DOA 2049. Detailed Economic Impact Analysis Report [ER-27-11], pertaining to the Wisconsin Endangered/Threatened Species List (Chapter NR 27, Wis. Adm. Code)

Additional data for Fiscal Estimate and Economic Impact Analysis (form DOA-2049):

Summary of Rule's Economic and Fiscal Impact:

Pursuant to s. 227.137 Wis. Stats., the Department was required to solicit comments on the economic impact of the proposed rule, and if requested to coordinate with local governments in the preparation of the Economic Impact Analysis (EIA). Comments were collected between 9/24/2012 and 10/24/2012. A total of 18 comments were received. No local governments requested the Department coordinate with them in the preparation of the EIA.

To determine implementation and compliance costs expected to be incurred, Bureau of Endangered Resources staff compiled a list of individuals and organizations who might be economically impacted by the proposed rule revisions. Types of positive and negative effects from both listing/delisting were identified along with a method on how they might be quantified. Given the unknowns and the complexity of assessing the impacts, a relative impact of low-moderate-high (L/M/H) was determined. The economic cost of listing a species is highly dependant on its range and distribution, seasonal occurrence, habitat requirements, management needs, sensitivity to disturbance etc.

Examples of relative impacts of currently listed species:

* Henslow's Sparrow (Ammodramus henslowii) - Since only the species is protected and not its habitat, impacts to birds can easily be avoided by scheduling activity outside of the breeding season. Henslow's sparrow does not often come into conflict with development projects because of the location and distribution of this species in the state. Low = Little to no economic impact.
* Ellipse mussel (Venustaconcha ellipsiformis) – Since mussels occupy the same site annually with little movement, relocations are often necessary for projects impacting the ellipse, such as bridge repairs or replacements, utility crossings, and other river alterations. Medium = Potential to have moderate economic impacts.

This detailed EIA report includes the economic-related comments received during the EIA public comment period as well as economic impacts known to the Department. The report is organized by the types of small businesses, organizations, units of government, etc. that could be affected. The 20 species proposed for a scientific name update are not included in this report, because there is no impact.

Effects of listing/delisting will be highly variable among different types of businesses and their location; however the overall economic impact of the proposed revisions will be reduced due to the net loss of because of the location and number of NHI records. The 16 species being proposed for delisting have a total of 1055 records in the NHI database which is used for conducting an endangered resources review. There are a total of 217 records in the NHI database for the eight species being proposed for listing.

Agricultural community

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Greater flexibility in agricultural practices. Do not have to follow avoidance measures (e.g., install silt fencing, delay work to avoid breeding season, alter project locations). Shorter environmental review time and lower costs.	Loss of landowner pride for providing habitat for an E/T species. Loss of grant opportunities and set-aside programs that are only given for management of an E/T species (e.g., CRP, Landowner Incentive Program).	Project expenditure (cost of time to alter project plans to implement avoidance and minimization measures). Grants lost or not eligible for in the future (e.g., CRP, Landowner Incentive Program).	Low. Few agricultural projects with impacts to E/T species enter the environmental review process.
LIST	Increase in grant opportunities or set-aside programs that are only given for lands with an E/T species. Landowner pride, especially for farming operations that support these species (e.g., cranberry growers that maintain appropriate water levels during the breeding season may support Black Tern population).	Increased regulation for agricultural projects where these species are present. Avoidance and minimization measures may include project delay, additional fencing, etc.	Project expenditure (cost of time to alter project plans to implement avoidance and minimization measures). Grants and set-aside program incentives (e.g., CRP).	Low. Few agricultural projects with impacts to E/T species enter the environmental review process.

Species with specific impacts

* Upland Sandpiper (Bartramia longicauda), list: Increase in environmental review as this species is sometimes found in lightly grazed pastures, old fields, idle grasslands, and hay fields. This species is protected under the federal Migratory Bird Treaty Act. This species can be added to the Grassland and Savanna Protocols (broad incidental take permit) for management activities. CRP and other set-aside programs will benefit this species and the agricultural community.

* Plants (all), delist: Minimal change as plants are not protected through Wisconsin's Endangered Species Law on private lands. In addition, agricultural, forestry and utility activities are exempt from the law on public lands.

* Black Tern (Chlidonias niger), list: It is expected that agricultural exemptions which allow farmers to drain and ditch low, wet fields will continue to occur. While these areas might be occupied by this species, the areas would not maintain viable populations and could be altered outside of the breeding season. Little change in the environmental review process is expected to occur, as this species is already protected under the federal Migratory Bird Treaty Act and its habitat is protected by wetland regulations.

County and municipal governments

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Reduced environmental review time. Do not need to follow avoidance measures. Greater flexibility in land use planning and management.	Loss of landowner pride for providing habitat for an E/T species. Loss of grant opportunities and set-aside programs that are only given for management of an E/T species (e.g., CRP, Landowner Incentive Program).	Project expenditures and budgets (cost of silt fencing, cost of staff time to develop and implement avoidance and minimization measures). Environmental Review staff time. Potential loss of grants.	Moderate. In the last 10 years, there have been many development projects impacted by the presence of the Butler's gartersnake.
LIST	Increase in grant opportunities for lands with an E/T species. Landowner and community pride in giving refuge to an E/T species.	Increased regulation for projects where this species is present. Avoidance and minimization measures may include project delay, additional fencing, etc.	Project expenditure (cost of time to alter project plans to implement avoidance and minimization measures). Grants and set-aside program incentives (e.g., CRP).	Low. Proximity of proposed species to urban areas is low.

Species with specific impacts

* Plants (all), delist: Reduced costs in translocating plants, especially for road projects.

* Butler's Gartersnake (Thamnophis butleri), delist: Reduced costs for county and municipal government development projects in the SE portion of the state. A city of New Berlin resident points to the City Center project as an example of how removing land from development or redesigning projects to protect this species means loss of time, money, and hence potential of loss of revenue to the municipality and its residents. A Menomonee Falls resident estimates that this species cost them $7000.

* Beach-dune Tiger Beetle (Cicindela hirticollis rhodensis), list: Mostly found on state and private beach. Only a few at most are found on county/municipal beaches.

* Upland Sandpiper (Bartramia longicauda), list: Very few sites occur on many county/municipal lands.

* Blanding's Turtle (Emydoidea blandingii), delist: Few county and municipal environmental reviews have been recorded in the WDNR-Central Office for Blanding's Turtle.

* Black Tern (Chlidonias niger), list: Little change in the environmental review process is expected to occur, as this species is already protected under the federal Migratory Bird Treaty Act and its habitat is protected by wetland regulations.

Department of Transportation (DOT)

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Cost and project management time savings. Do not have to follow avoidance measures (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc), although they are still	Existing projects and programs built around the species needs to be assessed for continuation or revamping. DOT typically plans 5+ years out; will have to modify existing plans to accommodate changes in the E/T list. Staff need to be trained to revise actions.	Project expenditures and budgets (cost of silt fencing, cost of staff time to develop and implement avoidance and minimization measures). Environmental Review and regional DNR liason staff time and WDOT staff time.	Low. Little change in the environmental review process is expected to occur, as WDOT often includes Special Concern plants and animals in their project planning.
LIST	Increased opportunity for avoidance success stories.	Increased costs and project management time in the enviromental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc). DOT typically plans 5+ years out; will have to modify existing plans to accommodate changes in the E/T list.	Project expenditure (cost of time to alter project plans to implement avoidance and minimization measures). Wetland mitigation would already exist as a cost.	Low. Little change in the environmental review process is expected to occur, as WDOT often includes Special Concern plants and animals in their project planning.

Species with specific impacts

* Butler's Gartersnake (Thamnophis butleri), delist: Reduced costs for road projects in the SE portion of the state.

* Plants (all), delist: Little change in the environmental review process is expected to occur, as WDOT often includes Special Concern plants and animals in their project planning. Many of the plants proposed for delising will become Special Concern and remain on the Natural Heritage Working List.

* Greater Redhorse (Moxostoma valenciennesi), delist: Decreased costs and project management time savings for bridge and dam replacement/removal projects that may impact breeding habitat.

* Fawnsfoot (Truncilla donaciformis), list: Potential for increased impacts with bridge and dam replacement/removal projects, however little change in the environmental review process is expected to occur, as there are typically other state and federally listed species in the same waterbodies where this species occurs.

* Pygmy Snaketail (Ophiogomphus howei), delist: Decreased costs and project management time savings for bridge and dam replacement/removal projects that may impact the species, however few projects have entered the environmental review permitting process for this species.

* Blanding's Turtle (Emydoidea blandingii), delist: DOT is the primary creator of road underpasses for Blanding's Turtles that a large number of other species have benefited from. While DOT often includes Special Concern plants and animals in their project planning, they may not undertake large expensive projects like road underpasses for Special Concern species.

* Black Tern (Chlidonias niger), list: Little change in the environmental review process is expected to occur, as Black Tern's are already protected under the federal Migratory Bird Treaty Act and its habitat is protected by wetland regulations.

Development community

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Cost and project management time savings. Do not have to follow avoidance measures (e.g., install silt fencing, delay work to avoid breeding season, alter project locations). Shorter environmental review time and lower costs.	Existing projects and programs built around a species need to be assessed for continuation or revamping. Loss of landowner pride for providing habitat for an E/T species. Loss of grant opportunities and set-aside programs that are only given for management of an E/T species (e.g., CRP, Landowner Incentive Program).	Project expenditures and budgets (cost of silt fencing, cost of staff time to develop and implement avoidance and minimization measures). Environmental Review staff time.	Moderate-High. There are 1055 NHI records (used for environmental review) for the species proposed for delisting. Except for a few exceptions (Butler's gartersnake), the species proposed for listing, generally occur in "wild" areas that are typically not under large commercial development pressure.
LIST	Increased opportunity for avoidance success stories.	Increased costs and project management time in the enviromental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc).	Project expenditures and budgets (cost of silt fencing, cost of staff time to develop and implement avoidance and minimization measures). Environmental Review staff time.	Low. There are only 217 NHI records (used for environmental review) for the species proposed for listing. The species proposed for listing, generally occur in "wild" areas that are typically not under large commercial development pressure.

Species with specific impacts

* Butler's Gartersnake (Thamnophis butleri), delist: This species is primarily found in the SE portion of the state and has come up frequently through the environmental review process.

* Plants (all), delist: Minimal change as plants are not protected through Wisconsin's Endangered Species Law on private lands.

* Blanding's Turtle (Emydoidea blandingii), delist: While this species is widely distributed with a large number of EOs, this species occurs in "wild" areas that are typically not under large commercial development pressure.

* Black Tern (Chlidonias niger), list: This species occurs in "wild" areas that are typically not under large commercial development pressure.

Environmental consultants

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Greater flexibility in developing project plans that had species management recommendations. Reduced time spent on following the Grassland and Savanna Incidental Take Protocol, or to resolve management recommendation conflicts. Shorter environmental review time and lower costs.	Potential loss of revenue for surveys and project consultation. Loss of landowner pride for providing habitat for an E/T species.	Project expenditures and budgets (cost of staff time to alter project plans to implement avoidance and minimization measures). Environmental Review staff time. Number of consulting projects.	Low-Moderate. The economic impacts will vary with size and goals of organization (i.e., if the organization is diverse in what species/habitats it surveys for and consults on, the economic impact would be lower than one that is dependent on projects that center on a single species).
LIST	Increased opportunity for avoidance success stories. Increased business for consulting firms and experts who specialize in E/T research and management.	Increased costs and project management time in the enviromental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc).	Project expenditures and budgets (cost of staff time to develop and implement avoidance and minimization measures). Environmental Review staff time.	Low-Moderate. The economic impacts will vary with size, goals and specialties of the organization.

Species with specific impacts

* Butler's Gartersnake (Thamnophis butleri), delist: As this species has come up frequently through the environmental review process, there will be a significant decrease in revenue for surveys and project consultation.

* Blanding's Turtle (Emydoidea blandingii), delist: Reduced staff time developing Blanding's Turtle management plans and building avoidance measures into project plans. Greater flexibility in developing project plans that had species management recommendations for Blanding's Turtle that conflicted with another Endangered/Threatened species.

Federal agencies (NRCS, USFWS, USFS, NPS, USACE)

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Reduced environmental review staff time and permits. Do not need to follow avoidance measures. Greater flexibility in land use planning and management.	Revamping of existing grant, management, and monitoring programs that focus on these species (e.g., CRP "points"). Decreased opportunities for partnerships.	Project expenditures and budgets (cost of silt fencing, cost of staff time to develop and implement avoidance and minimization measures). Environmental Review staff time.	Low-Moderate. Some federal agencies make considerations for Special Concern species as well as E/T species. Issues with the number of Blanding's turtle records and conflicts will be lessened.
LIST	Increased opportunity for avoidance success stories. Increase in partnering opportunities.	Increased costs and project management time in the enviromental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc).	Project expenditures and budgets (cost of silt fencing, cost of staff time to develop and implement avoidance and minimization measures). Environmental Review staff time. Number of grants and partnering opportunities.	Low. There are only 217 NHI records (used for environmental review) for the species proposed for listing. Migratory Bird Treaty Act will still be in place.

Species with specific impacts

* Blanding's Turtle (Emydoidea blandingii), delist: Reduced staff time developing Blanding's Turtle management plans and building avoidance measures into project plans. Greater flexibility in developing project plans that had species management recommendations for Blanding's Turtle that conflicted with another Endangered/Threatened species.

* Fawnsfoot (Truncilla donaciformis), list: Increased opportunity to propagate and augment the remaining populations in the St. Croix and Lower Wisconsin Rivers, through use of the Federal Genoa Hatchery, which is available for propagation efforts for State Listed species. This species is found in medium to large rivers, most of which already have E/T mussels and thus projects in these areas already employ avoidance measures for mussels. Avoidance measures for this species would be identical to those required for other mussel species - minimizing sedimentation into the river and using erosion/siltation controls during and immediately following construction, and relocations. These measures are often already required by DNR stormwater permits.

Forest Industry

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Greater flexibility in forestry practices, management, and development. Do not have to follow avoidance measures (e.g., install silt fencing, delay work to avoid breeding season, alter project locations). Shorter environmental review time and lower costs.	Loss of landowner pride for providing habitat for an E/T species. Loss of grant opportunities and set-aside programs that are only given for management of an E/T species (e.g., CRP, Landowner Incentive Program).	Project expenditure (cost of time to alter project plans to implement avoidance and minimization measures). Grants and set-aside programs lost or not eligible for in the future (e.g., CRP, Landowner Incentive Program).	Low. Few forestry projects with impacts to E/T species enter the environmental review process.
LIST	Increase in grant opportunities or set-aside programs that are only given for lands with an E/T species. Landowner pride, especially for forestry operations that support rare species (e.g., Jack pine stands that are 7-21 years old may support Kirtland's Warbler).	Increased costs and project management time in the enviromental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc).	Project expenditure (cost of time to alter project plans to implement avoidance and minimization measures). Grants and set-aside program incentives (e.g., MFL). Number of partnerships and collaborative efforts.	Low. Few forestry projects with impacts to E/T species enter the environmental review process.

Species with specific impacts

* Kirtland's Warbler, list: As this species is currently Federally Listed and is protected under the Federal Migratory Bird Treaty Act, little change in regulatory or administrative processes are anticipated. While the Department has developed management guidelines that describe actions that will help maintain or enhance habitat for the species, they are typically not mandatory unless required by a permit, authorization or approval. They would be mandatory under Federal regulations. If a project comes into the environmental review process, because a permit or grant is issued by the state at a location with a known population with suitable habitat, the simplest and preferred method to avoid impacts to the Kirtland's Warbler is to ensure suitable habitat remains intact. If suitable breeding habitat will be compromised, project-related disturbance must take place during the non-breeding season (1 October to 30 April) to avoid take of the species. If the breeding season cannot be avoided, then project applicants must work with the USFWS Kirtland's Warbler biologist to determine project alternatives.

* Plants (all), delist: Minimal change as plants are not protected through Wisconsin's Endangered Species Law on private lands. In addition agricultural, forestry and utility activities are exempt from the law on public lands.

Habitat (e.g., wetland, forest, prairie, beach, barrens, streams)

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Species success story.	Decreased protections that were provided because of the presence of an E/T species.	Acerage of land altered/degraded. Reduced ecosystem services.	Moderate. Ecosystem services provided by habitats are hard to measure. Individuals and organizations have expressed concern over habitat protections, specifically wetland habitat. Ecosystem services for wetlands in Wisconsin have been estimated to provide $617-28432 per acre/per year.
LIST	Increase in incentives for habitat creation, restoration, and protection.	Public opinion of the habitat may turn negative by the regulated community.	Acerage of land enhanced, altered, destroyed, created, etc.	Low. Ecosystem services provided by habitats are hard to measure.

Species with specific impacts

* Plants (prairie), delist: Removing limits on growing and selling these plants may result in more being planted which is good, however the source of plant material (plants, seeds, seedlings, etc) will be unknown and may have detrimental effects on native populations.

* Beach-dune Tiger Beetle (Cicindela hirticollis rhodensis), list: Increased grant opportunities for Great Lakes beach/dune preservation/restoration that would benefit the species. Designated trails and boardwalks would protect habitat while allowing state parks, forests, and natural area visitors access.

* Blanding's Turtle (Emydoidea blandingii), delist: Wetland regulations may change, the outcome to wetlands and associated species without an E/T species is unknown. Earth Economics in a publication, estimated that "Wisconsin wetland's have been estimated to provide from $617-28,432 per acre/per year" (2/9/2012).

* Black Tern (Chlidonias niger), list: This specis occurs in small, isolated wetlands. Ecosystem services of wetlands include flood control, groundwater replenshment, shoreline stabilization, sediment/nutrient retention, water purification, water reservoir, recreation and tourism, and habitat for many species. While hard to assess, some estimate that at a worldwide scale wetlands provide services worth trillions of US dollars every year (Ramsar Convention).

Land management and conservation groups (NGOs)

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Land managers would not be required to follow avoidance measures in the Incidental Take Protocol when conducting land management activities. Greater flexibility in developing and implementing management plans that had species management recommendations that conflicted with another E/T species.	Loss of landowner pride for providing habitat for an E/T species. Loss of grant opportunities and set-aside programs that are only given for management of an E/T species (e.g., CRP, Landowner Incentive Program).	Project expenditures and budgets (cost of silt fencing, cost of staff time to plan for and implement avoidance and minimization measures). Environmental Review staff time. Grants and habitat incentives lost or not eligible for in the future.	Low-Moderate. Low-Moderate. The economic impacts will vary with size and goals of organization (i.e., if the organization is diverse in what species/habitats it surveys for and consults on, the economic impact would be lower than one that is dependent on projects that center on a single species). Fewer management conflicts and number of projects with an E/T species. Many clients may still voluntarily protect Special Concern species.
LIST	Increase in grant opportunities or set-aside programs that are only given for lands with an E/T species. Organization pride in giving refuge to an E/T species.	Increased costs and project management time in the enviromental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc). Updated Incidental Take Protocols that include these species will need to be followed.	Project expenditures and budgets (cost of silt fencing, cost of staff time to plan for and implement avoidance and minimization measures). Environmental Review staff time. Grants and habitat incentives gained.	Low-Moderate. The economic impacts will vary with size and goals of the organization. Greater protection and management considerations can be given to more imperiled species. More management conflicts and number of projects with an E/T species.

Species with specific impacts

* Upland Sandpiper (Bartramia longicauda), list: This species can be added to the Grassland and Savanna Protocols (broad incidental take permit) for management activities.

* A Leafhopper (Attenuipyga vanduzeei), list: This species can be added to the Grassland and Savanna Protocols (broad incidental take permit) for management activities.

* An Issid Planthopper (Fitchiella robertsoni), list: This species can be added to the Grassland and Savanna Protocols (broad incidental take permit) for management activities.

* Ottoe Skipper (Hesperia ottoe), list: This species can be added to the Grassland and Savanna Protocols (broad incidental take permit) for management activities.

* Blanding's Turtle (Emydoidea blandingii), delist: Species avoidance and management recommendations often conflict with other E/T species and savanna/grassland management recommendations.

Private landowners

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Greater flexibility in the species private landowners want to manage for and what management tools they want to use. Greater flexibility in land development options.	Loss of landowner pride for providing habitat for an E/T species. Loss of grant opportunities and set-aside programs that are only given for management of an E/T species (e.g., CRP, Landowner Incentive Program).	Project expenditure (cost of time to alter project plans to implement avoidance and minimization measures). Grants lost or not eligible for in the future.	Moderate. There are 1055 NHI records (used for environmental review) for the species proposed for delisting. Except for a few exceptions (Butler's gartersnake), the species proposed for listing, generally occur in "wild" areas that are typically not under large commercial development pressure.
LIST	Increase in grant opportunities or set-aside programs that are only given for lands with an E/T species. Landowner pride in giving refuge to an E/T species.	Increased costs and project management time in the enviromental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc).	Project expenditures and staff time. Alteration of project timing, avoidance measures, etc. Grants and habitat incentives gained.	Low. There are only 217 NHI records (used for environmental review) for the species proposed for listing. The species proposed for listing, typically occur in "wild" areas that are typically not under large commercial development pressure. Private landowners can still manage their own land. Native communities and associated species benefit from outreach and education efforts targeted at endangered and threatened species.

Species with specific impacts

* Plants (all), delist: Minimal change as plants are not protected through Wisconsin's Endangered Species Law on private lands.

* Butler's Gartersnake (Thamnophis butleri), delist: Private landowners having to alter or delay projects because of the species presence. Estimate of $7000 for one homeowner.

Researchers

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Reduced costs, as projects will not require an E/T permit for work. Greater flexibility in research design and methods.	Potential loss of grant opportunities that fund research on E/T species only. Fewer research, management, monitoring studies on these species and their habitats.	E/T scientific collector permit costs. Grants lost or not eligible for in the future.	Low. Scientific collectors permits will still apply. Existing research projects may need to be revised, because of funding source or application of results.
LIST	Potential increase in grant opportunities that fund research on E/T species only.	Increased costs. Projects will require an E/T permit for work. Greater oversight in research design and methods.	E/T scientific collector permit costs. Grant opportunities.	Low. Existing research projects may need to be revised, because of funding source or application of results.

Species with specific impacts

* Blanding's Turtle (Emydoidea blandingii), delist: Several research projects are currently underway studying this species. Delisting may impact funding source or application of the study's results.

Small businesses

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Greater flexibility in the species private landowners want to manage for and what management tools they want to use. Greater flexibility in land development options.	Loss of landowner pride for providing habitat for an E/T species. Loss of grant opportunities that are only given for management of an E/T species.	Project expenditure (cost of time to alter project plans to implement avoidance and minimization measures). Grants lost or not eligible for in the future.	Low. Few small businesses with impacts to E/T species (other than the groups specifically mentioned in this report) enter the environmental review process.
LIST	Partnering and collaboration opportunity. Increase in grant opportunities and set-aside programs. Success stories for their customers when protecting an E/T species.	Increased costs and project management time in the enviromental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc).	Project expenditures and staff time. Alteration of project timing, avoidance measures, etc. Grants and set-aside program incentives and awards (e.g., CRP).	Low. Few small businesses with impacts to E/T species (other than the groups specifically mentioned in this report) enter the environmental review process.

Species with specific impacts

* Plants (all), delist: Removing limits on growing and selling these plants may result in more being planted which is good for the nursery industry and potentially for the plant, however the source of plant material (plants, seeds, seedlings, etc) will be unknown and may have detrimental effects on native populations.

* Blanding's Turtle (Emydoidea blandingii), delist: In the pet industry, as a Special Concern species, Blanding's Turtles could be kept as a pet (less than 6 individuals). May need a study to determine if illegal take/harvest is occurring. Could be added to the Protected Wild Animals list (NR 10.02).

Species

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	E/T species success story. Focuses attention and funds on the most at risk species.	Without mandatory avoidance measures, species declines may increase. Loss of E/T funding for research and habitat conservation may also impact the species.	Species population status.	Moderate. Loss of protections may directly cause harm to the species via harvesting or collection. Associated species and habitats also benefit from avoidance, minimization, conservation efforts (e.g., DOT road underpasses). Many organizations and individuals will continue to voluntarily employ avoidance, minimization efforts.
LIST	Keep the species from becoming extirpated in the state. E/T protection will increase protection, funding, partnerships, education/outreach, research, monitoring opportunities.	Public opinion of the species may turn negative by the regulated community.	Non-use value for keeping this species from becoming extirpated. Inherant value.	Moderate. Inherant value of a species is impossible to caluclate. Associated species and habitats also benefit from avoidance, minimization, conservation efforts (e.g., DOT road underpasses).

Species with specific impacts

* Plants (all), delist: Removing limits on growing and selling these plants may result in more being planted which is good, however the source of plant material (plants, seeds, seedlings, etc) will be unknown and may have detrimental effects on native populations.

* Upland Sandpiper (Bartramia longicauda), list: Umbrella species for other grassland inhabitants.

* Kirtland's Warbler (Dendroica kirtlandii), list: Reinforces the USFWS intent to delist at the Federal level. Increased partnerships.

* Blanding's Turtle (Emydoidea blandingii), delist: Without mandatory avoidance measures, species declines may increase. The population dynamics of this species (slow growing and long-lived) might be too complex to accurately monitor and react to population declines caused by increased trading and take. Concerns over bag limits, as this species is large enough to be a food turtle and is a pet species. Loss of E/T funding for research and habitat conservation may also impact the species. Consider study to determine if it should be added to the Protected Wild Animals list (NR 10.02).

* Black Tern (Chlidonias niger), list: Umbrella species for other wetland inhabitants.

Tourism

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Rare species success story.	Decrease in focus/attention on the species.	Number of tours/visitors focusing on the species.	Low. Few tours/visitors focus on a single species. Hard to assess impacts to local businesses that benefit from tour groups that patronize restaurants, motels, filling stations, etc.
LIST	Education and outreach for viewing, and conservation opportunities.	May need to close or restrict areas during breeding season showing stress from proximity and numbers of tourists.	Number of tours/visitors focusing on the species.	Low. Few tours/visitors focus on a single species. Hard to assess impacts to local businesses that benefit from tour groups that patronize restaurants, motels, filling stations, etc. Recreation (canoing, bird watching, hiking, etc) are typically compatible with protection efforts.

Species with specific impacts

* Kirtland's Warbler (Dendroica kirtlandii), list: Much interest and publicity about Wisconsin's population and management for the species. In Michigan there are tours for viewing Kirtland's Warbler.

* Ottoe Skipper (Hesperia ottoe), list: Education and outreach for viewing, conservation opportunities. Butterfly viewing/photographing and trips focusing on rare species is becoming very popular.

* Upland Sandpiper (Bartramia longicauda), list: Education and outreach for viewing, conservation opportunities.

* Beach-dune Tiger Beetle (Cicindela hirticollis rhodensis), list: Multi-use issues on public beaches may occur. Opportunity for partnerships and construction of Great Lakes board walks.

* Plants (all), delist: Botanical tours and field trips are frequented by individuals and groups who are interested in viewing/photographing rare E/T species.

* Black Tern (Chlidonias niger), list: Some of the larger colonies that are inhabitated provide good viewing and canoeing opportunities, bringing money into the state and local economies. Recreation (canoing, bird watching) and fishing are compatible with Black Tern protections.

Utility companies and the Public Service Commission

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Decreased costs and project management time savings. Do not have to follow avoidance measures (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc). Focuses attention and financial resources and recovery efforts and partnerships on the most at-risk species.	Existing projects and programs built around these species need to be assessed for continuation or revamping.	Project expenditures and budgets (cost of silt fencing, cost of staff time to develop and implement avoidance and minimization measures). Environmental Review staff time.	Low. Utility activities are exempt from following the Endangered Species Law for plants on public lands. Process to review projects proactively will continue between WDNR and Utility companies. Fewer NHI records to consider.
LIST	Partnering and collaboration opportunity. Success stories for their customers when protecting an E/T species.	Increased costs and project management time in the enviromental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc).	Project expenditures and staff time. Alteration of project timing, avoidance measures, etc.	Low. Utility activities are exempt from following the Endangered Species Law for plants on public lands. Process to review projects proactively will continue between WDNR and Utility companies.

Species with specific impacts

* Blanding's Turtle (Emydoidea blandingii), delist: Existing projects and programs built around Blanding's Turtles need to be assessed for continuation or revamping.

* Black Tern (Chlidonias niger), list: May impact projects which alter wetland hydrology or alter flowage water levels

Wisconsin Department of Natural Resources (WDNR)

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Reduced environmental review staff time in processing and reviewing project applications. Reduced NHI database mapping time. Greater flexibility for state land managers for land use planning and management, as avoidance measures would be recommended, not required. Focus and funds spent will be redirected to the rarest species in the state.	Maintaining a viable population without the regulatory tools available through Wisconsin's Endangered Species laws. Potential loss of Endangered Resources program support and partnerships from conservation and volunteer groups.	Project expenditures and budgets (cost of silt fencing, cost of staff time to develop and implement avoidance and minimization measures). Environmental Review and WDNR permitting staff time. NHI mapping staff time. Species status. Hours donated by volunteers and friends groups. Number of partnerships.	Low. Existing monitoring programs for need to be assessed for continuation or revamping. Funds spent on ER and management are already allocated to those programs, therefore there will not be a net gain or loss. Focus and funds spent will be redirected.
LIST	Funds spent on ER and management are already allocated to those programs, therefore there will not be a net gain or loss. Focus and funds spent will be redirected.	Avoidance and management recommendations will need to be developed and implemented. Potential gain of Endangered Resources program support and partnerships from conservation and volunteer groups.	Staff time. Hours donated by volunteers and friends groups.	Low. Funds spent on ER and management are already allocated to those programs, therefore there will not be a net gain or loss. Focus and funds spent will be redirected.

Species with specific impacts

* Plants (extirpated species), delist: Hemlock Parsley (Conioselinum chinense) and Canada Horse-balm (Collinsonia canadensis) are considered extripated from the state. If they are re-discovered, there will be costs associated with potential relisting. Is there a cost associated with keeping these species on the E/T list?

* Birds (non-resident and extirpated), delist: Barn Owl (Tyto alba) and Snowy Egret (Egretta thula) are considered non-residents and Bewick's Wren (Thryomanes bewickii) is considered extirpated. If they are re-discovered or if their ranges shift or expand, there will be costs associated with potential relisting. Is there a cost associated with keeping these species on the E/T list?

* Butler's Gartersnake (Thamnophis butleri), delist: Significant Department funds have been spent on protection, management, research efforts for this species. Delisting will allow funds to be spent on the rarest species in the state.

* Beach-dune Tiger Beetle (Cicindela hirticollis rhodensis), list: Increased grant opportunities for Great Lakes beach/dune preservation/restoration that would benefit the species. Designated trails and boardwalks would protect habitat and the beetle while allowing state parks, forests, and natural area visitors access.

Species with no or low anticipated impacts

* Bewick's Wren (Thryomanes bewickii), delist: No effects. Species is extirpated; has not been observed breeding in WI or neighboring states for over 40 years.

* Snowy Egret (Egretta thula), delist: No effects. Species is not considered a regular breeder in the state. Minimal WDNR costs for mapping occassional breeding records.

* Barn Owl (Tyto alba), delist: No effects. Species is not considered a regular breeder in the state. Minimal WDNR costs for mapping occassional breeding records.

* Canada Horse-balm (Collinsonia canadensis), delist: None - species is extirpated

* Hemlock Parsley (Conioselinum chinense), delist: None - species is extirpated

* Beak Grass (Diarrhena americana): Update scientific name to Diarrhena obovata*

* Canada Gooseberry (Ribes oxyacanthoides): Update scientific name to Ribes oxyacanthoides ssp. oxyacanthoides

* Cliff Cudweed (Gnaphalium obtusifolium var saxicola): Update scientific name to Pseudognaphalium saxicola

* Early Anemone (Anemone multifida var hudsoniana): Update scientific name to Anemone multifida var. multifida

* Forked Aster (Aster furcatus): Update scientific name to Eurybia furcata

* Green Spleenwort (Asplenium viride): Update scientific name to Asplenium trichomanes-ramosum

* Hall's Bulrush (Scirpus hallii): Update scientific name to Schoenoplectus hallii

* Lanceolate Whitlow-cress (Draba lanceolata): Update scientific name to Draba cana

* Large-leaved Sandwort (Moehringia macrophylla): Update scientific name to Arenaria macrophylla

* Long-beaked Baldrush (Psilocarya scirpoides): Update scientific name to Rhynchospora scirpoides

* Northern Cricket Frog (Acris crepitans blanchardi): Update scientific name to Acris crepitans*

* Pallid Shiner (Notropis amnis): Update scientific name to Hybopsis amnis

* Plains Ragwort (Senecio indecorus): Update scientific name to Packera indecora

* Shoal Chub (Macrhybopsis aestivalis): Update scientific name to Macrhybopsis hyostoma

* Spatterdock Darner (Aeshna mutata): Update scientific name to Rhionaeschna mutata*

* Sticky False-asphodel (Tofieldia glutinosa): Update scientific name to Triantha glutinosa

* Tea-leaved Willow (Salix planifolia): Update scientific name to Salix planifolia ssp. planifolia

* Thickspike (Elymus lanceolatus ssp psammophilus): Update scientific name to Elytrigia dasystachya

* Tufted Bulrush (Scirpus cespitosus): Update scientific name to Trichophorum cespitosum

* Worm-eating Warbler (Helmitheros vermivorus): Update scientific name to Helmitheros vermivorum