

Department of Natural Resources

District or bureau: Western
Type List Designation: NR 150.03(8)(d)(1)

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NOTE TO REVIEWERS: Comments should address completeness, accuracy or the EIS decision. For your comments to be considered, they must be received by the contact person before _____ (time) _____ (date).

Applicant: Roger and Wanda Lou Pergande
 Address: 5533 McKenna Road, Warrens, WI 54666
 Proposal Title: County Forest Withdrawal and Land Trade (Pergande)
 Location: Jackson County, Town of Knapp

County Forest Land Proposed for Withdrawal (400 acres):
 Township 21 North, Range 1 West
 Section 27: SWNE, SENE, NESE
 (Pergande Proposed East Development)
 Section 28: SWNE, SWNW, SENW, NESW, SESW, NWSE, SWSE
 (Pergande Proposed West Development)

Private Land Proposed for Trade (921.25 acres):
 Township 20 North, Range 1 West
 Section 2: NWNE, SWNE, SENE, NESE, NWSE, SWSE, SESE

Township 21 North, Range 1 West
 Section 5: SWNE, SENE, SENW, NESW, NWSW, SWSW, SESW, NWSE, SWSE
 Section 8: NWNW, SENW
 Section 20: NENW, SENW
 Section 21: NENW
 Section 35: NESE, SESE

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PROJECT SUMMARY

1. General Description (brief overview)

Roger and Wanda Lou Pergande own and operate a developed cranberry marsh on approximately 340 acres in the Town of Knapp, Jackson County (Attachment 1). A Land Transaction Application, submitted by the Pergandes to Jackson County on August 1, 1995, proposed to trade 921.25 acres (Attachment 2) of privately owned land (23 parcels) for 400 acres (Attachment 1) of County Forest land (10 parcels). All land involved in the proposal is located in the Town of Knapp, Jackson County. If acquired, Pergandes will develop the land and approximately double the size of their existing cranberry marsh.

This environmental assessment (EA) will address the entire development project (except proposed water control structure 3 and reservoir 3 which are to be constructed on land presently owned by the Pergandes) although portions of proposed reservoir 1, reservoir 2 and bed group 1 lie outside the county forest land applied for withdrawal.

Additional information regarding this project is available at DNR offices in Black River Falls and Eau Claire.

County Forest Land Proposed for Withdrawal (400 acres)

For purposes of discussion, the county forest land proposed for withdrawal will be described as the "east development" (Section 27, Town of Knapp) or the "west development" (Section 28, Town of Knapp). Incremental withdrawals and associated conditional statements would be permissible if the overall withdrawal is approved. A biological assessment for the grey wolf is pending for the west development; survey findings may have implications for the final project design and withdrawal options. The biological assessment is further addressed in Section 12.

The proposed east development includes three county forest parcels totalling 120 acres. To partially mitigate for wetland losses caused by the entire development, 36.8 acres of new wetlands will be created. Cranberry beds, predominately located on land presently owned by the Pergandes, will be developed on 14.72 acres.

The proposed west development includes seven county forest descriptions on 280 acres. Cranberry beds on 50.24 acres and mitigation wetlands on 44.3 acres will be created. Two dams, water control structure 1 and water control structure 2, (Attachment 4) are proposed to be constructed across a tributary of McKenna Creek in Section 28, T21N, R1W creating water impoundments (reservoir 1 and reservoir 2) on approximately 71.2 acres (289.5 acre-feet). Water control structure 4 will be installed on a smaller tributary in the SWNW as part of the mitigation development.

Timber rights will be retained by Jackson County for both the east and west developments; timber removal will be scheduled to accommodate timely bed development.

Ingress and egress rights for public hunting and fishing are proposed to be retained by the county in accordance with the Jackson County Forest 10-Year Plan, Section 420.1.1. After development, interest and demand for these recreational opportunities may decline on the site. Posting of developed beds is allowed under existing county ordinances, however, any posted sign also must state the public's rights and uses of the land.

If withdrawn, a reversionary clause in the deed would restrict land use to cranberry culture, including beds, ditches, dikes, and support facilities.

Private Land Proposed for Trade (921.25 acres)

All or part of sixteen legal descriptions (599 acres) are entered under the Managed Forest Law - Open program, (Attachment 2). In accordance with state

status, designated lands are available for public hunting, fishing, hiking, cross country skiing and sightseeing. A written management plan outlines mandatory forestry practices to be completed during a 25 year period (1990 - 2014). If traded to the county, these lands will be required to be withdrawn from the tax law program. Managed Forest Lands transferred to governmental units for public forest use are not assessed a withdrawal penalty.

These lands will be applied for entry as County Forest land as a condition of withdrawal following execution of the deed. The county would then manage the lands in accordance with the County Forest 10-Year Plan.

A deed restriction on most of the trade lands provides absolute sphagnum mosing rights to the Epstein Family Trust. On 21 parcels approximately 840 acres, (Attachment 3) the Trust has a lease agreement dated May 24, 1980, with American Foliage Mart for the exclusive right to harvest sphagnum moss on the property. A mutually agreed upon price would be paid for harvested sphagnum moss should the county opt to continue to manage the mosing beds.

2. Purpose and Need (include history and background as appropriate)

The purpose of the land exchange and withdrawal is to expand an existing cranberry operation owned by Roger and Wanda Lou Pergande in the Town of Knapp, Jackson County. The project involves creation of two water impoundments on 71.2 acres and development of 64.96 acres of cranberry beds. Portions of the beds and reservoirs will be constructed on land currently owned by the Pergandes. Bed development is projected to begin in 1997 and would continue during the ensuing eight to ten years.

The Pergandes' present cranberry operation is surrounded by county forest land and cranberry enterprises under different ownership. Both the east and west development of the county forest land proposed for withdrawal are adjacent to the Pergandes' existing cranberry operation. The blocking of ownership will create efficient marsh expansion, including provisions for additional water supplies.

The 921.25 acres of private land proposed for trade lies within the approved county forest boundary and improves ownership blocking of public land. These are land use objectives stated in the Jackson County Forest 10-year plan.

3. Authorities and Approvals (list local, state and federal permits or approvals required)

The "Cranberry Law" (s. 94.26 Wis. Stats.) of 1867 provides cranberry producers the right to build, erect, keep up and maintain dams on and across any stream, ditch, sluice, slough or any body of water as necessary for the purpose of flooding marshlands.

The construction of cranberry beds, ditches, dikes, roads, and other related structures in wetlands is a regulated activity under Sections 401 and 404 of the federal Clean Water Act (CWA). Section 404 requires a permit from the U.S. Army Corps of Engineers for fill or other disturbances in wetlands. Section 401 (CWA) requires federal regulatory permits to comply with state water quality standards (NR 103 - Wis. Adm Code for Water Quality Certification).

The withdrawal of land designated as County Forest is authorized under Chapter 28.11, Wisconsin Statutes. A withdrawal request was submitted by a resolution of the County Board of Supervisors and must be approved by the Wisconsin Department of Natural Resources. State law requires that withdrawn lands must be put to a better and higher use and the benefits after withdrawal must outweigh the benefits under continued entry.

The Department's policy regarding withdrawal approval is contingent upon issuance of the necessary permits, including those associated with Wisconsin's water quality certification.

An Army Corp. of Engineering permit application was submitted by Lampert, Lee and Associates on behalf of the Pergandes on June 18, 1996. The Corps will request and must receive a water quality certification from the state prior to the federal permit issuance for wetland disturbance. New wetland creation to offset existing wetland losses due to development is a typical condition of similar project Corps permits. The permit application by Pergandes contains a no net loss proposal for wetland mitigation (81.1 acres of wetland creation, 80.1 acres of natural wetlands lost).

An environmental analysis is part of the withdrawal process and is made available for public comment prior to final approval by the Wisconsin Department of Natural Resources.

4. Estimated Cost and Funding Source

	<u>County Forest Land Proposed for Withdrawal</u>	<u>Private Land Proposed for Trade</u>
Appraised fair market value	\$500/acre	\$575/acre
	East - \$60,000	Total - \$530,000
	West - \$140,000	
Moss operation value		\$22,000
Timber stumpage value*	East - \$4,500	\$60,000
	West - \$26,000	

* Jackson County Forest Administrator estimate, excludes an 80 acre timber sale under contract on trade land.

The fair market value appraisal was certified on July 9, 1996, by Richard A. Mertig, DNR Land Agent in Black River Falls, WI. The Jackson County Forest 10-Year Plan requires lands traded for high value developments, such as cranberry operations, be traded at not less than double the appraised value as established by a qualified real estate appraiser.

As stated in Jackson County Board Resolution 81-11-95, the Pergandes will bear the cost of abstracting, title insurance, surveying, engineering, repayment of state aids, appraisals, incidental costs, permit costs, constructing and maintaining dams, and payment of the full portion of taxes in the year the private land is traded.

PROPOSED PHYSICAL CHANGES (More fully describe the proposal)

5. Manipulation of Terrestrial Resources (include relevant quantities - sq. ft., cu. yard., etc.)

County Land Proposed for Withdrawal

During an eight to ten year period vegetation will be removed or altered and replaced with two water storage reservoirs, 1 wetland impoundment and approximately 4.4 miles of dikes encircling five cranberry bed groups (20 beds) and approximately 5.0 miles of dikes between the beds. (See attachment 4)

The proposed beds will range in size from 3.14 - 3.68 acres and have an approximate depth of 18 inches.

Dikes are typically two to seven feet above bed elevation and 20 feet wide at the top with a 3:1 side slope tapering to a 44 foot bottom width in the reservoirs and ditches and a 26 foot bottom width between the beds. Most dikes will have paralleling flood ditches for water conveyance between beds and the reservoirs. Water flow will be done by gravity or a pump station system. Ditch excavation material, dug by backhoe or dragline, will be used for dike construction material.

Culvert structures will be used to control water levels in the reservoirs and wetland mitigation area. Each structure will have twin galvanized aluminum culverts either 6' or 8' in diameter. Native, clean fill material will be utilized at culvert locations. All disturbed areas on the project site will be finished with six inches of topsoil and seeded. Slotted frames will front each structure to contain stop logs for water level control. Inlets and outlets will be gradually sloped, overlain with geotextile fabric and riprapped. Emergency overflow sections will be incorporated into the water control structures.

The water control structure construction, as proposed, will occur during the lowest stream level reasonable with no planned physical diversion of stream flow. However, a temporary diversion of the stream flow during construction could prevent erosion and downstream sedimentation as well as allow structure construction in dry or drier conditions.

Interior dikes will surround each cranberry bed group with smaller dikes separating the beds. Each new bed will have two 24" diameter culverts for water inlet (flood) and outlet (drain).

The upper 12 inches of soil from the authorized fill areas will be scalped and stockpiled at an upland location for use as topdressing within the wetland mitigation site(s). The wetland mitigation sites shall be excavated one foot below final grade elevation. The stockpiled soil shall be spread as a 12-inch thick topdressing to bring the mitigation site to final grade. Two small (less than 5 acres) wildlife ponds will be created as part of the mitigation plan.

Existing Timber Types (all parcels):

	<u>East</u>	<u>West</u>
Open sedge marsh/low swamp	50 acres	100 acres
Upland oak	70 acres	
Aspen/oak		180 acres

Proposed cranberry development:

Cranberry bed groups	14.72 acres	50.24 acres
Reservoir storage		71.2 acres (289.57 acre ft)
Wetlands lost	9.3 acres	70.8 acres
Wetlands created (mitigated)	36.8 acres	44.3 acres

Private Lands Proposed for Trade

Existing Timber Types (all parcels):

Marsh	10 acres
Moss (commercial)	160 acres
White pine swamp	40 acres
Upland oak	445.25 acres
Lowland hardwood	30 acres
Oak/aspens	40 acres
Regeneration	196 acres

Once acquired by the county, these lands will be entered under the County Forest Law. Land management will be in accordance with the Jackson County 10-Year Plan implementing multiple-use concepts and sustainable forestry. Commercial moss production may continue on up to 160 acres.

6. **Manipulation of Aquatic Resources (include relevant quantities - cfs., acre feet, MGD, etc.)**

County Land Proposed for Withdrawal

Reservoir 1 is proposed to be constructed in the west development in the SWNE, Section 28, T21N, R1W on an un-named tributary (Creek 28-2) of McKenna Creek. Total surface area of Reservoir 1 is projected to be 11.5 acres (80.4 acre-feet). Reservoir 2 is proposed to be constructed in the west development in the NESE, Section 28, T21N, R1W on an un-named tributary (Creek 28-2) of McKenna Creek. Total surface area of Reservoir 2 is proposed to be 59.7 acres (209 acre-feet). Each reservoir will have an average water depth of 5 feet.

The average flow of Creek 28-2 is 3.79 cfs. With a combined total water storage capacity of approximately 290 acre-feet for the two proposed reservoirs, it would take approximately 39 days for initial reservoir filling if all flow is diverted. A partial diversion would take longer but prevent complete dewatering of down gradient stream channels and provide associated protection of fisheries or other aquatic resources. A diversion limit could be required by DNR. Water stored in reservoirs will be routed to beds as needed for flooding. When beds are drained, water will be returned to the reservoir until the next bed flooding cycle. Water levels in the reservoirs will be subject to a maximum of three draw downs per year for bed flooding of up to one foot according to Pergandes' consultant. Sprinkling withdrawals will be more frequent. Associated unstable water level conditions may limit habitat value for aquatic species that utilize the reservoir. The ditch system would also be subject to fluctuating water levels.

During drought conditions engineers for the project estimate that no more than 75% of the flow in Creek 28-2 will be diverted for cranberry operations. McKenna Creek drains northerly into Potters Flowage approximately one mile downstream.

After the reservoirs are filled and during normal flow conditions the stream flow is not expected to be substantially altered.

New reservoirs, dikes and ditches also could be used for flooding operations at existing beds, thereby adding diversity and reliability to overall marsh operations.

As part of the mitigation plan, water control structure 4 will be installed on a small creek running through the SWNW of Section 28 raising the water table approximately four feet. The steep banks of the creek will be reduced to a 8:1 slope. Water levels will be coordinated with an upstream cranberry grower (Naden) to eliminate water backing up on upstream properties.

Prediction of water quality degradation of the receiving water from cranberry expansion is somewhat speculative due to lack of information on chemical usage levels and flow diversions from streams to reservoirs to beds. See additional discussion on Sections 8, 18 and 21.

Private Lands Proposed for Trading

No manipulation of an aquatic resource is anticipated. Best management practices for water quality would be incorporated, where appropriate, in timber sale design and harvest operations.

- 7. Buildings, Treatment Units, Roads and Other Structures (include size of facilities, road miles, etc.)**

County Land Proposed for Withdrawal

Pumping stations, roads, ditches, and dikes associated with bed development and water control structures will be built in stages over eight to ten years. No new buildings or other structures are anticipated.

The proposed water structures and associated reservoirs will be confined to county forest land thereby reducing potential negative impact on a historical logging camp and saloon site north of the project area.

Private Land Proposed for Trading

Presently there are no structures on these lands; once acquired by the county, no new buildings, permanent roads or structures are anticipated.

Moss drying beds are located in Section 2 of South Knapp Township and Sections 5, 8, and 21 of North Knapp Township.

8. Emissions and Discharges (include relevant characteristics and quantities)

A 1992 WDNR study of two cranberry operations in Jackson County found pesticide levels in receiving waters below the marsh sufficient to cause toxicity to test organisms. Elevated ambient downstream temperatures appeared to be a result of cranberry marsh complexes.

The exact changes to water quality from this proposal to expand operations in the McKenna Creek watershed and downstream receiving waters (Potters Flowage and Morrison Creek) are unknown. Fertilizer and pesticide applications are commonly used in cranberry operations. Pergandes retain an Integrated Pest Management (IPM) consultant approximately one day per week during the growing season to oversee chemical use on their cranberry operation. No studies have been conducted to determine current levels or remaining tolerances of McKenna Creek to additional chemical loads that would occur with this expansion proposal.

Temperature changes are not expected to be a concern as downstream waters contain warm water fisheries.

Other discharges may include fossil fuel and exhaust emissions associated with site preparation, dam/bed construction and maintenance/harvesting operations and would be greatest during the construction phase of the project.

9. Other Changes

None

10. Identify the maps, plans and other descriptive material attached

Attachment 1	Pergandes' Current Ownership County Forest Land Proposed for Withdrawal
Attachment 2	Private Land Proposed for Trading Managed Forest Law Designation
Attachment 3	Water Structure Locations Mossing Lease Locations
Attachment 4	Project Development
Other	County Wetlands Maps (Available at DNR offices)

AFFECTED ENVIRONMENT (Describe existing features that may be affected by proposal)

Information Based On (check all that apply):

Literature/correspondence (available at DNR offices in Black River Falls and Eau Claire)

The Impacts of Commercial Cranberry Production of Water Resources, Ken Schreiber, Bureau of Water Resources Management, Department of Natural Resources, March, 1988.

Biomonitoring Below Two Commercial Cranberry Marshes in Jackson County, Wisconsin. Ken Schreiber, Wisconsin Department of Natural Resources, December, 1993.

Wisconsin Agricultural Statistics Service, Noncitrus Fruits & Nuts Preliminary, January, 1996.

Surface Water Resource of Jackson County, DNR, 1968.

Wisconsin Wetlands Inventory, Jackson County, 1979.

Endangered Resources Information Review (Log Number 96-28), Wisconsin Department of Natural Resources, memo dated February 19, 1996.

Jackson County Forest 10-Year Plan, (1985-1994).

Soils maps

Wetland maps

Jackson County Forestry and Parks Committee memo, November 9, 1995.

Lampert, Lee & Associates LLA #96-014 memos, January 19, 1996 and June 19, 1996.

U.S. Fish and Wildlife Service memo, September 23, 1996.

[x] Personal Contacts (list in item 28)

Field Analysis By: [x] Author [x] Other (list in item 28)

Past Experience With Site By: [x] Other (list in item 28)

11. **Physical (topography - soils - water - air)**

County Forest Land Proposed for Withdrawal

Existing soil types include: Da (Dawsil mucky peat), IrA (Ironrun sand), IxA (Ironrun-Ponycreek), Pv (Ponycreek-Dawsil), RkA (rockdam sand); all with 0-3% slope. Soil profiles will be disturbed and replaced primarily with sand.

Aspen, oak, maple and sedge marshes, typical to Jackson County, are found on these generally flat parcels.

Air quality is good.

McKenna Creek, a very soft, medium brown colored water, ditched at upper end, with a sand bottom, supports a fishery of panfish and bullheads. Creek 28-2 is dark brown, very soft water with primarily a sand bottom and supports a fishery of forage species.

Existing wetlands, an estimated 104 acres, are primarily type E2H (emergent/wet meadows, narrow leafed persistent, standing water). In the east development 9.3 acres of natural wetlands will be lost, but mitigated with 36.8 acres of uplands. In the west development 70.8 acres of wetlands will be lost and 44.3 acres mitigated.

Marsh excavation from dike construction will be salvaged and used for top dressing mitigation sites to provide for native wetland plant species colonization. Additional information on the proposed wetland mitigation plan is available at the Department of Natural Resources office in Eau Claire.

Private Lands Proposed for Trading

Soil types present include: Da (Dawsil mucky peat), IrA (Ironrun sand), IxA (Ironrun-Ponycreek), Pv (Ponycreek-Dawsil), RkA (rockdam sand); all with 0-3% slope.

Mature and rejuvenated stands of oak and aspen, sphagnum moss, sedge marsh, white pine swamp and jack pine are present on the site.

Approximately 292 acres of the area are mapped as wetlands, primarily type E2H. Other wetland types present are T3K (forested, broadleaved deciduous, wet soil)

and E2MOHV (emergent/wet meadow narrow leaved persistent, moss, standing water).

A commercial mowing operation exists on 21 parcels. Harvesting occurs on a five to eight year rotation schedule, however some beds are harvested annually. Jackson County may continue to commercially manage the moss beds.

A net increase of 521.25 acres in public ownership will occur as a result of this project. Blocking within the established boundaries of the Jackson County Forest will be improved and consolidated. This is consistent with the approved Jackson County 10-year plan.

12. Biological (dominant aquatic and terrestrial plant and animal species and habitats including threatened/endangered species; wetland amounts, types and hydraulic value)

Common animals using the area include: beaver, puddle ducks, nesting wood ducks, ruffed grouse, whitetail deer, mink, otter, muskrat, raccoon, sandhill crane, green heron, great blue heron, songbirds, turkey, and other small mammals and reptiles.

The DNR Bureau of Endangered Resources and the U.S. Fish and Wildlife Service report there are no occurrence records of endangered, threatened or special concern species or natural communities, nor of any state natural areas for the specific project area in Section 27 and 28 of T21N, R1W, Jackson County. Comprehensive surveys have not been completed specifically for the project area so data files may be incomplete.

Federal listed threatened and endangered species in the vicinity or within Jackson County include the bald eagle, grey wolf, Kirtland's warbler and Karner blue butterfly. Federal listed species of concern in the area of Jackson County include the Blandings turtle and eastern massasauga rattlesnake. According to the U.S. Fish and Wildlife Service, other than the grey wolf and related travel corridors, the above species are not known to be in the project area and are not likely to be affected by the proposed development.

The U.S. Fish and Wildlife Service (USFWS) has requested that a Biological Assessment be completed for the grey wolf; the western development is of primary concern. While providing this information is the responsibility of the applicant, the USFWS recommends that tracking be performed by independent and trained personnel. Monitoring should be conducted weekly. Assistance from Department of Natural Resources staff will be limited; during the 96-97 winter DNR wildlife personnel may help delineate tracking transect lines. If animals are subsequently radio-collared in the project area by the department, data would be provided to the permittee. If the assessment indicates the project, as proposed, will adversely affect the wolf, then the Army Corp of Engineers has been advised by USFWS they should request to enter into a formal consultation with the USFWS as required by Section 7 of the Endangered Species Act of 1973 prior to Corps' permitting the western development.

The findings of the biological assessment could impact whether the east and west developments can be permitted by the Corps and under what conditions. Similarly, the findings could effect parts of the withdrawal. The Department of Natural Resources will continue to process the withdrawal application. Any withdrawal approval would be conditioned so that if the Corps permit was denied or partially approved to protect wolf habitat, development could not proceed and the withdrawal of such lands would be voided.

Because of known occurrence of the Karner Blue Butterfly within Jackson County, the U.S. Fish and Wildlife Service requested an assessment of the presence or absence of the species within the project area. A Karner Blue Butterfly Presence/Absence survey was completed in June, 1996, by Jackson County forestry staff. No lupine (host plant for Karner Blue Butterfly) was found on any of the county forest sites proposed in the withdrawal. A lupine/Karner blue butterfly survey was not conducted on the private lands. On land traded to the

county, surveys would be conducted prior to implementing land management activities which may destroy critical habitat.

The Martin Marsh, a natural community of average species diversity consisting of sedge bog, mossed areas and some undisturbed areas, is found within Sections 5 and 8, T21N, R1W of the trade parcels. Jackson County intends to keep natural bogs, unless previously commercially mossed, in an undisturbed condition.

13. Cultural

There are no known ethnic or cultural group implications in this project area.

a. Land use (dominant features and uses including zoning if applicable)

County Land Proposed for Withdrawal

These lands are zoned as C-1, Resource Conservancy District which allows wildcrop harvesting.

Private Land Proposed for Trade

These lands are zoned as A-2 which allows forestry and limited agriculture.

b. Social/Economic (include ethnic and cultural groups)

Jackson, Monroe and Wood counties accounted for 63% of the total state production of cranberries in 1987. The 1992 census of Wisconsin cranberry growers show that the state payroll average for cranberry production was \$225,000 per grower. This included an average of 4.4 full time employees and 16.4 seasonal employees. The estimated cost of a cranberry operation was \$5,263 per acre. Bed development costs range from \$20,000 - 40,000 per acre depending on the size of operation, equipment used, irrigation systems, and fuel and plant costs. The Wisconsin Cranberry Growers Association reported in 1996 that the 1995 assessed value of a 100 point bed was \$11,227.

County Land Proposed for Withdrawal

The Pergande expansion project will improve permanent and seasonal employment opportunities in the area. This will create secondary/value added multipliers at the local and statewide levels. The construction phase of the project will provide short term employment annually for eight to ten years. Some construction may be completed by the Pergandes as a cost savings.

The Pergandes state their current labor production is approximately \$1800 per acre. Currently ten part time employees are hired during the planting and harvesting periods (one week each) in addition to the four full time staff. An additional two full time employees and ten seasonal workers are anticipated for employment when the project is fully operational (8-10 years).

Recreational use of the property will change and be can restricted in developed bed areas. Deer hunting use will end with flowage and bed development and construction of deer proof fencing. Recreational hunting use in Jackson County in deer management unit 55 averaged 30 hunters/square mile on opening weekend of the 1995 deer gun season.

Private Land Proposed for Trade

599 acres of the 921.25 acre withdrawal parcels are designated as Managed Forest Law and are open to public access for hunting, fishing, hiking, sightseeing, and cross country skiing. Public recreational use will continue under county ownership. Reduced property taxes were paid by the private landowner and the county and townships were compensated with state aid reimbursements. If ownership is transferred to the county, the state aid payments to the county and town for MFL designation will end. When designated

as County Forest Lands, \$0.30 per acre per year state aid payments will be initiated to the towns.

Local jobs and revenues associated with timber sales will be generated as this land is managed in accordance with the approved Jackson County 10-year plan. Similar impacts could be expected with continued private ownership.

c. Archaeological/Historical

County Land Proposed for Withdrawal

According to the State Historical Society of Wisconsin two historical sites dating back to the late 1880's are adjacent to the northern boundary of the west development in Sec 28 North Knapp Township. The McKenna site contains remnants of a sawmill, accompanying logging town and a narrow gauge railroad. This site is recorded in Wisconsin's Inventory of Historic Places and has been applied for designation as a national historic site. If listed, site protection measures may be necessary. The lumbering era Baunel Saloon site is located on the northwest border of the proposed withdrawal area in Sec 28, North Knapp Township outside the project area.

The proposed project has been modified from the original proposal to ensure that the mill site will not be negatively impacted from bed development or creation of water impoundments.

Private Land Proposed for Trade

None known.

14. Other Special Resources (e.g., State Natural Areas, prime agricultural lands)

None known.

ENVIRONMENTAL CONSEQUENCES (probable adverse and beneficial impacts including indirect and secondary impacts)

15. Physical (include visual if applicable)

County Land Proposed for Withdrawal

Existing vegetation (woodlands and natural wetlands) will be removed or altered and converted into cranberry beds, water impoundments and support structures. This will create a permanent physical and visual change to the landscape.

Construction of beds may cause short term soil erosion until beds are planted and dikes re-vegetated. This may result in turbidity and sedimentation in downstream waters. The relatively level grade of the construction area and surrounding lands should preclude serious soil erosion providing standard construction site erosion control practices are employed.

Water flows in McKenna Creek, Creek 28-2 and downstream receiving waters will be altered during initial reservoir flooding and periodically for bed maintenance, watering, pesticide application, frost protection and harvesting. These changes will increase water temperatures and alter the extent and/or type of wetlands present. Deposition of an increased level of contaminants into the receiving waters from fertilizers and pesticides is anticipated. As a worst case scenario during drought conditions, up to 75% of the stream flow in McKenna Creek and Creek 28-2 would be diverted to project reservoirs. Groundwater levels may also change in response to managed water levels in created impoundments and cranberry beds.

West Central Regional (DNR) water resources staff expressed concerns about the lack of information to evaluate receiving waters from cranberry operations. A conditional statement that surface and ground water monitoring be conducted to evaluate the impacts of marsh expansion on water quality may be incorporated

into the water quality certification portion (Sec. 401) of the Corps Sec 404 permit.

Ditch maintenance activities may be temporarily disruptive to the water quality of McKenna Creek and its tributaries through increased sedimentation and resuspension of sediment.

Private Lands Proposed for Trade

Trade parcels should not be altered.

16. Biological (include impacts to threatened/endangered species)

County land proposed for withdrawal

Altered flows of McKenna Creek and Creek 28-2 downstream from the proposed cranberry bed operation may be detrimental to stream community and associated aquatic flora and fauna which are dependent on well oxygenated, flowing water for survival. 1967 data for Creek 28-2, a tributary to McKenna Creek, has a low flow rate of 0.15 cfs which is not likely to provide a favorable water exchange rate to support a fishing resource. Studies by Schreiber (1988, 1993) indicate that the loss of base flow of stream is more critical to warmwater fisheries resources than increased water temperatures.

Flow reduction downstream when impoundments are being filled, diversions from impoundments to beds (lowering water levels and impacting resident aquatic resources) and draining beds with associated increase in flow or chemicals downstream are unquantifiable concerns. Flow increases are likely to be similar to a minor flood event and can cause stream bank erosion, interfere with fish respiration and feeding patterns.

100% of the discharge waters from the cranberry beds typically will be returned into the proposed reservoirs for recycle. An estimated 30% of the water will be lost to seepage.

Although typical cranberry flowages are infertile, have acidic water, and are unproductive from a wildlife standpoint they may provide favorable habitat for common bird species such as waterfowl, wading birds and shore birds and for common furbearer (i.e. muskrat, beaver, mink, otter). Use may be minimal or dependent upon fluctuating reservoir depths. The reservoirs may create potential habitat for such warmwater fish species as large mouth bass, northern pike, black crappie, black bullhead and other pan fish and forage species. Deleterious effects on amphibians, reduction in food abundance and decreased reproductive success also may result. Reservoirs may winter kill due to their typically shallow depth.

Fertilizers and pesticides used in cranberry production to sustain and improve yield have been known to negatively impact aquatic flora and fauna in receiving waters. The following chemicals were applied in 1995 on the existing cranberry operation owned by the Pergandes: Casoron, Funginex, Diazinon, Guthion, Roundup, Sevin XLR. These were applied primarily by ground application once monthly in May, June and August and twice a month during July. Fertilizers were applied every two weeks from May through August at 50-100 pounds per acre. These applications were reported to Ocean Spray Cranberry, Inc.

There will be an increase in sediments discharged downstream as a result of the cranberry expansion. Phosphorus and some pesticides used in cranberry operations commonly attach themselves to soil particles which may adversely affect downstream aquatic organisms as well as those higher level animals which feed on them.

A cumulative loss of natural wetlands, upland wildlife habitat and habitat diversity will occur as a result of this project. The loss of existing emergent meadow wetlands may be offset somewhat by creation of shallow open water wetland communities though these typically demonstrate lower quality habitat and decreased plant growth.

Private Lands Proposed For Trade

No substantial negative biological impacts are expected on the trade parcels.

There are several known wolf packs near to the project area and some animals may occasionally range over the area. The incorporation of trade lands into the county forest system will result in a net gain in public lands the management of which would likely increase the degree of protection of these lands as wolf habitat.

17. Cultural

a. Land Use (include indirect and secondary impacts)

County Land Proposed for Withdrawal

Lands will be used for the expansion of existing cranberry operations.

Private Land Proposed for Trade

No substantial changes are expected. In addition to continuing mowing operations, lands will be managed in accordance with the Jackson County 10-year plan which promotes multiple use concepts and sustainable forestry.

b. Social/Economic (include ethnic and cultural groups, and zoning if applicable)

A net increase of 521.25 acres of county forest land will occur as a result of this project. Blocking within the established boundaries of the Jackson County Forest will be improved and consolidated which is consistent with the approved Jackson County 10-year plan. An increase in the local tax base and additional jobs are expected from the proposed land trade.

There are no known ethnic nor cultural implications in this project.

c. Archaeological/Historical

County Land Proposed for Withdrawal

While sites of historical significance are known to be adjacent to the proposed west development project boundary, their historic value will not be directly impacted nor compromised.

Private Land Proposed for Trade

None known.

18. Other Special Resources (e.g., State Natural Areas, prime agricultural lands))

None known.

19. Summary of Adverse Impacts That Cannot Be Avoided (more fully discussed in 15 through 18)

County Land Proposed for Withdrawal

Vegetative cover on 400 acres and associated wildlife habitat will be permanently altered reducing biological diversity on the site.

An unknown level of sedimentation and water quality contamination from fertilizers and pesticides will occur to downstream surface waters and groundwater.

Periodic streamflow changes and expected increased stream temperatures could impact the warmwater fisheries and other aquatic resources downstream. Limits on diversion rates at initial reservoir filling should help minimize negative effects. The creation of two water storage reservoirs and two wetland mitigation sites will largely offset these adverse impacts.

The aesthetic value of the land will change.

Potential impacts to the grey wolf are still being evaluated. Any approved withdrawal would be conditioned under determination by USFWS to prevent adverse impacts to the grey wolf.

Private Land Proposed for Trade

In general the vegetative composition and value of wildlife habitat will remain unchanged. When timber is harvested from these lands, the aesthetic value will temporarily be altered. Sale design and timing of harvest can reduce these perceived negative impacts.

ALTERNATIVES (no action - enlarge - reduce - modify - other locations and/or methods)

20. Identify, describe and discuss feasible alternatives to the proposed action and their impacts. Give particular attention to alternatives which might avoid some or all adverse environmental effects.

No action:

Expansion would be limited to the Pergandes' current land holdings or to acquisition of other non-contiguous private lands with the necessary water source. Lands in the NWSE, Sec 27, North Knapp Township east of the road are currently being developed into beds.

Enlarge:

Limited opportunities in the immediate area exist due to other adjacent cranberry operations and Jackson County policies regarding removal of county forest lands from the public domain. An adequate water supply may not be readily available.

Although the current engineering plans do not fully utilize the east development acreage into cranberry beds, the Pergandes' long range plans are to continue expansion of their cranberry operation in this direction. Portions of the land in the east development are required for mitigation purposes for wetlands lost in the west development. Even so, additional lands remain available on the east withdrawal site for future bed development.

Reduce:

Downsizing may jeopardize the economic viability of the project due to fixed costs for land purchase, pumping equipment, and water control structures. Land disturbance would be lessened, applications of fertilizers and pesticides would be decreased reducing the potential for declining water quality. This alternative would not meet the projected growth needs of the Pergandes.

The county forest administrator explored options for retaining portions of the land proposed for withdrawal and developing a wetland maintenance agreement with the Pergandes. This option was viewed as cumbersome and not an acceptable alternative by the county.

Modify:

The original proposal was to construct one dam and reservoir and to lease adjacent county forest land. This plan was modified so that impacts on the county forest land and the historic logging site were reduced or avoided. The modification allows all proposed improvements to be within the confines of Pergandes' land ownership and the land proposed for withdrawal.

Planned beds on 34.8 acres were removed from the initial proposal to minimize wetland impacts.

Results of the biological assessment for the grey wolf may influence the issuance of the Army Corps of Engineers permit. If the Corps permit is partially or completely denied, development would no longer be possible for that portion of the proposal. Acreage proposed for withdrawal in the east development, specifically lands required for mitigation for the west development project, could be reduced.

Other locations:

The 921.25 acre trade parcels were selected because of their availability from a willing seller, Jackson County's 2:1 land appraisal policy and their expected benefits from blocking when added to county forest land.

Other land expansion opportunities do not readily exist on nearby privately owned land since most adjacent lands are existing cranberry operations. Other county forest land would not offer the same benefits, such as proximity to current ownership and an available water supply.

Barring conflicts with wolf habitat, it is probably best biologically to concentrate cranberry operations in one area rather than spreading it out. Segmentation of habitat is avoided thereby helping protect biological diversity, particularly for those species like the grey wolf which requires large undeveloped blocks of woodland habitat such as the county forest and nearby state forest land provide. From a water quality standpoint, however, it is probably better to spread out cranberry operations.

Denial:

Lost potential jobs and expanded tax base, lost opportunities to expand the county forest land base by a net 521.25 acres. Avoids potential impacts or disturbance to biological resources on withdrawal lands and possibly other expansion lands Pergandes already own.

Methods:

Measures which could be required through state water quality certification or as a condition of withdrawal approval to reduce adverse environmental effects:

1. Temporary water diversion during construction around water control structures on McKenna Creek, Creek 28-2 and wetland mitigation site at control structure #4.
2. During initial reservoir filling or when refilling after drawdowns, normal flows in McKenna Creek and its tributaries should not be reduced by more than 25% to prevent dewatering impacts to downstream areas.

EVALUATION OF PROJECT SIGNIFICANCE (Complete each item)

21. Significance of Environmental Effects

- a. **Would the proposed project or related activities substantially change the quality of the environment (physical, biological, socio-economic)? Explain.**

The project would convert 250 acres of upland forest and 150 acres of natural sedge wetland of county forest land to cranberry culture reservoirs, beds, ditches, dikes and artificially created water impoundments. Marsh operations would disrupt existing flow patterns in McKenna Creek and a tributary, resulting in occasional reductions (diversion for reservoir filling) and increases (bed or reservoir drainage) in downstream flow.

Impacts to biological diversity will be offset by reservoir and wetland mitigation site development.

- b. Discuss the significance of short-term and long-term environmental effects of the proposed project including secondary effects; particularly to geographically scarce resources such as historic or cultural resources, scenic and recreational resources, prime agricultural lands, threatened or endangered species or ecologically sensitive areas. (The reversibility of an action affects the extent or degree of impact)

Short term impacts:

Economic opportunities will increase during the construction phase of this project.

Long term impacts:

For the county forest lands proposed for withdrawal this project will: create no net loss of wetlands according to Corps policy, interrupt the hydrological cycle of McKenna Creek and a tributary, increase unknown levels of contaminants to surface and ground water due to pesticide and/or fertilizer applications, alter water temperatures, increase open water habitat, modify the vegetation and land use, alter the visual appearance of the landscape, increase local employment opportunities, increase tax base and change recreational opportunities.

One of the most important potential long term water quality impact of cranberry production is eutrophication of surface waters. Excessive phosphorus stimulates growth of aquatic macrophytes and algae. Organic soils and sand generally have little ability to physically adsorb phosphorus. The reservoirs will have low flushing rates and eventually experience dissolved oxygen depletion which would prevent establishment of a viable warmwater fishery even without a eutrophication problem.

For the private land proposed for trade, no significant environmental effects are known. Acreage acquired will increase the county forest land base.

Economic benefits to the local area as well as statewide will be increased.

Reversibility:

Once converted to cranberry cultivation, it is unlikely the lands proposed for withdrawal could be reverted to their natural state.

Threatened/Endangered resources:

There are no known occurrence of threatened or endangered species on the lands involved in the proposed project, however, the grey wolf is known to range in close proximity. A biological assessment for presence of the grey wolf has been requested the by U.S. Fish and Wildlife Service during the 96-97 winter.

22. Significance of Cumulative Effects.

Discuss the significance of reasonably anticipated cumulative effects on the environment. Consider cumulative effects from repeated projects of the same type. What is the likelihood that similar projects would be repeated? Would the cumulative effects be more severe or substantially change the quality of the environment? Include other activities planned or proposed in the area that would compound effects on the environment.

Cumulative environmental effects may include: increased acreage of county forest lands, better blocking of public ownership, unknown degree of degradation to surface water quality (increased water temperatures, chemical contamination, sedimentation and streambank erosion), no net loss of wetlands, and a change with some loss of wildlife habitat. Future expansion requests may further increase impacted wetland acreage.

Approval of this proposal may encourage other cranberry growers to look toward the public land base for acquisition. Wisconsin is considered a prime location for cranberry expansion due to exemptions under the "Cranberry Law", an abundant water supply, appropriate soil conditions and low cost of land.

23. Significance of Risk

- a. **Explain the significance of any unknowns which create substantial uncertainty in predicting effects on the quality of the environment. What additional studies or analyses would eliminate or reduce these unknowns? Explain why these studies were not done.**

Grey wolf studies are underway. Any withdrawal approvals would be subject to these findings through any Corps permit decision(s) before construction could occur.

Cumulative water quality impacts of cranberry marsh expansion is speculative due to lack of quantitative, scientific information available on the impacts of these operations on water quality. Research on pesticide and nutrient loading from cranberry marshes is essential to adequately assess the potential impacts from these operations.

- b. **Explain the environmental significance of reasonably anticipated operating problems such as malfunctions, spills, fires, or other hazards (particularly those relating to health or safety). Consider reasonable detection and emergency response, and discuss the potential for these hazards.**

A dam or dike failure may occur following localized heavy precipitation and may result in downstream bank erosion, habitat destruction and accelerated sedimentation of Potters Flowage.

Chemical spills (pesticides, fertilizers) may occur possibly contaminating surface and ground waters. In these circumstances the grower is responsible for remedial action with the department.

24. Significance of Precedent

- a. **Would a decision on this proposal influence future decisions or foreclose options that may additionally affect the quality of the environment? Explain the significance.**

In the past 15 years, twelve withdrawal requests resulted in 700 acres of Jackson County Forest land being withdrawn for cranberry expansion. During the same period two requests were denied and one application withdrawn by the applicant. Similar withdrawals have occurred in surrounding counties. The Pergande proposal represents the largest withdrawal application for cranberry culture in Jackson County. Previous withdrawals have ranged between 20 acres and 160 acres.

Determining this proposed project as a "higher and better use" of county forest lands for the citizens of Wisconsin may influence the number of withdrawal applications received by Jackson County and the ultimate acreage withdrawn from the public domain for the purposes of cranberry cultivation. The Department considers each withdrawal request on its own merits and with respect to potential cumulative effects when combined with other similar existing or proposed projects.

- b. **Describe any conflicts the proposal has with plans or policy of local, state or federal agencies that provide for the protection of the environment. Explain the significance.**

This proposal is consistent with Chapter 400 (Land Acquisition) of the Jackson County 10-Year Plan which states an intent to preserve and protect the public land base. Requests for purchase of county-owned land within

the forest boundary will not normally be considered. This proposal meets Jackson County's minimum appraisal value for lands being traded.

Federal wetland policy is for a no net loss of wetland acreage or quality. State wetland policy NR 1.95 is for wetland preservation and avoidance of adverse impacts to wetlands. Wetland avoidance has been incorporated into project design. Mitigation proposals attempt to address federal "no net loss" policies. The Corps of Engineers will determine if this standard is being met. The Department can influence the Corps' evaluation through the water quality certification process. Any withdrawal approval would be contingent on Pergandes' receipt of other necessary permits.

25. **Discuss the effects on the quality of the environment, including socio-economic effects, that are (or are likely to be) highly controversial, and summarize the controversy.**

No other environmental effects other than those previously mentioned. Socio-economically speaking lands under cranberry cultivation are assessed at a higher tax value than forested lands. This may tend to favor a withdrawal approval due to economic benefits when biological or other non-economic effects would tend to favor denial of the withdrawal.

26. **Explain other factors that should be considered in determining the significance of the proposal.**

None

SUMMARY OF ISSUE IDENTIFICATION ACTIVITIES

27. **Summarize citizen and agency involvement activities (completed and proposed).**

A public information meeting for the proposed project was convened at a joint meeting between the Forestry and Parks Committee and the Tax Deed and Land Committee on November 9, 1995. One member of the public was present. A motion was carried to approve the proposal.

The Jackson County Board resolution concerning the withdrawal of county forest land was in the minutes of the meeting and published in the local newspapers.

News releases in the local paper will alert the public that this environmental assessment is available for review and comment.

On July 25, 1996, the Department of the Army published a public notice regarding the application for a permit to discharge fill material into wetlands. The Pergandes have requested the permit be addressed in two phases; the east development and the west development. The Department anticipates approval of the water quality certification for the east development since only 9.3 acres of wetlands are impacted. Approval of the west development will be partially dependent upon the biological assessment findings and the total wetlands impacted.

28. **List agencies, groups and individuals contacted regarding the project (include DNR personnel and title).**

<u>Date</u>	<u>Contact</u>
ongoing	Robert Hess, Jackson County Forest Administrator
ongoing	Tom Quilty, DNR, Area Forestry Staff Specialist
ongoing	Roger & Wanda Lou Pergande, applicant and their consultants
ongoing	Tim Babros, DNR, Water Regulations and Zoning
1/21/96	Robert F. Boszhardt, Mississippi Valley Archaeology Center
2/8/96	Wisconsin Agricultural Statistical Service
2/19/96	Charles Pils, DNR, Endangered Resources
12/11/96	
2/27/96	Chip Harry L. Brown III, State Historical Society of Wisconsin
3/7/96	David Epstein, Epstein Family Trust
3/8/96	Tom Lochner, Wisconsin State Cranberry Growers Assn.

3/18/96 Sherman Banker, State Historical Society of Wisconsin
11/27/96
4/18/96 Joel Trick, U.S. Fish and Wildlife Service
10/28/96
5/22/96 Jim Talley, DNR, Fish Management
5/24/96 Chet Pryga, DNR, Area Forestry Supervisor
5/28/96 Dick Thiel, DNR, Outdoor Skills Center, wolf specialist
5/29/96 Ken Jonas, DNR, Wildlife Management
6/3/96 Ken Schreiber, DNR, Water Resources
12/30/96
9/23/96 Janet Smith, U.S. Fish and Wildlife Service
11/96 Bruce Norton, U.S. Army Corps of Engineers
12/4/96
12/2/96 Ralph Eswein, Local Historian
No date Laurel Riedel, Crantrrol

DECISION (This decision is not final until certified by the appropriate authority)

County Forest Withdrawal and Land Trade (Perqande)
Project Name

Jackson County
County

In accordance with s. 1.11, Stats., and Ch. NR 150, Wis. Adm. Code, the Department is authorized and required to determine whether it has complied with s. 1.11, Stats., and Ch. NR 150, Wis. Adm. Code.

29. Complete either A or B below.

- a. EIS Process Not Required [XX]

Analysis of the expected impacts of this proposal is of sufficient scope and detail to conclude that this is not a major action which would significantly affect the quality of the human environment. In my opinion therefore, an environmental impact statement is not required prior to final action by the Department on this project.

- b. Major Action Requiring the Full EIS Process. []

The proposal is of such magnitude and complexity with such considerable and important impacts on the quality of the human environment that it constitutes a major action significantly affecting the quality of the human environment.

Signature of Evaluator Date Signed

Noted: Area Director or Bureau Director Date Signed

Copy of news release or other notice attached? [] Yes [] No

Number of responses to public notice _____

Public response log attached? [] Yes [] No

CERTIFIED TO BE IN COMPLIANCE WITH WEPA
District Director or Director of BEAR (or designee)

District Director or Director of BEAR (or designee) Date Signed

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed.

For judicial review of a decision pursuant to sections 227.52 and 227.53, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to section 227.42, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

Note: Not all Department decisions respecting environmental impact, such as those involving solid waste or hazardous waste facilities under sections 144.43 to 144.47 and 144.60 to 144.74, Stats., are subject to the contested case hearing provisions of section 227.42, Stats.

This notice is provided pursuant to section 227.48(2), Stats.