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Illinois Natural History Survey

Development and Expansion of the Natural Resource Data and Information Systems in Support of the Illinois Comprehensive Wildlife Conservation Plan

(Project: T-02-P-001; Amendment #2)

Annual Segment Report 2006

Liane Cordle, Leon Hinz, Ann Holtrop, Chris Phillips, Jeff Walk, Ed Heske,
and John Epifanio

Submitted to

Illinois Department of Natural Resources
One Natural Resources Way
Springfield, Illinois 62702

Illinois Natural History Survey
1816 South Oak Street
Champaign, Illinois 61820

March 2006



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Illinois Natural History Survey Technical Report 06/02

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**Illinois Natural History Survey
Center for Aquatic Ecology and Conservation, Center for
Biodiversity, Center for Wildlife and Plant Ecology**

(February 4, 2005 – February 3, 2006)

**Development and Expansion of the Natural Resource Data
and Information Systems in Support of the Illinois
Comprehensive Wildlife Conservation Plan**

(Project: T-02-P-001; Amendment #2)

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**Development and Expansion of the Natural Resource Data
and Information Systems in Support of the Illinois
Comprehensive Wildlife Conservation Plan**

Project: T-02-P-001 (Amendment #2)

Annual Report, Segment 3
4 February 2005 to 3 February 2006

Liane Cordle, Leon Hinz, Ann Holtrop, Chris Phillips, Jeff Walk, Ed Heske,
and John Epifanio

Illinois Natural History Survey
1816 South Oak Street
Champaign, Illinois 61820

March 2006


Dr. John Epifanio,
Project Coordinator
Illinois Natural History Survey


Dr. David Thomas,
Chief
Illinois Natural History Survey

**Annual Performance Report
(February 4, 2005-February 3, 2006)**

PROJECT NUMBER: T-02-P-001 (Amendment #2)

PROJECT TITLE: Development of an Illinois Comprehensive Wildlife Conservation Plan and Supporting Information Systems

Project 1 – Identification and Selection of Conservation Elements

Job 1.1 Identification and Selection of Conservation Elements

A task group of IDNR staff and the planning coordinator developed criteria for selecting priority species, and compiled a list of species in greatest need of conservation. These criteria and species lists were reviewed by the Endangered Species Technical Advisory Committees, scientists with other agencies and institutions, and IDNR staff. Each species was associated with one or more major habitat types. The revised criteria and list were again made available for comment from IDNR staff, other agencies, institutions, organizations, and the public. Appendix I (Species in Greatest need of Conservation for Illinois as identified by eight criteria) of the Illinois Comprehensive Wildlife Conservation Plan/Strategy (ICWCPS) lists these conservation elements, their habitat association, and criteria for inclusion.

Status: This project task is complete.

Estimated expenses for Job 1.1 through December 31, 2004:

Estimated expenses for Job 1.1 is included in a summary table of related tasks located at the end of the section for Job 4.1 (the summary includes Tasks 1.1, 2.1, 3.3, and 4.1).

Project 2 - Distribution and Abundance of Conservation Elements

Job 2.1 Distribution and abundance of priority wildlife species

The distribution of threatened and endangered species was mapped with geographic locations reported in the Biotics database. For non-listed terrestrial vertebrate species, GAP Analysis created projected distribution maps. Distributions of fishes and mussels have been derived from available survey data, published accounts and museum specimens. For the species for which direct population measures are available, population size and trend were quantified. For the vast majority of vertebrate species, a qualitative description of abundance was possible. Species for which abundance can be very poorly quantified (or qualified), including most invertebrate species in greatest need of conservation, have been identified as knowledge gaps for future survey efforts. The products of this job are aggregated in Section III-B (Statewide Overview: Current

Status of Illinois Wildlife & Habitat Resources) and Appendix II (Status, Objectives, and stresses to Illinois Wildlife & Habitat Resources) of the Illinois Comprehensive Wildlife Conservation Plan/Strategy, and the Distribution and Abundance Information Supplements.

Status: This job task is complete.

Estimated expenses for Job 2.1 through December 31, 2005:

Estimated expenses for Job 2.1 are included in a summary table of related tasks located at the end of the section for Job 4.1 (the summary includes Jobs 1.1, 2.1, 3.3, and 4.1).

Job 2.2 Distribution and abundance of game species

Distributions and abundances of game species have been mapped using habitat-abundance models, survey and harvest results, and other sources. By including these models, the State of Illinois included an important species group into the comprehensive planning effort, making both nongame and game interests stakeholders in the planning and implementation processes, and demonstrated opportunity areas for diverse conservation interests to work cooperatively. Products of this job are included within in Section III-B and Appendix II of the Illinois Comprehensive Wildlife Conservation Plan/Strategy and the Distribution and Abundance Information Supplements, and used by biologists in the selection of conservation opportunity areas.

Status: This job task is complete.

Estimated expenses for Job 2.2 through December 31, 2005:

[Note: No funds were requested for this Job].

Job 2.3 Location and condition of terrestrial and wetland habitats

Job 2.3 consisted of two related parts: GIS support for the Illinois Wildlife Action Plan (IWAP), and Identification and characterization the remaining key wildlife habitats (Element 2 in the IWAP), or "green infrastructure".

The GIS support for the Illinois Wildlife Action Plan was completed in October, 2005 when the final plan was submitted to the National Acceptance Advisory Team. In this first part, the model used GIS technology and built on work we conducted under a previous contract with the Illinois Department of Natural Resources (IDNR) to identify key wildlife habitats for species in greatest need of conservation. This study made use of the most current land cover data (1999-2000) to identify and characterize the remaining tracts (hubs) of land of a critical size and the connecting links (corridors) between them. Hubs were based on forests and grasslands identified in the Land Cover

of Illinois 1999-2000 database and wetlands from the National Wetlands Inventory (NWI). Corridors were delineated by linear features, which in Illinois are mainly streams and abandoned rail road right-of-ways. The Illinois Streams Information System (ISIS) database and a statewide database of abandoned railroads was the basis for corridors in this study. The final hubs and corridor dataset was characterized for IWAP based on statewide data sets such as the Illinois GAP analysis ecotone and vertebrate models for terrestrial vertebrates, Threatened and Endangered species locations, Illinois Natural Areas Inventory sites, The Nature Conservancy Ecoregions of Illinois, Bird Conservation Regions of Illinois, and the Natural Division of Illinois. Maps were created to facilitate the identification of proposed conservation opportunity areas in state and regional meetings with partner agencies and conservation groups. Final figures were created for the CWCP final plan.

The original model extended and refined for the Identification and characterization of remaining key wildlife habitats, or "green infrastructure", the focus of the second part of this job. In this study, an initial coarse filter based on size was applied to select areas for further analysis. Hubs of forests 150 acres or greater, and grassland 40 acres or greater were selected. Wetlands were buffered and combined into wetland complexes 250 acres or greater. Gaps in these hubs were backfilled with any other open land, such as impoundments, ponds and backwaters. The same corridors described above were used in this study. The end result was a statewide database of potential wildlife habitat resulting from the delineation of hubs and corridors.

After the habitat locations of hubs and corridors were determined, the potential wildlife habitat areas were then characterized relative importance as potential habitat for the species in greatest need of conservation. This analysis is ongoing and is based upon over 20 ecological and threat parameters. The ecological parameters includes measures of size such as the area within the hub of critical habitat types, presence of natural communities or of unique natural resources, amount of protected areas, and spatial relationships. Threat parameters include remoteness from roads, road density within the hubs, and areas of highly erodible soils.

Measures of size and presence for ecological and threat parameters uses existing databases such as the Illinois Natural Areas Inventory, Illinois Nature Preserve, and public land (e.g. IDNR Owned, Leased, and Managed Properties to be developed under Job 4.3, Illinois Recreational Facilities Inventory, IL-GAP project stewardship layer), significant aquatic features, IL-GAP (species richness developed in Job 2.1), pre-settlement land cover, railroad prairies and floodplain locations. Spatial relationships are calculated using Fragstats and V-Late software and include area, location, type, shape, spatial arrangement relative to other green space, and landscape context (surrounding land cover types). The final results of the habitat characterization will be used to create various scenarios of weighting factors, depending on the habitat type or species of interest, or a combination of these factors.

Habitat locations were determined from 1999-2000 land cover data. Their relative importance as habitat for the species in greatest need of conservation has been

analyzed based upon 1) presence of threatened/endangered species, 2) recognition as an Illinois Natural Areas Inventory site (high quality natural community), 3) diversity of species in greatest need of conservation (based upon GAP Analysis for terrestrial vertebrates, IDNR basin surveys for fishes, and museum records for freshwater mussels), and 4) patch size (terrestrial habitats only). These results are graphically presented in Figures 12 through 16 of the Illinois Comprehensive Wildlife Conservation Plan/Strategy.

The relative condition of key habitats has described from Critical Trends Assessment Project data, which has compiled information on the composition and biotic integrity of streams, grasslands, forests and wetlands throughout the State of Illinois. EcoWatch data, collected by citizen-scientists and IDNR personnel, and data collected by Illinois Natural History Survey form the core of the Critical Trends Assessment Project. Please see Section III-B and Appendix II of the Illinois Comprehensive Wildlife Conservation Plan/Strategy.

More detailed information on the condition of habitats in specific regions of the state or within proposed conservation opportunity areas was gleaned from IDNR field staff and regional experts for qualitative and/or quantitative habitat condition assessments. These results are provided for each of the 15 natural divisions in Section IV (Natural Division Assessments) of the Illinois Comprehensive Wildlife Conservation Plan/Strategy.

Expected Results, Benefits, and Deliverables:

The goal of this component is to create a GIS database that can be used to identify and evaluate contiguous "green" areas and corridors with important natural resources to guide conservation, management, land acquisition, and restoration efforts. This GIS data layer will provide one of the base layers to help develop, support, and enhance conservation efforts of the CWCP.

Status: This job task is complete.

Estimated expenses for Job 2.3 through December 31, 2005 (amended budget):

Job 2.3	Allocation	Expenses	Balances
Personnel - Salary and Wages	147,980	126,353	21,627
Benefits	47,943	40,007	7,936
Travel	2,781	2,781	0
Commodities	500	498	2
Equipment	1,160	761	399
Contractual	1,119	1,119	0
Direct Costs	201,483	171,520	29,963
Indirect Costs	40,297	34,304	5993
TOTAL (Direct + Indirect)	241,781	205,824	35,957

Job 2.4 Location and condition of stream habitats

The purpose of this job is to build statistical models for predicting riverine site habitats and biota from mapped landscape and local variables. The outcome of this work will be a set of models that can be used to predict biological and habitat conditions for all river segments, including sampled and unsampled reaches. Job 2.1 of T-3-P provided a large data set of attributes describing stream channels, riparian zones, and watersheds to use in developing the biological and habitat models. Job 2.2 of T-3-P provided a database of fish and habitat data on which to begin modeling fish assemblages. Collectively, the dataset comprised 146 fish species, including 9 hybrids. These fish were collected at 444 sites, where each site had 3 - 41 species. Two sites were later removed from analysis because they lacked true community samples. Additionally, hybrid species and individuals that were identified to genera only were removed from analysis. Finally, only those 88 species that occurred at 2% or more of the sites were included in analysis.

Sites were grouped into fish assemblage categories based on flexible beta hierarchical clustering (beta = -0.25) of a Relative Sorensen distance matrix, carried out in PC-ORD. Cluster analysis was performed on abundance data, which was defined as catch per unit effort (CPUE). For this job, CPUE was defined as the natural log (catch of each species per 1000 ft of stream length sampled +1). Nine clusters of fish assemblages were identified from the cluster analysis. These clusters will be used in subsequent Classification and Regression Tree (CART) analysis that will be completed during the

remainder of the project. Stream temperature data for the 53 missing sites were gathered where available; however, temperature was not collected as part of every stream assessment.

Data collected by temperature loggers in 2004-2005 were downloaded. These data along with data collected in 2003-2004 were edited to remove erroneous data points and the hourly temperature readings were formatted into several summary variables (e.g., mean daily maximum during summer). In addition to the 59 logger deployments from this project, data collected in the Pilot Watershed Program (16 sites) were formatted and summarized for use in the temperature modeling. Current efforts use multiple regression to predict mean daily maximum, mean, and minimum temperatures during the summer. The resulting state-wide models explain 59-69 % of the variation in these summary statistics. Other modeling techniques are being investigated in an effort to improve the percent of variation explained. By the end of the reporting period, the modeling approach will be finalized and the resulting model(s) will be used to predict stream temperatures to all unsampled river locations.

Paralleling the approach used by our collaborators in Michigan we have begun to develop multiple linear regression models relating summaries of the invertebrate assemblage to human-induced stressors (e.g., land use) and natural causes/covariates (e.g., drainage area, geology, etc). The macroinvertebrate collections from 688 sites supplied by IL Environmental Protection Agency were reduced to 636 for model development mainly due to overlap within the stream reach or the dates of collection. Stations were linked to stream arcs in the GIS and catchment and riparian zone summaries were acquired from our existing database. Preliminary modeling has focused on invertebrate community indices (e.g., EPT taxa, proportion of sensitive taxa) and can explain roughly 25% of the variation state-wide. We will continue to work on modeling macroinvertebrate community indices (e.g., taxa richness, number of *Plecoptera* taxa). By examining additional predictors including estimates of water temperature (available through application of the temperature models) we expect these models to greatly improve.

Finally, Dr. Leon C. Hinz was hired as a stream ecologist and began work on this project in April 2005.

Status: This job task is ongoing.

Estimated Expenses for Jobs 2.4 through December 31, 2005:

Job 2.4	Allocation	Expenses	Balances
Personnel - Salary and Wages	85,000	65,091	19,909
Benefits	25,186	21,161	4,025
Travel	5,000	1,814	3,186
Commodities	2,500	277	2,223
Equipment	-	-	-
Contractual	4,000	1,475	2,525
Direct Costs	121,686	89,818	31,868
Indirect Costs	24,337	17,964	6,373
TOTAL (Direct + Indirect)	146,023	107,785	38,238

Job 2.5 Update of species occurrence and habitat condition data

Field surveys are being undertaken to determine the location and relative abundance of cryptic species identified as priority species due to poorly known status (e.g, nocturnal wetland birds, herptiles). This work will be undertaken, as needs are determined, in small regions of the state and in specific habitat types to determine presence/absence and relative abundance of priority species.

Field surveys are determining the extent or condition of habitats that are not reliably assessed by remote imaging and existing monitoring projects. For example, with remote sensing techniques, successional habitats cannot be adequately distinguished from open woodland and forest. Grassland habitat is also problematic in that plant composition, vegetation structure and disturbance regimes are crucial in determining their adequacy for priority species. When feasible, field surveys describing habitat conditions and presence/absence of priority species are being completed simultaneously. GPS receivers are being made available to key field staff so that new information will be appropriately and precisely geo-referenced for integration into Biotics 4 and other information systems.

During this reporting period we identified several species of amphibians and reptiles with poorly known distributions and that require specialized survey methods: Blanding's

turtle (*Emydoidea blandingii*), Spotted Turtle (*Clemmys guttata*), Illinois mud turtle (*Kinosternon flavescens*), Four-toed salamander (*Hemidactylium scutatum*), and several pond-breeding salamanders (genus *Ambystoma*). Landcover and aerial photography GIS layers were examined to locate potential areas to field survey for each species.

Status: This job task is ongoing.

Estimated Expenses for Jobs 2.5 through December 31, 2005:

Job 2.5	Allocation	Expenses	Balances
Personnel - Salary and Wages	17,496	230	17,266
Benefits	5184	18	5,166
Travel	8,320	6,176	2,144
Commodities	5,000	640	4,360
Equipment	0	0	0
Contractual	14,000	0	14,000
Direct Costs	50,000		
Indirect Costs	10,000	1,412	8,587
TOTAL (Direct + Indirect)	60,000	8,476	51,525

Job 2.6 Biotics 4 Updating

During this reporting period, the number of Data Specialists on staff for this project varied from one to three. Data Specialists logged, entered, and mapped faunal data received by the Illinois Natural Heritage Database program as part of a multi-year effort to update information in Biotics 4 for use within the Illinois Wildlife Action Plan. In addition to entering new data received by the program, the Data Specialists have updated Biotics 4 with changes resulting from the 2004 revised list of endangered and threatened species in Illinois. During this reporting period, the Data Specialists have processed 750+ faunal records for both new T&E faunal populations and updates to existing faunal T&E populations. An additional 530+ records for high quality natural communities, colonial bird colonies, and geological features were added or updated in

Biotics 4. All records were screened for accuracy under an established quality control process.

Work on remapping existing faunal occurrences under the new Heritage data methodology began in August 2005. All original T&E point locations were brought into Biotics 4 via buffering with the size of the buffer based on the accuracy of the locational data provided. In an effort to establishing more meaningful polygonal locations for faunal T&E species, every faunal T&E location is being remapped following a thorough review of all existing data and documentation. To date, over 300+ faunal records have been remapped in 12 of 102 counties in Illinois. Completed counties include:

Carroll	Kane	Monroe
Cook	Lake	St. Clair
DuPage	Madison	Whiteside
Jo Daviess	McHenry	Will

Two Geographic Information System (GIS) workstations and 1 monitor were purchased to replace the outdated systems presently used by the Illinois Natural Heritage Database program for work on Biotics 4.

One Data Specialist attended NatureServe's Core Heritage Methodology training in April 2005 and two attended in October 2005. Methodology training provided the Data Specialists with beginning to moderate skills in Biotics 4 and mapping of T&E populations. One Data Specialist attended NatureServe's Advanced Biotics training in October 2005. Advanced Biotics training provided advanced skills in querying and administration of Biotics 4.

EXPECTED RESULTS AND BENEFITS: Completion of Project 2 provides information on the distribution and abundance of priority species (element 1), the distribution and abundance of game species, and the location and condition of priority habitats (element 2). Surveys conducted in Project 2 address the priority research and survey efforts necessary for effective, comprehensive conservation. Project 2 data will form a baseline for monitoring priority species, their habitats, and the effectiveness of conservation actions. The information systems developed in Project 2 will be updated as new information becomes available (element 5), and thus will be employed in future iterations of the CWCP (element 6).

Status: This job task is ongoing.

Estimated Expenses for Jobs 2.6 through December 31, 2005:

Job 2.6	Allocation	Expenses	Balances
Personnel - Salary and Wages	105,000	71,625	33,375
Benefits	31,112	22,473	8,639
Travel	4,500	2,112	2,388
Commodities	4,000	3,964	36.29
Equipment	0	0	0
Contractual	2,500	1,000	1,500
Direct Costs	147,112	101,174	45,938
Indirect Costs	29,422	20,235	9,187
TOTAL (Direct + Indirect)	176,534	121,409	55,125

Project 3 - Identification of Detrimental Factors

Job 3.3 Identification of Detrimental Factors

For all of the vertebrate species in greatest need in conservation and for freshwater mussels, a small group of expert scientists for each taxa were gathered to assess the detrimental factors. A total of 20 detrimental factors across the broad headings of habitat, community, population and direct human stresses were scores as high, medium, and low concern for each species. Each score was also given a high-medium, low, and very low confidence ranking to identify species and stresses that are poorly known. The Critical Trends Assessment Project provided detailed data on factors that are affecting the health and integrity of key habitats on a statewide and landscape basis. A large body of literature was consulted for factors that are shown and/or suspected of adversely affecting populations of priority species, habitats and natural communities in Illinois and the Midwest. The results of this project are presented in Section III-D (Challenges for Illinois Wildlife and Habitat Resources) and Appendix II of the Illinois Comprehensive Wildlife Conservation Plan/Strategy.

Additionally, IDNR biologists, INHS scientists, and scientists within other agencies, organizations and institutions have been polled for factors adversely affecting priority species and habitats in each region of the State. These results are provided for each of

the 15 natural divisions in Section IV (Natural Division Assessments) of the Illinois Comprehensive Wildlife Conservation Plan/Strategy.

Status: This project task is complete.

Estimated expenses for Job 3.3 through December 31, 2005:

Estimated expenses for Job 3.3 are included in a summary table of related tasks located at the end of the section for Job 4.1 (the summary includes Jobs 1.1, 2.1, 3.3, and 4.1).

Project 4 - Development of Conservation Opportunity Areas and Landscapes

Job 4.1 Selecting opportunity areas and landscapes

Using GIS products of this project as well as GIS layers provided by partner organizations (e.g., Important Bird Areas, TNC Portfolio Sites, C2000 strategic sub-watersheds), IDNR staff and the CWGPS steering committee located sites and landscapes providing outstanding conservation opportunity (See Figure 11, Priority conservation areas identified by other conservation plans and other known resource locations, in the Illinois Comprehensive Wildlife Conservation Plan/Strategy). Through regional meetings with IDNR staff, and regional meetings with conservation partners, these opportunity areas and landscapes were refined (see Figure 17, Partner-selected priority areas for conserving Illinois Species in Greatest Need of Conservation, and Table 8, Conservation Opportunity Areas, in the Illinois Comprehensive Wildlife Conservation Plan/Strategy). A management philosophy, conservation objectives, and priority conservation actions were developed for each conservation opportunity area, with public input (see Section IV of the Illinois Comprehensive Wildlife Conservation Plan/Strategy.)

Status: This job task is complete.

Estimated expenses for Jobs 1.1, 2.1, 3.3, and 4.1 through December 31, 2005:

Jobs 1.1, 2.1, 3.3, and 4.1	Amended Allocation	Expenses	Balances
Personnel - Salary & Wages	60,636	60,636	0
Benefits	16,631	16,083	548
Travel	4,200	3,119	1,081
Commodities	1,803	1,212	591
Equipment	3,760	2,175	1,585
Contractual	3,750	4,270	-520
Direct Costs	90,779	87,495	3,284
Indirect Costs	18,157	17,064	1,093
Total (Direct + Indirect)	108,936	104,559	4,377

Job 4.2 Mapping of Illinois' Natural Divisions

The Natural Divisions of Illinois is a classification of natural features in the state based on flora, fauna, and physiography which was derived from such factors as topography, soils, bedrock, glacial history, and the distribution of plants and animals. Fourteen natural regions are delineated in the state. The Natural Divisions designations are currently widely accepted and used in many natural resource applications. An update of the Natural Divisions GIS coverage is being done to create a new coverage with higher resolution, based on GIS data such as plant and animal distributions, land cover, soils, glacial boundaries, digital 1:24,000 quadrangle maps, and digital aerial photography, as well as input from IDNR-Springfield staff. Metadata for this project has been completed. The database is being used in-house to assess quality and make final adjustments prior to the delivery date of 9/30/06.

EXPECTED RESULTS, BENEFITS, AND DELIVERABLES:

By defining the major ecosystem borders within Illinois, the Natural Divisions of Illinois will provide a key classification scheme for management of species, communities, and habitats (Elements 1, 2, and 4) in the state. The Natural Divisions GIS layer required enhancements to improve its resolution so it can be effectively used in the GIS

environment (e.g. spatial information such as species distributions and habitat locations are correctly assigned to a natural division when conducting spatially based analyses).

Status: This job task is ongoing.

Estimated expenses Job 4.2 through December 31, 2005:

[Note: No funds were requested for this Job].

Job 4.3 Mapping of IDNR's owned, managed, and leased property (OMLP project)

The first phase of the OMLP project, initiated under T-03-P-001, focused on the mapping of properties purchased with federal and special funds. This early focus was needed to provide a guide for the planning of conservation practices allowable on those properties. The federal or special fund sites that were unable to be completed as part of T-03-P-001 due to incomplete paper records are being addressed first under Job 4.3. The remaining sites to be mapped are properties partially owned by IDNR and partially leased from either a private company or other agency and managed by IDNR. (e.g. Army Corps of Engineers, Central Illinois Public Service, Illinois Power Company). Legal description information, which can be difficult to obtain for some of the older sites, needs to be obtained by the leasing agency in order to complete mapping the site. Three additional federal or special fund sites have been completed as part of Job 4.3, for a total of 56 completed sites. While some information is still needed on the remaining federal or special fund sites, mapping on the next priority listing of sites has begun. Ten sites have been completed on the next priority listing (which includes state parks, conservation areas, natural areas, fish and wildlife areas, trails and greenways, and state forests). Federal Geographic Data Committee (FGDC) compliant metadata has been created for the GIS data layers and will be updated as necessary. A quality assurance, quality control (QA/QC) methodology has been put into place to insure the data created meets the accuracy standards defined in the OMLP project data input methodology. QA/QC on federal and special fund sites is also ongoing; QA/QC has been completed for two sites. By providing accurate boundary information and current management on IDNR lands, the OMLP database will help managers in determining conservations priorities and actions (Element 4).

EXPECTED RESULTS, BENEFITS, AND DELIVERABLES:

The GIS database developed under this Job provides information on the precise boundaries and management practices for properties IDNR currently owns, manages, and leases for conservation purposes. This information is important for developing an effective and successful statewide conservation plan.

Status: This job task is ongoing.

Estimated expenses Job 4.3 through December 31, 2005 (amended):

Job 4.3	Allocated	Expenses	Balance
Personnel – Salary & Wages	139,608	85,693	72,296
Benefits	41,281	24,788	20,036
Travel	1,130	930	8,000
Commodities	770	486	1,500
Equipment	3,000	-	3,000
Contractual	4,300	2,308	1,993
Direct Costs	190,089	114,204	111,832
Indirect Costs	38,018	22,841	22,366
Total (Direct + Indirect)	228,107	137,045	17,762

Job 4.4. Future risk assessment of Illinois' streams.

In this job, we will link output from a Land Transformation Model (LTM) with the models developed in Job 2.4. Dr. Bryan Pijanowski and his colleagues at Purdue University are in the process of developing the LTM for Illinois. We met with Dr. Pijanowski in November and discussed model progress and applications. Upon completion of the models developed in Job 2.4, we will work with Dr. Pijanowski to complete the risk assessment portion of this project.

EXPECTED RESULTS, BENEFITS AND DELIVERABLES:

Project 4 will describe and prioritize conservation actions for conserving species and their habitats within opportunity areas for all regions of the State (element 4). With other land and water management agencies and conservation organizations playing a key role in determining geographic priorities, conservation objectives, and proposed actions, these groups will be invested in the CWCP development and implementation (element 7). By updating the information systems created in Project 4, modifying, if necessary, and repeating this process, priorities will be periodically re-evaluated for

future iterations of the CWCP (element 6). This Project further provides for coordination with conservation partners (element 7) and public participation (element 8).

Status: this job task is ongoing.

Estimated expenses Job 4.4 through December 31, 2005:

[Note: budgeting and expensing for this job task are under separate agreement with the University of Illinois]

Project 5 - Involvement of Conservation Partners, Agencies and the Public in Developing, Implementing, and Evaluating the Comprehensive Wildlife Conservation Plan

Job 5.1: Consultation for partner coordination and public involvement

Coordination of the ICWCPS with other agencies and partners and public involvement are integrated into multiple jobs (Project 1, Project 3, Job 4.1, Project 6 (below)). Professional consulting assistance helped develop a communications framework and ensured communications remained productive. Specifically, assistance was received in collecting contact information, creating opportunities for communication (i.e., printed, electronic and web-based, and in-person meetings), and facilitating regional meetings of conservation partners. Ensuring citizens had ample opportunity to learn about the ICWCPS process and contribute constructively to the ICWCPS were paramount, as is handling a large amount of feedback and responding appropriately. Consultation aided in establishing an efficient public involvement system.

As a result of efforts to involve conservation partners and the public, more than 150 agencies and organizations contributed to the development and revision of the ICWCPS. Presentations reached an estimated 600 persons, about 250 conservationists attended planning workshops, and about 350 persons requested periodic email updates on the planning process and inviting their participation.

Status: This job task is complete.

Job 5.2: Developing an Illinois CWCP website

A webpage provides an excellent forum for sharing data, reviewing documents, viewing maps, and receiving feedback from agency staff, conservation partners, and the public. The Illinois Department of Natural Resources developed a website that contains background planning information, lists of species in greatest need of conservation, conservation maps, presentations, the final version of the ICWCPS, and an online

application for competitive State Wildlife Grant program awards. The webpage allowed for electronic public input on two drafts of the ICWCP before it was submitted to the US Fish & Wildlife Service for approval in August of 2005. The URL is:
<http://dnr.state.il.us/orc/wildliferesources/theplan/>

Status: This job task is complete.

Estimated expenses Jobs 5.1 & 5.2 through December 31, 2005:

[Note: this account has been frozen to reflect completed status and pending amendment]

Jobs 5.1 & 5.2	Allocation	Expenses	Balance
Personnel – Salary & Wages	62,151	27,656	34,495
Benefits	18,353	2702	15,650
Travel	2,100	985	1,115
Commodities	1,500	1,747	-247
Equipment	0	0	0
Contractual	20,592	16,932	3,660
Direct Costs	104,696	50,022	54,674
Indirect Costs	20,939	10,005	10,934
Total (Direct + Indirect)	125,635	60,027	65,608

Project 6 - Implementation, Evaluation and Review Strategy

Job 6.1: Developing an implementation, evaluation and review strategy

Through meetings with staff, regional partner workshops, and existing planning efforts, priority statewide conservation strategies were developed and included in the final ICWCPS (Section III-E, Priority Conservation Actions for Conserving Illinois Wildlife & Habitat Resources, in the Illinois Comprehensive Wildlife Conservation Plan/Strategy). IDNR staff and conservationists with other agencies and organizations identified the conservation actions most appropriate within the 15 natural divisions of Illinois (Section IV). How the Illinois Department of Natural Resources approaches implementation, and how implementation will be coordinated among partners, are active topics for discussion at present. As examples, the divisions with DNR's Office of Resource

Conservation have drafted implementation plan, outlining priorities, needed resources, and short-term benchmarks. The steering committee that provided oversight to the planning process is likely to be modified and expanded into a group that coordinates implementation activities and monitoring among various agencies and organizations.

Plans for evaluating the effectiveness of conservation actions rely on a combination of existing methods, additional monitoring, and research (see Section III-F, Research, Monitoring and Evaluation, in the Illinois Comprehensive Wildlife Conservation Plan & Strategy). Methods for revising and updating the Illinois Comprehensive Wildlife Conservation Plan & Strategy are described in Section II-F, Approach & Methods: Plan Revision & Review.

Status: This job task is ongoing.

Job 6.2 Information Coordinator for development of the Comprehensive State Wildlife Conservation Plan.

No work was completed on this task during this segment.

Estimated expenses Job 6.1 through December 31, 2005:

Job 6.1 & 6.2	Allocation	Expenses	Balance
Personnel – Salary & Wages	55,792	15,417	40,375
Benefits	16,475	4,820	11,654
Travel	6,000	2,190	3,810
Commodities	3,000	0	3,000
Equipment	-	-	-
Contractual	856	0	856
Direct Costs	81,123	22,428	59,695
Indirect Costs	16,424	4,485	11,939
Total (Direct + Indirect)	98,547	26,913	71,634

Project 7 - Report Development

Comments on the partial draft and final draft of the ICWCPS were received from the public, stakeholders, conservation organizations and agencies, during two separate public comment periods. The final ICWCPS integrated comments received from partners and the public, and was submitted to the US Fish & Wildlife Service in August of 2005. In September of 2005, the National Acceptance Advisory Team recommended the approval of the Illinois Comprehensive Wildlife Conservation Plan/Strategy. About 70 hard copies and more than 300 compact disk copies of the full technical document have been distributed to date to biologists, conservationists and citizens upon request. The full document remains available for downloading from the website. A full color summary document is under development.

Status: This job task is ongoing.

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