:   * Water level management and timing. * Inspection and maintenance of the bioreactor and contributing drainage system, especially upstream surface inlets. * Monitoring the status of the bioreactor media and replacement/ replenishment of media as needed. * Monitoring and reporting criteria that demonstrate system performance. * Monitoring information to improve the design and management of this practice as needed. |
| 606 – Subsurface Drain | A conduit, such as corrugated plastic tubing, tile, or pipe, installed beneath the ground surface to collect and/or convey drainage water. | * Conduct periodic inspections and post-storm inspections to detect and minimize damage to outlets. Check outlets to ensure free flow and a stable outlet condition. * Repair eroded areas as necessary. * Control trees and shrubs by hand, machine, or chemicals as necessary. |
| 607 – Surface Drain, Field Ditch | A graded ditch for collecting excess water in a field. | * Keep channels clean and free of materials that can reduce the flow. * Repair eroded areas as necessary. * Inspect side slopes to ensure stability is maintained. Reshape and re-seed slopes as necessary. * Check outlet to ensure free flow and a stable outlet condition. * Control trees and shrubs by hand, machine, or chemicals as necessary. |
| 608 – Surface Drain, Main or Lateral | An open drainage ditch constructed to a designed size and grade. | * Keep channels clean and free of materials that can reduce the flow. * Repair eroded areas as necessary. * Inspect side slopes to ensure stability is maintained. Reshape and re-seed slopes as necessary. * Check outlet to ensure free flow and a stable outlet condition. * Control trees and shrubs by hand, machine, or chemicals as necessary. |
| 612 – Tree/Shrub Establishment | Establishing woody plants by planting seedlings or cuttings, by direct seeding, and/or through natural regeneration. | * Inspect the trees and shrubs at least annually during the first and second years. If survival is less than expected, replant as needed to achieve the intended purpose of the practice. If native trees and/or shrubs (other than what was planted) become established, and this cover meets the intended purpose of the practice and the client’s objectives, the cover should be considered adequate. * If tree shelters are used, remove them before they impede the growth of the trunk. Removal should not occur until the seedling has adequate girth to support itself (usually 3 to 5 years after planting), or until the seedling has attained sufficient height to survive deer browse. Remove bird netting from shelters when tree growth reaches the top of the shelter. * Check for insects and diseases, and if an incidence threatens stand survival, take corrective action to keep the pest under control. * Control undesirable plants by pulling, mowing, or spraying with a selective herbicide. Control noxious weeds as required by state law. * Protect trees and shrubs from wildfire and damage from livestock and wildlife to the extent feasible. * Trees and shrubs should not be fertilized in the first year, because the plants will develop too much top growth compared to the roots. If nutrients will be applied later, refer to the Maryland conservation practice standard for Nutrient Management (590). * Describe the acceptable uses (e.g., forest harvest, occasional removal of some tree and shrub products, etc.) and time of year or frequency of use restrictions, if any. Pay particular attention to program requirements as they relate to acceptable vs. restricted uses and other management restrictions. |
| 614 – Watering Facility | A device (tank, trough, or other watertight container) for providing animal access to water. | * Inspect collection and storage devices, valves, outlets and pipelines at least biannually. Make repairs as needed. * Check for and remove debris, algae, sludge or other materials, which may restrict the inflow or outflow system. * Prepare guidance for winter weather operation, such as cleaning and discontinuing use, or providing for frost-free use. * Protect from damage due to livestock and farm equipment. Maintain fences and other devices used for this purpose. * Check for leaks and repair immediately. Check valves, automatic water level devices, and overflow pipes for proper operation. * Chemicals may be added to the system for control of algae when used in accordance with local rules and regulations. * Maintain vegetative cover around the system. Mow at least yearly. Provide weed control as needed. Reseed, lime, and fertilize area as needed based on soil test results. |
| 620 – Underground Outlet | A conduit installed beneath the surface of the ground to collect surface water and convey it to a suitable outlet. | * Keep inlets, trash guards, and collection boxes and structures clean and free of materials that can reduce the flow. * Repair leaks and broken or crushed lines to insure proper functioning of the conduit. * Check outlet conduit and animal guards to ensure proper functioning of the conduit. * Keep adequate backfill over the conduit. * Repair any eroded areas at the pipe outlet. |
| 629 – Waste Treatment | The mechanical, chemical or biological treatment of agricultural waste. | At a minimum, follow specified requirements for these activities:   * Recommended loading rates of the waste treatment facility or process for hydraulic and critical pollutant parameters. * Proper operating procedures for the waste treatment facility or process, including the amount and timing of any chemicals added. * Operation and maintenance for pumps, blowers, instrumentation and control devices, and other equipment used as components of the waste treatment facility or process. * Startup procedures, normal operation, safety issues, and normal maintenance items. This includes procedures for the planned replacement of components with less than a ten-year service life. * Alternative operation procedures in the event of equipment failure. * Troubleshooting. * Monitoring and reporting designed to demonstrate system performance on an ongoing basis. |
| 630 – Vertical Drain | A well, pipe, pit, or bore in porous, underground strata into which drainage water can be discharged without contaminating groundwater resources. | * Periodically inspect inlets to vertical drains to ensure that they are not plugged or damaged. * Maintain vegetative filters, sediment basins, and other filters per operation and maintenance requirements for each of the respective conservation practices. |
| 632 –Waste Separation Facility | A filtration or screening device, settling tank, settling basin, or settling channel used to partition solids and/or nutrients from a waste stream | At a minimum, follow specified requirements for these activities:   * Normal operation of the facility, including design capacity, safety issues, and normal maintenance items. * Alternative operation procedures in the event of equipment failure. * Daily and/or periodic (as described in the plan) inspection of the following: * Separation device and support structure. * Screens and outlets. * Remaining capacity in storage facilities. |
| 633 – Waste Recycling | Using agricultural wastes such as manure and wastewater, or other organic residues. | Records shall be kept for a period of three years (as required by MDA) or longer, and shall include when appropriate:   * Quantity of manure and other wastes produced, and their nutrient content.\* * Soil test results.\* * Dates and amounts of waste application where land applied, and the dates and amounts of waste removed from the system due to feeding, energy production, or export from the operation\*. * Crops grown and yields (both yield goals and measured yield).\* * Waste application methods. * Other tests as applicable, such as determining the nutrient content of the harvested product. * Calibration of application equipment.   \*Note: These records are required by the State of Maryland as part of a Nutrient Management Plan, and may be maintained in that document, unless program requirements specify otherwise. |
| 634 – Waste Transfer | A system using structures, conduits or equipment to convey byproducts (wastes) from agricultural operations to points of usage. | * Liquid or slurry material shall be adequately agitated prior to transfer for the purpose of land application both on and off the farm. * Pipelines used for transferring waste material should be flushed with clean water after use to reduce the risk of gas build up and pipeline explosion. * Provisions should be made for removing solids during management operations from conveyance conduits such as concrete lined ditches, etc.   **Record-Keeping**   * For on-farm transfer, the producer must keep records in accordance with requirements of his/her current nutrient management plan. * For the hauling of material from one geographical area to another, record keeping by the producer or his/her designated representative will be in accordance with the State of Maryland’s regulations (COMAR 15.20.05 – 15.20.08) concerning nutrient management and waste transfer and may include such items as: * Type, nutrient content, and amount of manure transferred. * Solids percentage of the manure. * Date of the transfer. * Name and address of the source and destination of the manure. and, * Condition of the manure as left at the destination (e.g., spread, stockpiled and covered, etc.). |
| 635 – Vegetated Treatment Area | An area of permanent vegetation used for agricultural wastewater treatment. | * Control weeds, especially state-listed noxious weeds, and other pests that could inhibit proper functioning of the treatment area. * Inspect and repair the treatment areas after storm events to address gullies, reseed disturbed areas, and prevent concentrated flow. * Apply soil amendments as needed to maintain the desired species composition and stand density of herbaceous vegetation. * Maintain or restore the treatment area as necessary by periodically grading or removing excess material when deposition jeopardizes its function. Follow original seeding specifications to reestablish herbaceous vegetation. * Routinely dethatch or aerate the treatment area used for treating runoff from livestock holding areas in order to promote infiltration. * Conduct maintenance activities only when the surface layer of the treatment area is dry enough to minimize compaction. * Monitor all treatment areas to maintain optimal vegetative growth and environmental protection. |
| 638 – Water and Sediment Control Basin | An earth embankment or a combination ridge and channel constructed across the slope of a minor drainageway. | * Conduct periodic inspections, especially following significant storm events. * Promptly repair or replace damaged components. * Maintain basin ridge height and outlet elevations. * Periodically remove sediment that has accumulated in the basin to maintain capacity and grade. * Regularly clean inlets for underground outlets. Repair or replace inlets damaged by farm equipment. Remove sediment around inlets to ensure that the inlet remains the lowest spot in the basin. * Where vegetation is specified, regularly mow and control trees and brush. Schedule vegetative disturbances to avoid the peak-nesting season (April 15 – August 15). * As applicable, maintain warning or hazard signs for steep slopes on the basin. |
| 642 – Water Well | A hole drilled, dug, driven, bored, jetted or otherwise constructed to an aquifer. | * Ensure that no agricultural chemicals, such as fertilizers and pesticides, are stored or mixed or containers rinsed within a 100 ft. radius of the wellhead. * For screen wells that have blank casing installed at the bottom, periodically bail or flush the well to remove excessive, accumulated sediment. * Ensure periodic inspection of the well for proper functioning and water quality. The inspection must include conditions that affect well performance as designed for the water use. As a minimum, these conditions include: * Declines in discharge, static level, maximum pumping level, and pressure (for artesian wells) that are outside acceptable limits for the well design. * Appearance of sediment that may damage the well, pump, or appurtenances. * Changes in water quality including odor, color, taste, and chemistry. * Presence of algae or iron bacteria. * Correct unacceptable conditions in a timely manner. * In the maintenance record, include statements describing identified problems, corrective action taken and date, and specific capacity of well before and after corrective action. * Keep well construction records with the maintenance plan. |
| 643 – Restoration of Rare or Declining Natural Communities | Reestablishment of abiotic (physical and chemical) and biotic (biological) conditions necessary to support rare or declining natural assemblages of native plants and animals. | * Evaluate habitat conditions on a regular basis (at least annually) to determine whether the desired habitat is present in suitable quantity, quality, and distribution to meet objectives of the project. Make timely adjustments to the management plan, and schedule maintenance to ensure the desired habitat condition. * Implement management as specified to maintain vegetation in the desired species composition or age class (if applicable), or no management required (e.g., natural area). Conduct haying, grazing, brush management, and other management activities as needed to achieve and maintain the intended purpose. * Do not conduct vegetation management and maintenance activities during the season of primary use for the targeted species or group of species, except when necessary to achieve the desired habitat condition. * Rotate management and maintenance activities to mimic natural disturbance regimes. * Control undesirable plants by pulling, mowing, or spraying with a selective herbicide. Control noxious weeds as required by state law. * Comply with acceptable uses (e.g., grazing, hunting, etc.) and time of year/frequency of use restrictions, if any. Pay particular attention to regulatory and program requirements as they relate to acceptable vs. restricted uses and other management restrictions. State and local laws and regulations may restrict or require permits or approvals for removal of existing vegetation on a site. Laws pertaining to forest conservation, wetland protection, critical area protection, stream buffers, and erosion and sediment control may be applicable. |
| 644 – Wetland Wildlife Habitat Management | Managing wetland and aquatic habitat to provide the needs of wetland wildlife. | * Inspect structural and vegetative components at least annually and after major storm events to determine whether any repairs or maintenance is needed. * Manage the timing and water level control setting (if applicable) to meet objectives of the project. * Inspect vegetation in the wetland and buffer area to determine whether the desired vegetation is present in suitable quantity, quality, and distribution to meet the objectives of the project. Follow time of year restrictions on mowing, burning, etc., as applicable. * Control noxious weeds and other invasive plants by spot treatment, using mechanical methods, or approved herbicides. Control of noxious weeds is required by state law. Noxious weed control can be conducted during the primary nesting season (April 15 to August 15), but may require prior approval if the site is enrolled in a financial assistance program. Contact your local weed control specialist concerning recommendations for spot-treating the weed problem. * Comply with acceptable uses (e.g., timber production, hunting, nature preserve, etc.) and time of year/frequency of use restrictions, if any. Pay particular attention to cost-sharing program requirements as they relate to acceptable vs. restricted uses, and other management restrictions. |
| 645 – Upland Wildlife Habitat Management | Managing areas to provide the needs of upland wildlife and other wildlife species that use upland habitat for a portion of their life cycle. | * Inspect vegetative and structural components (if applicable) at least annually and after major storm events to determine whether any repairs or maintenance is needed. * Inspect vegetation to determine whether the desired vegetation is present in suitable quantity, quality, and distribution to meet the objectives of the project. Follow time of year restrictions on mowing, burning, etc., as applicable. * Control noxious weeds and other invasive plants by spot treatment, using mechanical methods, or approved herbicides. Control of noxious weeds is required by state law. Noxious weed control can be conducted during the primary nesting season (April 15 to August 15), but may require prior approval if the site is enrolled in a financial assistance program. Contact your local weed control specialist concerning recommendations for spot-treating the weed problem. * Comply with acceptable uses (e.g., timber production, hunting, nature preserve, etc.) and time of year/frequency of use restrictions, if any. Pay particular attention to cost-sharing program requirements as they relate to acceptable vs. restricted uses, and other management restrictions. |
| 646 – Shallow Water Development and Management | The shallow inundation of lands to provide habitat for fish and/or wildlife. | * Inspect the management area at least annually to determine whether the desired vegetation is present in suitable quantity, quality, and distribution to meet the objectives of the project. * Inspect embankments and structures at least once per year and after every major storm. Promptly remove trash and obstructions, fix leaks, and make other repairs as needed. * On embankments to be maintained in herbaceous cover, spot mow or burn infrequently (not more than once every 2 to 3 years) if needed to reduce encroachment of trees and shrubs. Flash grazing by livestock may also be used. To protect ground-nesting wildlife, do not mow or burn between April 15 and August 15. * Control noxious weeds and other invasive plants by spot treatment, using mechanical methods, or approved herbicides. Control of noxious weeds is required by state law. Noxious weed control can be conducted during the primary nesting season (April 15 to August 15), but may require prior approval if the site is enrolled in a financial assistance program. Contact your local weed control specialist concerning recommendations for spot-treating the weed problem. * Deter colonization of undesirable plants (e.g., cocklebur, phragmites, cattails, red maple, sweetgum) by conducting regular site inspections and spot treatment using mechanical methods or approved herbicides. If undesirable plants become established, disk 2 or 3 times by mid-summer, then immediately flood, if possible, until the following spring. * Nuisance animals such as beavers and muskrats may be removed in accordance with state game regulations. Geese can be discouraged by minimizing areas of open water and promoting the growth of tall vegetation in the shallow water area and adjacent buffers. * Avoid noisy activities, such as mowing or use of recreational vehicles, in or near the shallow water area when waterfowl are present. To the extent possible, do not allow livestock and other domestic animals to have uncontrolled access to the site. * Limit use of motorized vehicles to designated trails and access roads to protect vegetation and minimize disturbance to wildlife. Avoid use of motorized vehicles on ponded or inundated areas at any time during the year to prevent damage to soil, vegetation, and aquatic wildlife (e.g. frogs, salamanders). * Avoid the use of pesticides on the site to prevent harm to wildlife that use the shallow water area. * Comply with acceptable uses (e.g., flash grazing, cropping, timber production, hunting, nature preserve, etc.) and time of year or frequency of use restrictions, if any. Pay particular attention to program requirements as they relate to acceptable vs. restricted uses and other management restrictions. |
| 647 – Early Successional Habitat Development/ Management | Manage early plant succession to benefit desired wildlife or natural communities. | * Inspect the site at least annually to determine whether the desired vegetation is present in suitable quantity, quality, and distribution to meet the objectives of the project. * Control noxious weeds and other invasive plants by spot treatment, using mechanical methods, or approved herbicides. Control of noxious weeds is required by state law. Noxious weed control can be conducted during the primary nesting season (April 15 to August 15), but may require prior approval if the site is enrolled in a financial assistance program. Contact your local weed control specialist concerning recommendations for spot-treating the weed problem. * Comply with acceptable uses (e.g., flash grazing, timber production, hunting, nature preserve, etc.) and time of year or frequency of use restrictions, if any. Pay particular attention to program requirements as they relate to acceptable vs. restricted uses and other management restrictions. |
| 649 – Structures for Wildlife | A structure installed to replace or modify a missing or deficient wildlife habitat component. | * Monitor condition and/or usage of structures. * Implement adaptive management by relocating, modifying or repairing structures as needed during the season with the least disturbance to target species. * Conduct needed maintenance of structures such as removal of old nesting materials, nests of non-target species, undesirable debris, or abandoned structures. * Install, modify and/or monitor during the season of year or time of day to minimize disturbance to wildlife. * Remove structures if they are determined (i.e., upon abandonment) as being potentially detrimental to the target and other species. |
| 654 – Road/Trail/Landing Closure and Treatment | The closure, decommissioning, or abandonment of roads, trails, and/or landings and associated treatment to achieve conservation objectives. | * Conduct initial monitoring following major storm events until the site is determined to be stable. Apply stabilizing measures and additional treatment as needed. * After vegetation is well established, inspect the site at least annually to determine whether desired vegetation is present in suitable quantity, quality, and distribution to meet the objectives of the project. * Promptly repair any damaged areas and revegetate as needed. * Control noxious weeds and other invasive plants by spot treatment, using mechanical methods, or approved herbicides. Control of noxious weeds is required by state law. |
| 655 – Forest Trails and Landings | A temporary or infrequently used route, path or cleared area. | * Conduct regular and timely inspections of trails and landings and associated measures. * Promptly repair any damaged areas and revegetate as needed. * Trails and landings utilized and managed as firebreaks will be properly maintained to accomplish this purpose while maintaining acceptable mitigation of other concerns. * Access to trails and landings shall be controlled when and where needed for erosion abatement, safety and liability, and reduced maintenance costs. |
| 656 – Constructed Wetland | An artificial wetland ecosystem with hydrophytic vegetation for biological treatment of water. | * Inspect all embankments and structures at least once per year and after every major storm. Promptly remove trash and obstructions, fix leaks, and make other repairs as needed. * Inspect the site periodically (at least annually) to determine whether the desired vegetation is present in suitable quantity, quality, and distribution to meet the objectives of the project. * Control noxious weeds and other invasive plants by spot treatment, using mechanical methods, or approved herbicides. Control of noxious weeds is required by state law. * Maintain water levels in wetland cells to support desired vegetation. * Control flow to the wetland according to a water budget. * Monitor water quality to assess wetland performance. * Sample effluent for nutrients prior to utilization. * If needed and feasible, remove accumulated sediment and make other repairs according to a management plan that describes locations where sediment removal is acceptable (e.g., designed sediment basins, open water areas) and conditions under which sediment may be removed and repairs made (e.g., time of year restrictions, permits needed, etc.). |
| 657 – Wetland Restoration | The return of a wetland and its functions to a close approximation of its original condition as it existed prior to disturbance on a former or degraded wetland site. | * Inspect all embankments and structures at least once per year and after every major storm. Promptly remove trash and obstructions, fix leaks, and make other repairs as needed. * Inspect the site periodically (at least annually) to determine whether the desired vegetation is present in suitable quantity, quality, and distribution to meet the objectives of the project. * On embankments to be maintained in herbaceous cover, spot mow or burn infrequently (not more than once every 2 to 3 years) if needed to reduce encroachment of trees and shrubs. To protect ground-nesting wildlife, do not mow or burn between April 15 and August 15. * Control noxious weeds and other invasive plants by spot treatment, using mechanical methods or approved herbicides. Control of noxious weeds is required by state law. Noxious weed control can be conducted during the primary nesting season (April 15 to August 15), but may require prior approval if the site is enrolled in a financial assistance program. Contact your local weed control specialist concerning recommendations for spot-treating the weed problem. * Deter colonization of undesirable plants (e.g., cocklebur, phragmites) by conducting regular site inspections and spot treating using mechanical methods or approved herbicides. * Nuisance animals, such as beavers and muskrats, may be removed in accordance with state game regulations. Geese can be discouraged by minimizing areas of open water and promoting the growth of tall vegetation in the wetland and adjacent buffers. * Avoid noisy activities, such as mowing or use of recreational vehicles, in or near the wetland when waterfowl are present. To the extent possible, do not allow livestock and other domestic animals to have uncontrolled access to the site. * Limit use of motorized vehicles to designated trails and access roads to protect vegetation and minimize disturbance to wildlife. Avoid use of motorized vehicles on ponded or inundated areas at any time during the year to prevent damage to soil, vegetation, and aquatic wildlife (e.g., frogs, salamanders). * Avoid the use of pesticides on the site to prevent harm to wildlife that use the wetland area. * Comply with acceptable uses (e.g., flash grazing, cropping, timber production, hunting, nature preserve, etc.) and time of year or frequency of use restrictions, if any. Pay particular attention to program requirements as they relate to acceptable vs. restricted uses and other management restrictions. |
| 658 – Wetland Creation | The creation of a wetland on a site location that was historically non-wetland. | * Inspect all embankments and structures at least once per year and after every major storm. Promptly remove trash and obstructions, fix leaks, and make other repairs as needed. * Inspect the site periodically (at least annually) to determine whether the desired vegetation is present in suitable quantity, quality, and distribution to meet the objectives of the project. * On embankments to be maintained in herbaceous cover, spot mow or burn infrequently (not more than once every 2 to 3 years) if needed to reduce encroachment of trees and shrubs. To protect ground-nesting wildlife, do not mow or burn between April 15 and August 15. * Control noxious weeds and other invasive plants by spot treatment, using mechanical methods or approved herbicides. Control of noxious weeds is required by state law. Noxious weed control can be conducted during the primary nesting season (April 15 to August 15), but may require prior approval if the site is enrolled in a financial assistance program. Contact your local weed control specialist concerning recommendations for spot-treating the weed problem. * Deter colonization of undesirable plants (e.g., cocklebur, phragmites) by conducting regular site inspections and spot treating using mechanical methods or approved herbicides. * Nuisance animals, such as beavers and muskrats, may be removed in accordance with state game regulations. Geese can be discouraged by minimizing areas of open water and promoting the growth of tall vegetation in the wetland and adjacent buffers. * Avoid noisy activities, such as mowing or use of recreational vehicles, in or near the wetland when waterfowl are present. To the extent possible, do not allow livestock and other domestic animals to have uncontrolled access to the site. * Limit use of motorized vehicles to designated trails and access roads to protect vegetation and minimize disturbance to wildlife. Avoid use of motorized vehicles on ponded or inundated areas at any time during the year to prevent damage to soil, vegetation, and aquatic wildlife (e.g., frogs, salamanders). * Avoid the use of pesticides on the site to prevent harm to wildlife that use the wetland area. * Comply with acceptable uses (e.g., flash grazing, cropping, timber production, hunting, nature preserve, etc.) and time of year or frequency of use restrictions, if any. Pay particular attention to program requirements as they relate to acceptable vs. restricted uses and other management restrictions. |
| 659 – Wetland Enhancement | The augmentation of wetland functions beyond the original natural conditions on a former, degraded, or naturally functioning wetland site; sometimes at the expense of other functions. | * Inspect all embankments and structures at least once per year and after every major storm. Promptly remove trash and obstructions, fix leaks, and make other repairs as needed. * Inspect the site periodically (at least annually) to determine whether the desired vegetation is present in suitable quantity, quality, and distribution to meet the objectives of the project. * On embankments to be maintained in herbaceous cover, spot mow or burn infrequently (not more than once every 2 to 3 years) if needed to reduce encroachment of trees and shrubs. To protect ground-nesting wildlife, do not mow or burn between April 15 and August 15. * Control noxious weeds and other invasive plants by spot treatment, using mechanical methods or approved herbicides. Control of noxious weeds is required by state law. Noxious weed control can be conducted during the primary nesting season (April 15 to August 15), but may require prior approval if the site is enrolled in a financial assistance program. Contact your local weed control specialist concerning recommendations for spot-treating the weed problem. * Deter colonization of undesirable plants (e.g., cocklebur, phragmites) by conducting regular site inspections and spot treating using mechanical methods or approved herbicides. * Nuisance animals, such as beavers and muskrats, may be removed in accordance with state game regulations. Geese can be discouraged by minimizing areas of open water and promoting the growth of tall vegetation in the wetland and adjacent buffers. * Avoid noisy activities, such as mowing or use of recreational vehicles, in or near the wetland when waterfowl are present. To the extent possible, do not allow livestock and other domestic animals to have uncontrolled access to the site. * Limit use of motorized vehicles to designated trails and access roads to protect vegetation and minimize disturbance to wildlife. Avoid use of motorized vehicles on ponded or inundated areas at any time during the year to prevent damage to soil, vegetation, and aquatic wildlife (e.g., frogs, salamanders). * Avoid the use of pesticides on the site to prevent harm to wildlife that use the wetland area. * Comply with acceptable uses (e.g., flash grazing, cropping, timber production, hunting, nature preserve, etc.) and time of year or frequency of use restrictions, if any. Pay particular attention to program requirements as they relate to acceptable vs. restricted uses and other management restrictions. |
| 666 – Forest Stand Improvement | The manipulation of species composition, stand structure, or stand density by cutting or killing selected trees or understory vegetation to achieve desired forest conditions or obtain ecosystem services. | * Periodically check the stand for insects and diseases, and if an incidence threatens stand survival, taking corrective action to keep the pest under control. * Control undesirable plants as needed to achieve management goals. * Protect trees from fire and damage from livestock. |
| 670 – Lighting System Improvement | Complete replacement or retrofitting of one or more components of an existing agricultural lighting system. | * The producer/client is responsible for maintaining the lighting system. Provide operation and maintenance instructions that include the following: * Inspect lamps, ballasts, fixtures, wiring, and controls regularly. Replace burned out lamps promptly, and repair or replace other system components as appropriate to ensure the system is functioning properly. * Clean lamps, fixtures, and room surfaces regularly to ensure a high-quality light environment is maintained. |
| 672 – Building Envelope Improvement | Modification or retrofit of the building envelope of an existing agricultural structure. | * Check for leaks in the building envelope, especially along edges of energy screen seals. * Regularly inspect insulation to ensure it evenly covers building envelope spaces and repair damaged material and components as necessary. * Periodically check for tears and repair or replace torn vapor barrier or energy screen material. * Identify critical control devices associated with the building envelope system. Inspect regularly and perform maintenance as necessary. * Maintain records to document the implementation of energy improvements. Retain and update records for a minimum of three years from the installation of the building envelope improvement. Recommended records to be retained include: * Utility bills, fuel purchases, and yield of agricultural commodities produced in the building. * Documentation of maintenance conducted on the building envelope improvement and related components or devices. |
| 735 – Waste Gasification Facility | Thermo-chemical treatment facility for animal and agricultural waste in an oxygen starved environment. | At a minimum, follow specified requirements for these activities:   * Recommended loading rates and capacities of the gasification system. * Proper operating procedures for the gasification system. * Operation and maintenance for pumps, blowers, instrumentation and control devices, and other equipment used as components of the gasification system. * Startup procedures, normal operation, safety issues, and normal maintenance items. This includes procedures for the planned replacement of components with less than a ten year service life. * Alternative operation procedures in the event of equipment malfunction. * Shut-down procedures for both maintenance and for permanent closure. * Troubleshooting. * Monitoring and reporting designed to demonstrate system performance on an ongoing basis. |
| 782 – Phosphorus Removal System | A system designed to remove dissolved phosphorus (P) from surface runoff, subsurface flow, or groundwater, usually consisting of a sorption media with a high affinity for dissolved P, a containment structure that allows flow through the media and retains the media so that it does not move downstream, and a means to remove and replace the media. | At a minimum, follow specified requirements for these activities:   * All required inputs necessary to operate the system. * Water level management and timing. * Inspection and maintenance of the Phosphorus Removal System and contributing drainage system, especially upstream surface inlets. * Phosphorus sorption media replacement schedule. * Monitoring and reporting as required to confirm system performance and provide information to improve the design and management of this practice. Monitoring shall include water testing for phosphorus (both dissolved and total P) in milligrams per liter at the phosphorus removal system inlet and outlet, at certain frequencies or specific dates, with a corresponding record of water level elevations or flow rates. |
| 808 – Soil Carbon Amendment | Using carbon-based amendments to increase soil carbon and improve the physical, chemical, and biological properties of the soil. | At a minimum, follow specified requirements for this activity:   * Monitor fields following Maryland Extension guidance and State law. Take a follow-up soil test that includes soil organic carbon at least a year after application to determine the effectiveness of the application for improving soil organic carbon. Consider testing at least 3 years after application to evaluate the impact of the amendment on other soil health-related resource concerns. * Inspect and evaluate surface applied applications after the first heavy precipitation event to assure that the material is stable and does not impact non-target areas. * Calibrate application equipment to ensure accurate distribution of material at planned rates. * Evaluate the effectiveness of the amendment (application, amount of cover provided, durability, etc.) and adjust future management or type of amendment to better meet the intended purpose(s). |