5.0 Conservation Strategy

5.1 Overview

NiSource is committed to complying with the applicable environmental rules and regulations of federal, state, and local governments. Consistent with this commitment, the conservation strategy of this MSHCP builds on NiSource's current business policy that all construction, operation, and maintenance activities be conducted in a safe manner that minimizes impacts on stream and wetland ecosystems, wildlife habitat, cultural resources, and the human environment. The conservation strategy lays out the overall conservation goals of the MSHCP, explains NiSource's current business practices where NiSource already meets some of those goals, and summarizes the conservation program that NiSource will implement in accordance with this MSHCP. This MSHCP was developed in coordination with the Service and builds upon NiSource's existing environmental practices. The plan addresses conservation of endangered species using management practices that have been developed over time, as well as new measures that have been developed in collaboration with Service biologists specifically for this MSHCP. The resulting conservation plan will protect important ecosystems for the benefit of the species that dwell within them while allowing NiSource to provide natural gas to its customers in an environmentally safe manner. Discussion of specific conservation strategies developed for MSHCP species, including biological goals and objectives, is provided in Chapter 6 for take species and **Appendix F** for other species analyzed in the MSHCP.

It should be understood, for purposes of this chapter and for the entire MSHCP that NiSource is committed in everything it undertakes to meet human needs while preserving the environment, now and for future generations. NiSource has implemented a sustainability program that strives to resolve conflicts between competing goals in pursuing economic prosperity, environmental quality, and social equity in all NiSource does as a company. Therefore, in reviewing each enhancement to a NiSource energy facility, the "triple bottom line" concept receives due consideration and balance as decisions are made to maintain and grow its energy systems. The NiSource vision is one that establishes a legacy for sustained economic growth, social responsibility, and environmental stewardship reflective of a premier energy company.

5.1.1 Goals of the Conservation Strategy

As stated in Chapter 1, the purpose of the MSHCP is to implement an innovative approach to both conserve listed species under the ESA and to streamline regulatory compliance requirements for NiSource's covered activities. In light of this purpose, the goals of the conservation strategy are to:

- Protect MSHCP species and their habitats through the implementation of an environmental compliance program (e.g., practices, standards, training, etc.) that meets or exceeds federal, state, and local regulations and requirements;
- Enhance the conservation of MSHCP species through the application of rigorous planning, adaptive management, and sound scientific principles; and

- Support species conservation actions using a landscape approach, maximizing conservation benefits to take species and the ecosystems that support them.

5.1.1.1 Core Values and Guiding Principles

NiSource holds the core values of *quality, credibility, reliability, integrity, and responsiveness* as the basis for all conservation actions. NiSource will be guided by these core values as well as the following guiding principles:

- NiSource will minimize and mitigate the impact of take associated with covered activities to the maximum extent practicable.
- To eliminate or reduce the likelihood of take, NiSource will first employ avoidance and minimization measures before undertaking mitigation measures.
- NiSource will monitor and report compliance and project impacts, as well as verify progress toward biological goals.
- NiSource will embrace adaptive management, where appropriate, so information gathered during monitoring can be incorporated into avoidance, minimization, or mitigation measures.
- NiSource will ensure that conservation measures are consistent with NiSource's business philosophy and with species conservation objectives.
- NiSource will develop clear goals and objectives for all aspects of the MSHCP utilizing a diverse array of expertise and interests.
- NiSource will collaborate with the diversity of stakeholders affected by the MSHCP. NiSource serves a wide range of constituencies and will solicit and incorporate their input, as appropriate, in its decision-making process.
- NiSource will use scientifically-sound information.

5.1.2 NiSource Environmental Practices

NiSource follows standard practices outlined in company environmental documents that help avoid and minimize impacts to many of the MSHCP species. NiSource's pre-construction planning and project implementation comply with various specifications as set forth in the documents described below and in **Appendix K**. These may be supplemented or superseded by species-specific avoidance and minimization measures described in this Chapter, Chapter 6, and **Appendix F**.

5.1.2.1 Environmental Construction Standards (ECS)

The ECS document (**Appendix B**) provides NiSource personnel and its contractors with the minimum requirements for construction, operation, and maintenance activities in environmentally sensitive-areas. The ECS provides standards for various aspects of NiSource's operation, maintenance, and construction activities, including, but not limited to: right-of-way width; clearing; grading; access roads; residential areas; trenching; backfilling; final grading, restoration, and stabilization; noise impact mitigation; hydrostatic testing; stream crossings; wetland crossings; spill prevention, containment, and control; maintenance; environmental inspections;

environmental training; contractor's environmental compliance; environmental construction management; and emergency construction.

5.1.2.2 Pre-Construction Environmental Compliance Program

NiSource's Natural Resources Permitting Staff developed an Environmental Awareness Handbook that NiSource uses to train its personnel. The training and handbook provide guidance regarding adherence to NiSource's environmental compliance program, which meets or exceeds federal, state, and local regulations and requirements. Topics include, but are not limited to, the steps and forms used to comply with the environmental program, governing regulations and required permits, and application of the ECS during project work.

5.1.3 Training

A properly trained work force is essential to the safe and successful operation and maintenance of a natural gas transmission pipeline system. Therefore, NiSource has established and maintained a performance-based instructional training system. A significant feature of the training system is that it meets standards and guidelines established by the International Association for Continuing Education and Training (IACET).

NiSource business units that construct and operate the interstate natural gas pipeline facilities are highly regulated by federal agencies. Virtually all of the NiSource pipeline segments are subject to federal regulation as explained in Chapters 1 and 8 and therefore must be in compliance with all federal, state, and local laws, rules and regulations. Consequently, a properly trained work force is essential to operating and maintaining the natural gas pipeline facilities in full compliance.

All training is aimed not only at educating the work force in a safe and successful operation and maintenance mode, but also stresses the NiSource management commitment to regulatory compliance. The training for MSHCP implementation will be handled in this same manner, whether the Service's IPaC system (*see* Chapter 7) system is used or not. If the IPaC system is not fully operational and able to handle the MSHCP needs, NiSource will continue its current tracking, monitoring, and reporting methods until such time as the IPaC system (or something similar) is functional. NiSource accepts the full responsibility to train all personnel associated with the MSHCP to meet all implementation, monitoring and reporting requirements.

All NiSource personnel that will engage in activities associated with this MSHCP and ITP, whether in Operations or Construction and Engineering, will be thoroughly trained in all compliance aspects. NiSource Corporate Environmental Services, in partnership with the NGT&S NRP, will plan and conduct all training of NiSource's workforce as required by this MSHCP and ITP. Training materials will be completed prior to implementation of the MSHCP and ITP and training will occur regularly, as necessary to keep the work force adequately trained.

The Training Program is based on the following assumptions:

- Training is more effectively delivered in the context of an established curriculum. Such curriculum will be developed in accordance with the MSHCP,

- Training delivery systems are more easily maintained and implemented when designed in a modular format. The training associated with the MSHCP and ITP will be in modular format, with responsibilities broken down for each employee.
- Training programs are more credible when internal validity is easily determined. All personnel training for the MSHCP will be recorded and will be available to the Service upon request.
- Training documentation and evaluation is more defensible when appropriate criteria have been established in a catalog of tasks (or instructional objectives) and performance guides. Such appropriate training documents will be prepared and used by NiSource trainers.
- On-The-Job training is acceptable only when delivered in a structured format with skill performance checklists. All NGT&S personnel working in areas that are applicable to the MSHCP and ITP, and have compliance responsibility for that plan and permit, will be trained prior to being placed on the job site. The only on-the-job training (e.g., tailgate sessions) that will be acceptable will be when personnel, not thoroughly trained, are accompanying other trained personnel out on job sites. The trained personnel will bear responsibility for all actions of un-trained employees.
- Training must be in compliance with NiSource operating procedures and compatible with requirements detailed in the MSHCP, ITP, and IA.

5.2 Conservation Program

Because the MSHCP is a landscaped-based conservation plan that crosses 14 states and encompasses over nine million acres of land, the strategies for avoiding, minimizing and mitigating impacts to MSHCP species are intended to also be landscape-based, where such approaches serve to maximize the conservation of the affected species. For example, mitigation for impacts from NiSource activities will not necessarily be limited to onsite measures because the location where the activities occurred may not be the optimal location for mitigation from a species conservation standpoint. Accordingly, mitigation measures may be implemented in other areas where such measures would have a greater benefit to the species. Offsite mitigation may also be warranted in light of the recurring nature of pipeline operation and maintenance activities and the inability to implement onsite mitigation efforts. Thus, the mitigation measures will not be limited to NiSource's right-of-way or the MSHCP covered lands, but generally will utilize a landscape approach that employs sound biological rationales and principles.

5.2.1 Avoidance and Minimization Measures

Due to the nature of this MSHCP, in terms of scope of covered lands and the requested permit term, NiSource cannot predict with certainty where or when a given covered activity would occur. As a result, we also cannot precisely calculate the take of

species from those actions. Thus, the species analyses in Chapter 6 includes our assessment of the "reasonable worst case scenario" from which we anticipate take over the requested 50 year permit duration. When planning individual projects over that time, NiSource will employ avoidance and minimization measures, including possible project rerouting, which will cause less take than the reasonable worst case suggests. Obtaining the requested take authorization and having a process to avoid and minimize the impact of any take that does occur will provide NiSource with the predictability it needs to be efficient in its operations, while providing a benefit to the MSHCP species through the MSHCP's landscape-level conservation approach.

NiSource's conservation strategy includes avoiding, minimizing, and mitigating adverse effects of covered activities on MSHCP "take" species. NiSource will utilize AMMs before employing mitigation measures.

A detailed analysis was completed to determine the specific effects that each of the covered activities might have on individual MSHCP species. Specific AMMs were then developed to address, to the maximum extent practicable, these effects and impacts of the resulting take. These species-specific measures are described in detail in the individual species' analysis presented in Chapter 6 and in **Appendix F**. Most of the measures are mandatory and must be applied to all covered activities. NiSource went through a rigorous internal review process to ensure that these proposed mandatory AMMs could be implemented all of the time. The mandatory measures are shown in standard font text. The waterbody crossing method selection process is of particular importance in terms of some species' conservation measures and economic considerations for the project and thus is discussed in detail in Section 5.2.1.1 below.

Non-Mandatory AMMs

During the internal review process, NiSource identified a suite of the proposed AMMs that cannot be feasibly implemented in every instance. NiSource, however, did not want to completely dismiss this suite of potentially valuable conservation measures. These AMMs therefore are not mandatory, but optional. These non-mandatory AMMs appear in *italic* font text and are described in detail in the individual species' analysis presented in Chapter 6 and in **Appendix F**. A decision to apply a non-mandatory measure will therefore be made on a case-by-case basis taking into account practicality in terms of other requirements of the project based on the factors described below.[1] NiSource will include in its annual report submitted to the Service the specific evaluation, including the criteria considered during the decisional process and how they were applied. NiSource will implement mitigation measures when take of an MSHCP species results from deciding not to implement a non-mandatory AMM.

There are a variety of reasons why all of the AMM's cannot be used for all proposed projects. Those reasons include: location, technical or engineering feasibility, potential adverse impacts to other trust resources, project timelines, customer needs, and effectiveness. For all of the non-mandatory AMMs, except those associated with waterbody crossings, NiSource will use the following criteria to determine the feasibility of their implementation and will implement them to the maximum extent

[1] It is important to note that given their non-mandatory nature, protections afforded by the italicized AMMs were not considered when calculating the reasonable worst case scenario when predicting take.

practicable. Depending on individual project circumstances, any or all of these reasons may be the primary reason for NiSource not implementing the non-mandatory AMMs. For instance:

- The specific topography and/or weather conditions may prevent effective implementation of an AMM to the point that it would not accomplish the intended conservation goals. For example, a project may cross a stream containing a freshwater mussel that is one of the MSHCP "take" species. Non-mandatory AMM #12 specifies that *"Abandon pipelines in place to avoid in-stream disturbance that would result from pipeline removal unless the abandonment would be detrimental to endangered mussels."* It is possible that the abandoned pipe is exposed in the stream bed, diverting the water flow, and causing downstream erosion of the stream banks. Leaving the abandoned pipe in-place in this situation could be more detrimental to the long-term health of the mussel habitat than the temporary impacts of removing it and properly stabilizing the stream bed and banks.
- The safety of NiSource personnel, the public, and property is of paramount importance in the selection and implementation of non-mandatory AMMs. For example, a project may cross a wetland area containing habitat for bog turtles. Non-mandatory AMM #13 specifies that NiSource should *"Avoid pulling woody vegetation out by the roots in "mucky" areas to avoid destruction of potential hibernacula."* It is possible that leaving the woody vegetation in place could create an unsafe work environment. This can occur if one of a side boom's tracks rides up and over the vegetation and destabilizes the load it is carrying. This could cause the side boom to flip over and injure the operator.
- Due to terrain, AMM implementation may be prohibitively expensive, technically infeasible, or risky in terms of environmental consequences.
- A project may need to be placed into service during a timeframe that does not allow adherence to a specific avoidance window. For example, a customer informs NiSource in April of a critical need for natural gas service by November 1st of that year. The project may cross an area with suitable summer habitat for Indiana bats. Mandatory AMM #29 and non-mandatory AMMs #30 and 31 specify that:

  i. #29 - No clearing of suitable summer habitat within the covered lands of the MSHCP from June 1 to August 1or "side-trimming" of suitable summer habitat from April 15 to September 1 to protect non-volant Indiana bat pups.
  ii. *#30 - No clearing of suitable summer habitat within the covered lands of the MSHCP from April 1 to May 31 to avoid direct affects to pregnant females and minimize direct effects on Indiana bats in summer habitat.*
  iii. *#31. No clearing of suitable summer habitat located more than 10 miles from a Priority 1, 2, 3 and 4 hibernacula within the Covered Lands of the MSHCP from August 2 to October 15 to avoid direct effects to post-lactating females and volant juveniles and minimize direct effects to Indiana bats in summer habitat.*

  Taken together, there would not be sufficient time to construct the facilities and provide the necessary service. In this example, it may be necessary to begin

construction in late September and therefore be unable to implement non-mandatory AMM #31.

- NiSource's work schedules are such that the avoidance window cannot be adhered to for the entire project (i.e., ROW clearing in Indiana bat habitat). Examples of this situation include certificates and/or orders, time-sensitive safety-related mandates from the USDOT Pipeline Hazardous Material Safety Administration, etc.

Pre-Construction Project Planning

The species-specific AMMs supplement (and supersede where in conflict with) the general BMPs specified in the NGT&S ECS document (**Appendix B**). They do not substitute for NiSource's pre-construction planning and project implementation specifications.

NiSource's NRP developed an Environmental Awareness Handbook that NiSource uses to train its personnel. The training and handbook provide guidance regarding adherence to NiSource's environmental compliance program, which meets or exceeds federal, state, and local regulations and requirements. Topics include, but are not limited to, the steps and forms used to comply with the environmental program, governing regulations and required permits, and application of the ECS during project work.

Appendix K (Natural Gas Pipeline & Storage Permitting Processes) details NiSource's overall project development process. The waterbody crossing method selection process is described in Section 5.2.1.1. In addition, NiSource will utilize the following pre-construction planning and project implementation specifications when implementing this MSHCP (*see* additional details in Section 8.4.1).

1. In accordance with its current practice and corporate policy, NiSource will use a Project Environmental Information Form (PEIF) and Environmental Management & Construction Plan (EM&CP) – EZ form, modified as necessary based on AMMs, to gather data related to the potential project impacts.
2. NiSource will follow all mandatory AMMs including potentially modifying the project activity and/or relocating the project footprint to avoid effects on MSHCP species. NiSource will implement non-mandatory avoidance measures as described above. All modifications and/or relocations made to specifically avoid impacting a MSHCP species will be documented and reported in the annual report.
3. For projects that cannot be designed to fully avoid impacts, NiSource will then evaluate the specific covered activity's potential impact on MSHCP species and prepare a clearance package, including an EM&CP with appropriate AMMs identified to further avoid and/or minimize the impacts on these species. Relevant mandatory AMMs from Chapter 6 and **Appendix F** will be included in the EM&CP. Non-mandatory AMMs will be selected on a project-by-project basis as described above. Consideration will also be given to customer and business needs and the site-specific circumstances that influence the effectiveness of the AMM (examples provided above).

4. The clearance package will contain reply forms that will be used to evaluate and track the implementation of AMMs and actual impacts to MSHCP species for a particular project, including how often optional AMMs are used and documentation of why they are not when they would benefit the species.

The information gathered during the pre-construction planning and project implementation phases will be used to determine actual project impacts on MSHCP species and used as the basis for the mitigation debt, if take is anticipated or occurs (*see* Section 8.4.1).

5.2.1.1 Waterbody Crossing Method Selection Process

Several of the covered activities involve installing, operating and maintaining facilities across waterbodies that are occupied or presumed occupied by MSHCP species. Selecting the appropriate crossing method is the first step in avoiding or minimizing affects on these species. For some MSHCP species the crossing method is specified as a mandatory AMM, and for others the crossing method will be decided on a project-specific basis. Following is the process NiSource will use in deciding which waterbody crossing method will be selected.

Since the NiSource natural gas pipeline system is linear and traverses varied landscapes in fourteen states, there are numerous times in which those pipeline facilities cross under a waterbody. Once in place those facilities have to be maintained. The maintenance of an existing pipeline facility, or the proposed installation of a new pipeline facility within or across a waterbody, would be accomplished in accordance with NiSource's crossing methods as detailed more fully in the following paragraphs of this section. Prior to selecting one of the basic methods furnished in this section to cross a waterbody, NiSource will complete a site-specific review of the crossing, an environmental assessment, which will include consideration of all specific needs of any species potentially present, a design and engineering assessment, and a balanced economic evaluation.

NiSource uses five basic methods to cross waterbodies. They are:

- Open-cut, wet-ditch
- Open-cut, dry-ditch (dam & pump or flume pipe(s))
- Horizontal bore
- Horizontal Directional Drill (HDD)
- Span

The open-cut methods are described in NiSource's ECS; the other methods are described more fully below. If the crossing method is not specified in a mandatory AMM, the process to decide which method is used for a particular crossing includes a site-specific review of the crossing, an environmental assessment including consideration of the species needs, a design and engineering assessment, and a balanced economic threshold evaluation. These steps provide strategic guidance in the decision process and are an integral part of the Natural Gas Pipeline & Storage Permitting Processes attached as **Appendix K**.

Horizontal Bore

The horizontal bore method consists of excavating a pit on either side of the feature, drilling a hole from pit to pit underneath the feature, and pushing (jacking) the pipe thru the hole. This method is typically used to cross highways and railroads. However, in some instances it can be successful under waterbodies.

Horizontal Directional Drilling

HDD is a trenchless method of installing underground pipes in a shallow arc, along a prescribed bore path, by using a surface launched drilling rig. The tools and techniques used in the HDD process were originally developed in the oil well drilling industry in the 1960's. The rigs use similar components, with the major difference being that the pipeline rig is equipped with an inclined ramp. A complete description of the HDD method and the components involved in an engineering evaluation (authored by J. D. Hair & Associates - experts in the field of HDD) are attached in **Appendix J**. NiSource typically performs site investigations as described in these two documents.

HDD installations are generally accomplished in three stages:

The first stage consists of directionally drilling a small diameter pilot hole along a designed directional path. The path of the drilling string is tracked and directed using surface monitoring systems. The surface monitoring system determines the location of the probe down-hole by taking measurements from a grid or point on the surface. This allows the operator to follow the designed directional path.

The second stage involves enlarging the pilot hole to a diameter that will accommodate the pipeline. The enlargement process involves the use of hydraulic cutting with jet nozzles and down-hole hydraulic motors (also called "mud motors") used to cut harder soils. It can take several passes to enlarge the hole to the required diameter, typically 42 inches for a 24-inch pipeline.

The third stage begins once the pilot hole is enlarged to the correct size. The section of pipe, prepared in advance, is pulled back through the hole using the horizontal directional drilling unit.

Spans

In some instances (although rarely), the crossing can be completed by spanning the feature. Often this is accomplished by hanging the pipeline from an existing bridge. A significant amount of design engineering and safety considerations are necessary for this type of installation.

Regulatory Considerations

In addition to the evaluation of the above mentioned studies, processes, and decisional sequences, NiSource must also file for and obtain all other necessary water crossing permits prior to performing any construction. These permits typically include CWA permits issued by the Corps and state water crossing/obstruction permits typically issued by their Dept. of Natural Resources (or similar agency). The application and negotiation for such site-specific permits may influence and, at times, dictate the type of crossing method that NiSource must use regardless of the results of the evaluation process described herein.

Economic Considerations

In concert with NiSource's sustainable approach in pursuing environmental quality, economic prosperity, and social equity in all it does as a company, economics are considered as part of the waterbody crossing method selection process. During this evaluation, NiSource develops costs for the specific water crossing being considered. These costs may be based on NiSource's experience or could involve a specific bid from qualified contractors.[2]

Although cost is not the only factor NiSource uses in determining which waterbody crossing method to utilize, economics may be a factor in some decisions. For waterbody crossing measures only, in rare occasions it may not be economically practical for NiSource to implement a somewhat more protective, but significantly more expensive, crossing method.[3] When implementation of a waterbody crossing method that would reduce impacts to a MSHCP species would be impracticable from a financial standpoint, NiSource will completely mitigate for any impacts on the species resulting from the selected crossing method. In cases where cost is flagged as a primary driver in determining which waterbody crossing method to employ, NiSource will consider the following factors, among others, as part of the decision process to determine whether or not it is economically feasible to implement the biologically preferred method:

1. Whether or not the project is a single crossing or repair of an existing crossing, or part of a larger project with a correspondingly larger overall budget?
2. Whether or not there are multiple sensitive resources in the vicinity of the crossing that might be better crossed using trenchless technologies?
3. Whether or not there are numerous endangered species habitat crossings that need to be completed independent of each other and thus substantially increase overall project costs?
4. Whether there are other factors that might directly or indirectly influence the crossing method?

This information will be considered jointly by the Project Manager and NRP Manager to determine the appropriate method for each crossing. NiSource will include in its annual report, submitted to the Service, the details of the method used for the waterbody crossing and the specific evaluation criteria considered during the decisional process and how they were applied.

[2] Typically open-cut (wet or dry) stream crossing costs range from $50,000 to $500,000; trenchless crossings (e.g. HDD) range from $500,000 to several million dollars depending on length, soil type, and pipe diameter.

[3] An example would be where a dry-ditch crossing might temporarily affect a 30-foot wide stream containing Nashville crayfish for approximately 185 feet of its length and cost $150,000 to install. The same crossing using a HDD, because of the typical solid bedrock geological formations in the area, could cost up to $2,500,000 but would avoid impacts to the crayfish.

5.3 Mitigation Program

5.3.1 Mitigation Strategy

Due to the geographic scope of this MSHCP, the mitigation strategy outlined below will be landscape based, where appropriate, and will utilize an ecoregional approach. This means that mitigation may occur at a location distant from the impact area, when appropriate for conservation purposes, such as protection of a large block of habitat versus small, fragmented blocks, or to ensure that such mitigation is not disturbed by further facility operation or maintenance along the right-of-way, or where other constraints, such as landowners' rights, preclude mitigation activities within the vicinity of the impact area.

Species-specific mitigation measures are identified and explained in Chapter 6. Examples of mitigation that will be required to compensate for the impact of the taking include, but are not limited to:

- Permanent protection of existing habitat through fee acquisition, conservation easements or other legal instruments (may include both NiSource-owned lands and lands owned by others);
- Enhancement and restoration of habitat;
- Management of habitat to achieve and/or maintain specific biological characteristics; and
- Species propagation and reintroductions.

Chapter 6 discusses these measures in detail, outlining the calculus to quantify the amount of mitigation necessary, as well as the criteria for suitability, eligibility, success and completion. But because the requested permit period is 50 years, mitigation for most species will not occur in its entirety at the outset.

In addition to the species-specific information set forth in Chapter 6, the following methods will be utilized to compensate for impact of the take under the ITP.

- Mitigation shall occur within states crossed by the covered lands.
- NiSource shall provide funding assurances for all MSHCP implementation, including mitigation, as described in Chapter 8.
- NiSource shall initiate on-the-ground efforts for mitigation as described in Chapter 8 (*see* Chapter 6 for species-specific roll outs).
- NiSource shall initiate mitigation activities no later than 2 years after take unless the Service agrees that a longer initiation period is advantageous in garnering the conservation benefit for the species (*see* Chapter 6 for species-specific timing requirements) – for any type of project unless other terms are discussed for specific species in Chapter 6.
- It is likely that multiple activities will occur in the same location over the life of the MSHCP and ITP. However, compensatory mitigation will only be required for the first time that a covered activity involving take is conducted in a specific

- NiSource will maintain and annually provide to the Service a report describing, among other things, the amount of mitigation performed, by species, along with any "credits" remaining. The report will include details regarding mitigation projects that compensate for take for more than one species at the same site.

To the extent that NiSource undertakes conservation efforts to offset the impacts of a given activity on one or more migratory bird species protected under the MBTA, and such conservation efforts also offset that activity's impacts on one or more species covered by this MSHCP, NiSource may use those conservation efforts to satisfy, in whole or in part, its mitigation obligations for that activity under this MSHCP. Likewise, where mitigation undertaken pursuant to this MSHCP to offset an activity's impacts to take species also serves to offset impacts of that activity to one or more migratory bird species, NiSource may use that mitigation to satisfy, in whole or in part, any commitment NiSource has made under the MBTA.

In most cases, NiSource's minimization and mitigation measures will be implemented on real estate owned by third parties. NiSource will ensure that those rights left to the third party landowners are compatible with achieving the success criteria of the mitigation. Strategies used to protect the mitigation values may include a variety of tools such as entering into conservation easements and other contractual arrangements, and installing fences and other physical barriers. If a third-party landowner damages a mitigation measure despite NiSource's best efforts, NiSource will assess and handle this damage using the procedures described in Chapter 10. NiSource may also purchase credits in existing conservation banks to provide the mitigation necessary to compensate for all or part of the take from its activities. To do so, however, the banked lands must satisfy all the mitigation criteria identified in Chapter 6

The Service, in collaboration with NiSource, has identified the parameters for required mitigation required for each take species in Chapter 6. These include, but are not limited to the type, quality, amount and general location of habitat to be conserved. As discussed above, however, specific locations of on-the-ground mitigation projects have not been identified to date. Therefore, to guide implementation during the permit period, The Conservation Fund is developing a Strategic Conservation Planning Tool that will extend beyond the covered lands to encompass the adjacent counties, ecoregions, and watershed units within the 14-state area. Part of this planning process includes a comprehensive assessment, covering more than 10 million acres, to identify the location of species-specific conservation opportunities to maximize conservation benefits to the affected species. More information on this planning process and assessment is provided in Section 1.1.3.2. As described in Sections 5.3.2 through 5.3.4, subsequent mitigation implementation in response to individual projects may be guided by this assessment, as well as by recovery plans, state requirements and/or other ecoregional information, so long as mitigation criteria in Chapter 6 have first been satisfied.

The MSHCP includes two approaches for undertaking mitigation efforts to compensate for impact of take of MSHCP species: (1) mitigation undertaken directly by NiSource, and (2) mitigation undertaken by third parties. NiSource reserves the right to choose between the two approaches, at NiSource's discretion, unless specific mitigation measures and the parties to conduct them have been identified in Chapter 6. The approaches are described below in Sections 5.3.2, 5.3.3 and 5.3.4 and shown in **Figure 5-1**.

5.3.2 Mitigation Undertaken by NiSource

In light of the requested 50-year permit term, mitigation of impacts from NiSource activities will be an ongoing process. While mitigation may occur before, during, or after undertaking permitted activities, the preference will be for mitigating before take occurs, and in all cases, mitigation shall be initiated within 2 years of take unless the Service agrees that a longer initiation period is advantageous in garnering the conservation benefit for the species (*see* Chapter 6 for species-specific timing requirements). This approach allows NiSource to pursue mitigation opportunities as they arise, consistent with the requirements identified in Chapter 6. For instance, if a parcel of land with significant habitat for an MSHCP species becomes available for purchase or a conservation easement, NiSource may purchase or acquire a conservation easement on the property to compensate for past and/or future impacts to such species.

Before pursuing any mitigation efforts, NiSource will calculate compensation credit, based on Chapter 6, and seek the Service's written concurrence before undertaking the activity. If the NiSource-initiated mitigation effort more than compensates for previous impacts to a given take species, NiSource will receive a mitigation "credit" toward future impacts to that species. NiSource may also agree to conduct activities that provide additional benefit to the species beyond what is required to compensate for the impact of the take. If the mitigation effort does not fully compensate for impacts to a given species, NiSource will either pursue additional mitigation efforts or will utilize the mitigation fund described below.

5.3.3 MSHCP Fund

In addition to the NiSource-initiated mitigation approach, NiSource will establish a trust fund (MSHCP Fund) that will be administered by the NFWF. Monies will be disbursed at NiSource's request, following vetting with the Service to ensure consistency with the mitigation requirements of Chapter 6. NFWF is a private, nonprofit, tax-exempt organization chartered by Congress in 1984 that sustains, restores, and enhances the Nation's fish, wildlife, plants, and habitats through leadership conservation investments with public and private partners.

The MSHCP Fund will contain of two separate but related sub-accounts. The first, referred to as the "Reserve Account," will consist of an initial payment of $100,000. The Reserve Fund will be maintained at this amount to finance any unfunded obligations for mitigation, monitoring, adaptive management, or changed circumstances. The initial $100,000 will provide a pool of cash for NiSource to draw upon if an unexpected situation develops or an underestimate becomes evident. However, it is possible that the $100,000 will never be used during the life of the permit. Additionally, every five years, NiSource will deposit a sum of money into the

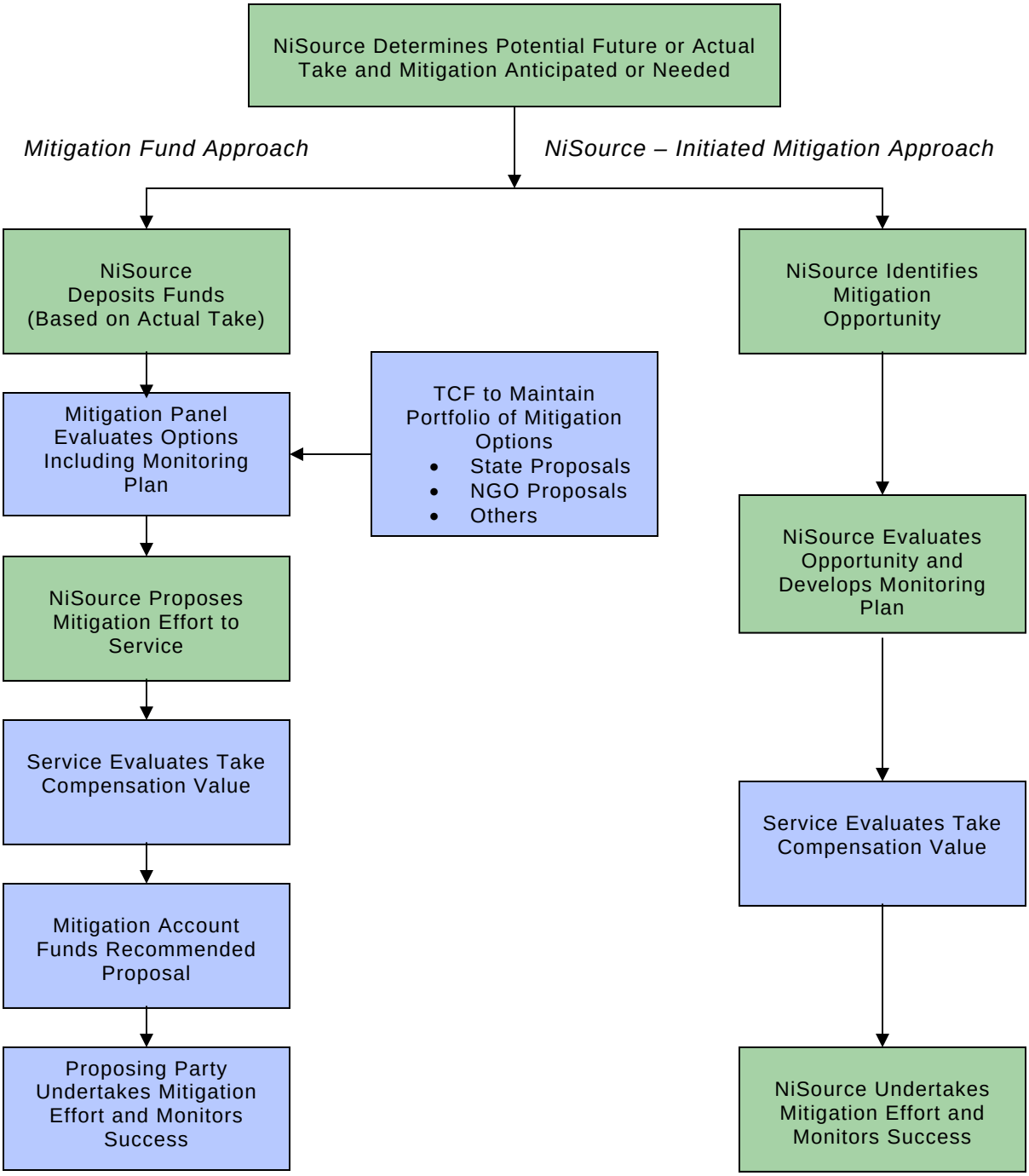

Figure 5-1 Mitigation Process

Fund to account for inflation, as reflected by the consumer price index. The goal shall be to maintain a balance of $100,000 in 2010 dollars. Chapter 8 identifies the process for drawing upon the Reserve Account.

The second sub-account, referred to as the "Mitigation Account," is intended to fund mitigation to compensate for the impact of the take species. Deposits into the Mitigation Account will vary from year to year, depending on anticipated take and the level of compensation that is required by Chapter 6. Chapter 8 identifies the various timeframes for deposits, depending on the type of covered activity being undertaken. It also obligates NiSource to make necessary and regular adjustments to ensure the Mitigation Account is fully funded.

Although NiSource will make deposits to the MSHCP Fund to ensure that mitigation measures will be financed, NiSource's ultimate goal is to avoid and minimize the take of endangered species. The financing mechanisms described above give NiSource the incentive to minimize take because NiSource's contributions to the Mitigation Fund in any given year depend on the amount of take. By implementing its AMMs, NiSource can meet the dual goals of reducing its expenditures under the ITP and minimizing its impact on endangered species. However, NiSource can not fully avoid all impacts to MSHCP take species; therefore, mitigation projects will be implemented for at least some of the take species.

The MSHCP Fund will be managed as a general account for all species and funds may be used as necessary for mitigation for any species as needed. NiSource will ensure, however, that there is adequate funding to compensate for all take of each species; mitigation must be completed within the established timeframes for each species. This information will be provided in the annual mitigation report described above in Section 5.3.1.

5.3.4 Projects Undertaken by Third Parties Using Mitigation Account Funds; NiSource Mitigation Panel

If NiSource chooses not to directly undertake mitigation efforts (Section 5.3.2), mitigation will be carried out with monies from the Mitigation Account of the MSHCP Fund (Section 5.3.3). NiSource shall select the future mitigation projects from proposals solicited from third parties. Proposals will be solicited on a rolling basis throughout the permit duration, consistent with NiSource's annual mitigation debt, if any. After evaluating proposals, NiSource will submit final written recommendations, including its reasoning and all supporting information to the Service, which will ultimately determine whether the proposed mitigation package is acceptable.

NiSource will convene a Mitigation Panel (Panel), which it will chair, to assist it in evaluating third-party mitigation proposals. The charter for the Panel describing its structure, membership, conflict of interest provisions, purpose, record-keeping and reporting is included in **Appendix N**.

NiSource or the Panel may solicit proposals from various NGOs, states within the MSHCP area, tribes, federal agencies, academics, and others for projects to be funded by the Mitigation Fund. The proposals must conform to the mitigation requirements identified in Chapter 6 for the particular take species at issue. These

proposals must also relate to the take species impacted by the MSHCP covered activities and must be conservation- and science-based. At a minimum, each mitigation proposal should set forth the following information:

- The entity or entities responsible for undertaking the proposal, a contact person for that entity or those entities, and the particular individuals who would undertake the activities described in the proposal;
    i. Whether the entity(ies) has any pending business before the Service or any financial ties or affiliations with Panel members, their sponsoring organizations, TCF or NFWF;
    ii. Resume (Curriculum Vitae) describing relevant experience conducting the described work;
    iii. Entity will have any necessary State/Service endangered species permits to conduct the work or will be in the process of obtaining such permits;
- Specific geographic location of the proposal;
    i. Project-specific information such as habitat type, length/width of riparian corridor, and other pertinent features;
    ii. Current and future proposed ownership of parcel if land-based mitigation, results from title search or title insurance identifying any encumbrances, reserved rights or rights-of-way on real property to be protected, and how that mitigation parcel will be protected and for how long;
- The nature of the mitigation activity (e.g., conservation easement, habitat restoration, research, species reintroduction, etc.) and the anticipated timeframe for such activity;
    i. Explanation of how the project falls within the sideboards written in the MSHCP/ITP;
- The take species that will benefit from the proposal and how such species will benefit (e.g., relationship to other projects in the area);
- The amount of funding sought for the proposal and a breakdown of costs used to derive such amount, including costs associated with management and monitoring of the mitigation effort;
- A monitoring protocol, that is consistent with Service protocols, that will be used to track the effectiveness of the mitigation proposal, and
- Specific reporting obligations that satisfy the needs of the Service and NiSource.

Funds in the Mitigation Account for individual species may be aggregated over multiple years (up to 2 years after impacts or preferably before impacts) so that the Panel may consider larger, more significant projects for funding. In addition, mitigation measures may be undertaken that provide greater mitigation than is required to compensate for the previous year's take. Such mitigation may also provide a "credit" toward future impacts.

Using the MSHCP Fund and Mitigation Panel, NiSource will be able to achieve greater conservation benefit per dollar spent, by taking advantage of economies of scale and partnering opportunities, compared to traditional prescriptive regulations and project-specific mitigation efforts. It will also provide a centralized and streamlined process for obtaining, evaluating, tracking, and funding mitigation proposals.

5.4 Species-Specific Conservation Strategies

While this chapter discusses the overall conservation strategy for the MSHCP and company policy, Chapter 6 discusses in detail the species-by-species biological goals, objectives, conservation measures, and mitigation that comprise the remainder of the conservation strategy.